



Corporate Overview of
Fastek's Capabilities
in Avionics

Company Overview

Background

- Founded in 1997 by Arvind Dandekar and Marc Meyer
- Sustained 30% Growth Each Year Through Expansion and Acquisition
- 40+ Employees
- Fastek was created as a rapid response engineering company to provide innovative system solutions for corporate clients.

Fastek's Mission

- To Provide Our Customers With the Best Possible Blend of Technical and Business Solutions



Company Overview

National / International Support

- Headquartered in Cedar Rapids, Iowa
- Engineering Development Centers in:
 - Cedar Rapids, Iowa
 - Milwaukee, Wisconsin
- Overseas Development Resources in India and Russia
- Network Engineering Resources



Fastek's Avionics Expertise

- **Systems Engineering**
 - Definition, Analysis, Requirements Capture
- **Program Planning and Management**
- **Develop Software Requirements**
 - DO-178B Compliant Process
- **Develop Design Documents**
- **Develop Source Code**
- **Validation and Verification**
 - DO-178B Level A Compliant Process



Fastek's Avionics Customers

- Rockwell Collins
- Goodrich Aerospace
- Innovative Solutions and Support (IS&S)
- Derco Aerospace (United Technologies)
- Northern Airborne Technology (NAT)
- Testvionics
- Parker Hannifin
- Cobham
- Chelton



Specific Avionics Projects

Rockwell Collins

- SAAB Program (Flight Mgmt)
- Galaxy Program (Flight Deck Displays)
- Weather Radar Software Verification (V&V)
- Flight Management Systems (FMS)
- Achieved Rockwell Supplier Approval

Goodrich Aerospace

- Software Development



Fastek Avionics Experience

Innovative Solutions & Support

- Flat Panel Display Program
 - Requirements, Development, Test and Verification
- Air Data and Air Data Instruments
 - Development, Test and Verification
- Boeing Displays
 - Requirements and Definition

Testvionics

- Air Data Instrument Simulator



Fastek Avionics Experience

Derco Aerospace

- C-130 Aircrew and Maintenance Training Simulator
 - Definition
 - Lesson Development
 - Audio, Graphics Generation
 - Software Development
 - Lesson/audio/graphics Integration

Fastek Avionics Experience

Northern Airborne Technology

- Software Certification Plans Generation
- Verification Test Procedure Development
- Coverage Analysis(DO-178B level C)
- Coordination With FAA Designated Engineering Representative
- Coordination With System Integrator(Rockwell Collins)



Fastek Strengths – Program Management

Emphasis on Project Planning

- Resources, Development Environment
- Test Equipment
- Project Schedule
- Customer Communication
- Risk Assessment



Fastek Strengths - Project Tracking

- **Customer Teleconference**
- **Customer Coordination Meetings**
- **On-site Presence**
- **Customer Access to Project Status**



Fastek Strengths – Change Management

Change Tracking

- Timely Identification
- Use of Fastek Tracker to Record and Track Changes
- Perform Changes in Batches to Minimize Program Impact
- Reassess Resource Requirements to Maintain Program Schedule



Fastek Strengths – Problem Tracking

Problem Reporter

- Custom Web-Based Problem Reporter In Place
- Customer Access to the Problem Reports
- Easy Access to Summary Level Status
 - Closure Rates Are a Good Indication of Program Stability



Potential Avionics Opportunity Areas

- Upgrade of Existing Products (Software Development, Verification)
- Document Existing Systems (Software Requirements, Design Documentation)
- Automation of Verification Activity (Test Procedures, Test Coverage Analysis)

Fastek's Project Goals are to :

- **Increase Operational Efficiency**
- **Lower Project Management Costs**
- **Lower Product Life Cycle Costs**
- **Shorten Development Time**
- **Reduce Time to Market**
- **Shorten Your Time to Profit**
- **Maximize Your Market Share and ROI With Fastek Project Evaluation**



Fastek Contacts

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**Recent Project
Accomplishments**

Fastek Achieves Rockwell Supplier Approval

Rockwell Collins Software Supplier Process Requirements

Rockwell developed a quality audit system for software suppliers. The system is based on ISO 9000, SEI CMM and DO-178B(avionics standard). The audit includes a review of process documentation and evidence that processes are followed. Audits are conducted on project management, engineering, procurement and training.

