Regulatory Review

Jon Haag – Chair, Maintenance Committee
Nathan Winkle – Vice Chair, Maintenance Committee
Overview

- FAA Employee Outlook
- RVSM CAMP Change
- AC120-78 – Electronic Documents, Manuals, Recordkeeping, and Signatures
- Video Return to Service
FAA Employment Backlog:
• FAA workforce is coming up to retirement age.

<table>
<thead>
<tr>
<th>Description</th>
<th>Personnel #s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projected Avg. Annual Losses (FY 2015 – FY 2024)</td>
<td>437</td>
</tr>
<tr>
<td>Projected Avg. Annual Hires (FY 2015 – FY 2024)</td>
<td>511</td>
</tr>
<tr>
<td>Projected Workforce FY 2024</td>
<td>7765</td>
</tr>
</tbody>
</table>

FAA Competing with Industry for Employees.

Chart Developed based on FAA Document #: FAA-15021-001, dated September 2014
Average US Based - Aviation Maintenance Technician Age
If look at just the Maintenance Technician Workforce information:
• Approximately 66% of technicians are 51 years of age or older
• Most of this group is looking to retire over the next 10 years

Increased pressure for the FAA to find qualified and competent employees.

There is a "Brain Drain" component to the FAA based on turnover in the future.

We are experiencing this phenomenon now with new employees cycling through local FSDO’s.
Strategies for your operations:
• Find out who your POI, PAI, and PMI’s are at your local FSDO
• Reach out to them
• As they change – reach out again
• Be a resource to them!
RVSM Changes:

- Part 91 Operators - No longer required to receive approval for RVSM Continuous Airworthiness Maintenance Program (CAMP) as of July 21, 2016.
- NBAA was instrumental in this change.
- This change is a substantial savings to Industry and the FAA.
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<thead>
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</thead>
<tbody>
<tr>
<td>Number of RVSM Approvals Per Year (forecasted growth 4.46%)</td>
<td>2,546</td>
<td>2,659</td>
<td>2,778</td>
<td>2,902</td>
<td>3,032</td>
<td>13,917</td>
</tr>
<tr>
<td>Cost Savings Per RVSM approval</td>
<td>$5,000</td>
<td>$5,000</td>
<td>$5,000</td>
<td>$5,000</td>
<td>$5,000</td>
<td>$5,000</td>
</tr>
<tr>
<td>Total Operator Cost Savings</td>
<td>$12,730,000</td>
<td>$13,295,000</td>
<td>$13,890,000</td>
<td>$14,510,000</td>
<td>$15,160,000</td>
<td>$69,585,000</td>
</tr>
<tr>
<td>Operator Net Present Value at 7%</td>
<td>$12,730,000</td>
<td>$12,425,234</td>
<td>$12,132,064</td>
<td>$11,844,482</td>
<td>$11,565,491</td>
<td>$60,697,271</td>
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<tr>
<td>Hours to review one program</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Hours Saved Annually</td>
<td>30,552</td>
<td>31,908</td>
<td>33,336</td>
<td>34,824</td>
<td>36,384</td>
<td>167,004</td>
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<tr>
<td>Salary Table 2014-GS middle of the scale GS-12 Step 5</td>
<td>$45.96</td>
<td>$46.51</td>
<td>$47.07</td>
<td>$47.63</td>
<td>$48.20</td>
<td></td>
</tr>
<tr>
<td>Savings Per Review</td>
<td>$552</td>
<td>$558</td>
<td>$565</td>
<td>$572</td>
<td>$578</td>
<td></td>
</tr>
<tr>
<td>Annual FAA Savings</td>
<td>$1,404,170</td>
<td>$1,484,041</td>
<td>$1,569,126</td>
<td>$1,658,667</td>
<td>$1,753,709</td>
<td>$7,869,712</td>
</tr>
<tr>
<td>FAA Net Present Value at 7%</td>
<td>$1,404,170</td>
<td>$1,386,954</td>
<td>$1,370,535</td>
<td>$1,353,966</td>
<td>$1,337,896</td>
<td>$6,853,522</td>
</tr>
<tr>
<td>Total Cost Savings</td>
<td>$14,134,170</td>
<td>$14,779,041</td>
<td>$15,459,126</td>
<td>$16,168,667</td>
<td>$16,913,709</td>
<td>$77,454,712</td>
</tr>
<tr>
<td>Total Cost Savings (PV)</td>
<td>$14,134,170</td>
<td>$13,812,188</td>
<td>$13,502,599</td>
<td>$13,198,449</td>
<td>$12,903,387</td>
<td>$67,550,793</td>
</tr>
</tbody>
</table>

