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## **SAFETY AND TECHNOLOGY DEPARTMENT UPDATE**

**Week ending May 20, 2016**

**INTEGRATED DISPLAY SYSTEM REPLACEMENT (IDS-R):** Richie Smith (N90) is the IDS-R Article 48 Representative for the union. Mr. Smith forwarded the information below for this update.

- The latest NIDS software release will be installed at BOI for keysite testing during the week of June 30th and, barring any issues, be distributed shortly after. A new operating system is being bundled and is set for testing in Atlantic City during July with a planned distribution time period of the fall of this year.
- Over the past four weeks a few facilities have declared Initial Operating Capacity (IOC) on NIDS, including PIT. PHL on the other hand is still having ASOS issues with its satellite airports.
  - At this point the program office THINKS that all issues have been resolved but only time will tell.
- Last year there was an attempt to achieve System Acceptance Testing on NIDS at SCT but it was cancelled due to software issues. After months of delay, threats of being shut down due to data traffic clogging FTI lines, extensive testing and the reconfiguration of the hardware setting in the network the program office and vendor, AWI, went back to SCT to finish what was started last year. Unfortunately similar,
  - if not the same, issues were uncovered during this round of SAT testing and the network has once again been shut down pending investigation.
- The next big hurdle for the program is I90 with an IOC date set for May 25th. This represents the largest network to date and will be a major stepping stone and learning experience to bring to SCT (whenever it gets started again).
- With the NIDS program waterfall being cut there are no new facilities set to receive the product other than the CMH/DAY network. This is a challenge for the Program Office (PO) because the present network is SAIDS-5.
  - It was custom built for CMH/DAY by Systems Atlanta and NATCA has been told that while the system is not old nor in danger of nearing the end of its shelf life, spares and or replacement parts can be very difficult to obtain.

**NEXTGEN:** Kevin McLaughlin (SCT) is the National NextGen Representative for NATCA. His report to the membership is below.

- Participated in kickoff 2-day NATCA Safety and Technology Leadership Committee meetings.

- Participated in numerous Leesburg Remote Tower telcons, as one of the alternate NATCA Reps on the program to primary Rep. Kieron Heflin. The program is currently evolving through the Requirements phase.
- Participated in multiple telcons on the Colorado Remote Tower Program, the Program has moved to the Site Survey Stage with monthly travel scheduled to Fort Collins scheduled beginning in June.
- Participated in multiple meetings of the NextGen Facilities Outreach Workgroup. This workgroup is focusing on laying a collaborative foundation between ARTCC and underlying Terminal facilities 16-24 months prior to arrival of NextGen technologies to the workplace.
- Participated in ATD-3 Strategic Flow Management Application (SFMA) Demo at MITRE Corporation. SFMA is part of the real time severe weather avoidance dynamic re-route technologies being developed.
- Participated in 2-day Spring Collaborative Decision Making meetings and Stakeholders Workgroup at American Airlines Operations Center in Dallas, continuing the effort advocating for a Charter rewrite that includes NATCA as a member of the Stakeholder Group.
- Participated in QWERTY keyboard evaluation meeting at the William Hughes Technical Center in Atlantic City, NJ.
- Met with Jim Eck, incoming Assistant Administrator for NextGen, to discuss state of NextGen and Agency strategy for mitigating funding shortfalls.
- Participated in 2 day ATD-2 Demo and AEFS Electronic Flight Strips Kickoff meetings at CLT supporting NATCA ATD-2 Representative Pete Slattery.
- Met with PBN Program Manager Donna Creasup, to discuss PBN model facility concepts.
- Traveled 4/4 weeks in this briefing cycle

**REMOTE TOWER:** Kieron Heflin (IAD) represents NATCA in accordance with Article 48 on the Leesburg Remote Tower initiative. Mr. Heflin forwarded the information below for this week's update.

- On April 17th the second round of passive data collection was completed in the R-Twr at Leesburg Airport, which began in the third week of February. This has been titled as Winter Passive Data Collection as what we were hoping to capture was how the R-Twr responded to the different weather and light conditions that are present during the winter months.
  - Also, more data was collected regarding the ability to see and identify targets/traffic during these weather and light conditions.
  - Six current Air Traffic Controllers/SME's were brought in from around the country to collect this data for periods of approximately two weeks at a time.
  - The reasoning behind the two week time frame was that SAAB, who is the designer of the r-twr, feels that controllers become more comfortable with the r-twr the more time they spend in the r-twr environment.

- The work group consisting of NATCA, numerous branches of the FAA, VSATS and SAAB had several meetings, Tel-cons, email exchanges on the need and feasibility on bringing in a radar monitor and radar feed to enhance the "situational awareness" in the r-twr environment. Currently the idea has been shelved and may be possibly resurrected at a later date.
- Currently having weekly meeting's and tel-con's concerning the Concept of Operations for the r-twr put forth by SAAB.
- Currently having weekly meeting's and tel-con's reviewing and commenting on SAAB/VSATS Evaluation plan Phase 1A. The hopes are to have a Mobile Tower set up at the Leesburg (JYO) airport running passively as well as the r-twr running passively and be able to execute a comparative data analysis testing plan.
- Currently having numerous meeting's and Tel con's to hammer out the Leesburg Sequence of Events & Draft Time line for a Safety Risk Assessment Panel. This has been in flux as frequently each step is predicated on the previous step/benchmark being met and if this is not met by any of the party's involved the time line moves.
- The SRAP is a very important part of the process as the risks identified in running the r-twr will be identified and if they can be mitigated to an acceptable level this will be a step towards ultimately actively testing the r-twr.