■ Audit Results

- Fastek was rated as *fully acceptable*

■ Business Need


- Evidence of software quality program
- Placed on list of eligible software suppliers within Rockwell purchasing
- Benchmark Fastek quality program

■ Fastek Engagement

- 6 months to write procedures
- Evidence collected over 9 month period
- 1 part-time process engineer, 1 part-time quality engineer for 15 months



■ Fastek Approach

- Procedures written as part of avionics development project
- Evidence of use gathered during avionics development project
- Self assessment against Rockwell quality requirements performed, corrective actions addressed
- Rockwell on site audit conducted, corrective actions identified
- Corrective actions resolved 

IS&S Pilot's/IP™

Cockpit Information Portal Flat Panel Display

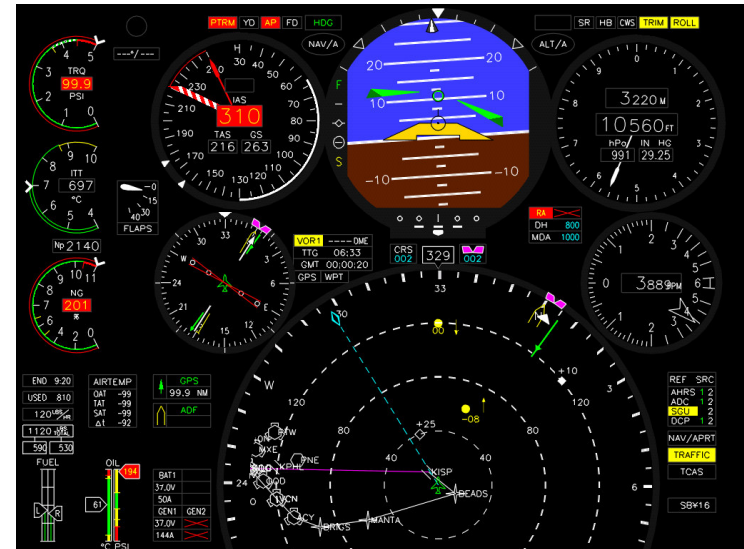
The next generation of flight deck displays; a flight deck information portal into the future. The 12" X 9" display area enhances the flight crew's situational awareness with seamless integration of vital information.

■ Business Need

- Schedule constraints and delivery timeline
- Experience in large scale Avionics Programs
- Critical System Certification in DO-178B

■ Engagement

- 21 engineers for 11 months



■ Services Provided by Fastek

- Program Management
- System Requirements Definition
- Software Development Plan
- Verification Test Plan
- Application software for the display symbology
- S/W integration & test



Northern Airborne Technology

Avionics Software Verification

Northern Airborne Technology(NAT) is a leading manufacturer of specialized aircraft communication equipment. NAT is currently developing an Audio Management System and Fastek is providing engineering services associated with software verification and TSO certification for the 4110 Audio Control Panel.



■ Business Need

- Aggressive verification schedule and certification timeline (< 6 months)
- Experience in verification process and standards
- Expertise in review, test and analysis phases of RTCA/DO-178B life cycle

■ Fastek Engagement

- 3 engineers for 3 months

■ Services Provided by Fastek

- Verification lead
- Plan for Software Aspects of Certification(PSAC)
- Verification Test Planning(VTP)
- Functional Test Development
- Structural Coverage Analysis
- Coordination with regulatory agency and designated engineering representatives



Derco Aerospace

Pilot/Maintenance Training Simulator

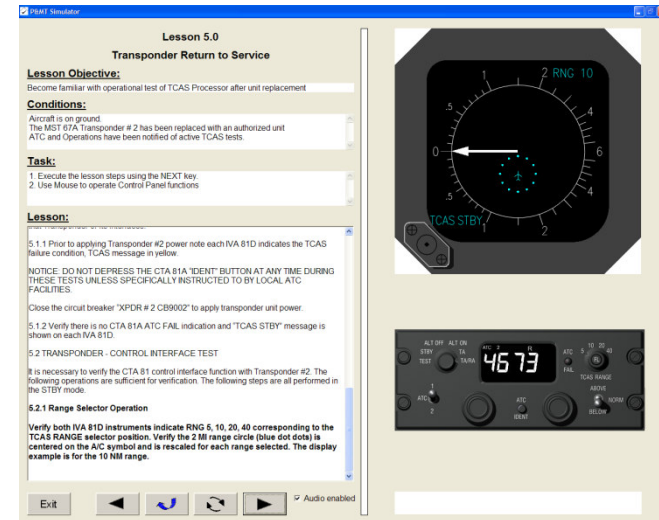
The next generation training system – a PC-based avionics trainer that utilizes state-of-the-art software, workstation hardware and simulation techniques to achieve the pilot and maintenance training objectives.

■ Business Need

- Aggressive schedule and delivery timeline (< 6 months)
- Expertise in Avionics programs
- Expertise in software, hardware and Avionics training

■ Fastek Engagement

- 6 engineers (3 offshore) for 6 months



■ Services Provided by Fastek

- Program Management
- System Definition
- Expertise in Avionics Systems Operation
- Windows-based software development
- PC Hardware/Software Integration