Entries may not exactly add to totals due to rounding.
Revision to AC120-78

U.S. Department of Transportation
Federal Aviation Administration

Subject: Electronic Signatures, Electronic Recordkeeping, and Electronic Manuals

Advisory Circular

Date: 6/22/16
AC No: 120-78A

Initiated by: AFS-300
Change:
Two Changes to the AC:
• AC was rewritten for clarity and longevity with the never ending change in technology
• Part 91 Operations are not required to get FAA “acceptance or approval”

How does this help my department?
Can AC120-78A processes work in my department?
One Flight Department’s Opportunities and Successes

REMEMBER WHEN?
What can be the future?
Original Goal

Go paperless in the maintenance department via electronic recordkeeping and by using digital signatures.
Flight Department’s Revised Goal

Define a new industry norm by reducing busy work and increasing accuracy in all facets of the Aviation function by creating process discipline, setting new standards, and breaking the mold by leveraging technology to maintain and manage all records and information within Aviation for both our internal and external Customers.
Paperless Team

**FAA**
- Communicate our intent
- Formally declare when SOPs are in place
- Obtain formal acceptance

**Company IT**
- IT Leadership
- iPad Support
- Hardware & Software

**Implementation**
- SOP development
- Training for technicians and flight crews
- Participate in practical testing/validation

**Maintenance**
- Development
- SOPs
- Thorough testing and validation
- Training our Teams and Customers

**Operations**
- Develop and implement standards
- Participate in practical testing/validation
- Develop and conduct training

**Flight Scheduling**
- SOPs
- Thorough testing and validation
- Training our Teams and Customers

**Internal Audit**
- Expectations
- Data/system integrity
- Reporting options

**Vendors**
- Flight Scheduling
- Maintenance Tracking
- Digital Signature Web Service
- Secure Data Storage
- Software

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Not Paperless

Why?

• To preserve asset value
• Maintain a broader market (global) for resale
• Ease of internal and external audit activities
• Lack of a global standard for, or repository of data from a regulatory standpoint
What is being kept in paper…for now…

– Aircraft, engine, and APU logbooks
– TOLD Cards
– AFM, W&B, OPM
– Plotting and En Route Charts
  – In the process of implementing an electronic solution for this now.
Tools of the Trade

Hardware

Integration is the key to success!

- Laptop
  - Solid state drive for faster boot ups and higher reliability
- Smartphone
  - High quality voice with a robust data plan
  - Consider an extended-life battery pack
- Tablet
  - Bluetooth keyboard is a must major data entry
- Bluetooth Headset
  - Long battery life and one that works will all of the above items
Tools of the Trade

**Software**

*Integration is the key to success!*

- Scheduling software
  - Robust mobile capability
- Electronic signature process/system
  - Make sure it meets IT security requirements
- Records retention system
  - Needs to comply with internal audit protocols
- Cloud storage
  - Mobile accessibility is key
- Instant messaging with video conferencing capabilities
  - Accessible outside your Company’s network
- Social media
Visual Return to Service Concepts

Background to Future?

International Trip:
• 5 countries
• 6 cities
• 8 days
• No Technician Onboard
• Leg 2 – San Paulo to Windhoek, Namibia

- #2 Brake is leaking on the Ramp
- Next Flight is 2 Days
- Trained National Aviation Maintenance Technician available onsite!
Now What?

Good News:
• Part is available in San Paulo
• Shipment set up for Next Day with all necessities

Bad News:
• It will take 3 days for on-staff Technician to get in country
• It will take 2 days for OEM Technician to get in country
• The trained National Technician does not have an A&P
Potentially through the use of technology a VRTS could save the day!
By Developing Policy and Processes for VRTS

1. Ensuring proper documentation is available:
   b. Proper Parts Documentation
2. Performing a visual inspection throughout the event using video technology
3. Performing an “Obvious Defect Inspection” – Flight Crew
4. Approve the Aircraft for Return to Service through normal documentation procedures
What is Next for FAA approval / acceptance of VRTS?

Concept has been proposed to the FAA – response was positive

Develop an Industry Standard:
- Gather Industry Stakeholders
- Formulate Plan
- Write Standard
- Receive FAA Acceptance

Operator develop process and procedures
Implement process into their department
QUESTIONS?