**RUNWAY SAFETY COUNCIL (RSC):** The RSC is an group in Washington that was created in 2007 to address Runway Safety. NATCA has been active on this council since day one and at one time was the industry co-lead. Chris Stephenson (S&T) represents NATCA on the RSC. Below are the minutes from their last meeting.

- **Meeting Report:** □ The meeting was called to order at 9:08 a.m. by James Fee, AJI-1400, followed by brief
  - introductions made around the room.
- **Runway Safety Metrics**
  - James Fee, AJI-1400, explained that there will be new runway safety metrics coming in 2018. These metrics will be risk-based and more reflective of risk in the NAS as compared to our current metrics.
- **Runway Safety Council**
  - **Runway Status Lights (RWSL)**
    - Discussion on Runway Status Lights research and how to use voice recognition, ASDE- □X, and other technologies to enhance effectiveness of RWSL system. □
    - Commercial runway incursions (RI) are defined as Part 121, 129 and scheduled 135. □
    - General Aviation (GA) RIs are Part 91, 91K, and non-scheduled/charter 135 operations. □
    - There continues to be increasing GA Part 91 Pilot Deviation (PD) RI events. □

- Steve Jangelis (SJ) – parallel runways are a frequent location of RIs, we continue to see □ these happening, several have occurred recently at Dallas Fort Worth (DFW). □
- SJ – Fatigue and night time operations are an issue with Part 121 air carrier operations □ with regards to RIs. □
- SJ – Hear-back, read-back issues continue to happen, possible factor is the fact that the □ communications in cockpit are typically conducted by the First Officer (co-pilot) not the Captain. Need more vigilance/involvement of the Captain when ground communications are taking place to ensure correct information is exchanged (i.e. clearances for take-off, taxing across runways, etc.). □
- SJ – Coded taxi instructions by ATC could help pilots and ATC by providing the entire taxi route in one simple taxi clearance (example, Delta cleared for Taxi Green 1 route at ATL). □
- Ben Marple (BM, ANG) – The following airports did not want to pursue deployment of RWSL systems when initial program was launched a few years ago, including: Atlanta (ATL), Philadelphia (PHL), and Denver (DEN). □ Risk Based Runway Safety Metrics □
- Firdu Bati presented the risk based runway safety model that AJI-333 has been working □ on for the last year. This effort is using both FAA and NTSB data for accidents and □ runway incursions. The data goes back to 1982 from the NTSB database. □
- Risk weighting chart shows all data sets. □
- Chris Pokorski (CP, AVP) – Asked question on Towered vs. Non-Towered airports, there □ are different data collected at these airports, with most of the runway safety (RI) data only collected at Towered airports. Need to consider this fact when looking at the NTSB data as compared to FAA data. □
- Fatalities since 1982 after study of the collision events found to have a higher risk for fatalities. □
- Jake Streeter (JS, AVP) – Consider changing the data set to 2008 to present to take into account the newer data and causal factors. □
- JF – We can certainly look at the causal factors after we develop the risk model.
- **Root Cause Analysis Team (RCAT)**
  - Based on the three events discussed, there appears to be a trend of English Language proficiency issues (especially in the GA related events involving flight school operations). □
  - Discussion on how RCAT recommendations can be specific to facilities (where events occur) but also be relevant across the National Airspace System (NAS) where there are common causal factors influencing RIs. □
- **Runway Safety Council**

- **RSC/RCAT Charter Presentation**
  - The group reviewed the RSC and RCAT charters. There had been several charter workgroup meetings in previous months to refine the language in the draft charters that were circulated for review by the RSC.
  - JF discussed the background on why changes were needed to these charters. □ • There was a discussion on wording of the vision statement and goal statement sections of
  - both charters. One member suggested adding a specific metric in the goal so we know if we have achieved the goal (i.e. Reduce RIs by XX% in the next 5 years). There were opinions expressed in support and opposed to this approach (pros and cons).
  - Agreement that the charter goals should be broad enough to capture risk and include risk- based metrics, not just focus on Category A and B event numbers.
  - JF – our bigger challenge is how we collectively articulate what runway safety efforts are reducing risk in the NAS.
- **Program Update Briefing(s)**
  - Call to Action
  - There were a total of 29 action plans/recommendations generated from the 2015 Call to □Action that are being pursued and tracked. □
  - There will be Call to Action updates presented at each RSC. The focus of these updates □will be those actions that are coming due, for example we reviewed all the actions with a □FY16 due date at this RSC meeting. □
  - Greg Pray briefed RSC on the Call to Action activities with due dates in FY16. □Flight Reviews and Part 142 Training Centers □Joe Foresto (Joe F., AFS) – briefed the RSC on the issue of remedial training for pilots, especially those that were involved in a runway safety event (RI) that need more runway safety training. □
  - Joe F. described the Top 3 causal factors involved with aircraft accidents: loss of aircraft control, runway safety (runway incursions, runway excursions, etc.), and Visual Meteorological Conditions (VMC) flights going into Instrument Metrological Conditions (IMC) flights. □
  - Joe F. emphasized to the industry groups at the RSC that the Part 142 training centers will listen to their customers. If their customers (companies and individuals receiving flight training at a 142 center) ask for a flight curriculum to include runway safety, that the centers will develop that training. It is difficult for the FAA to drive this change; it should come from the pilot/operator community. □

- Joe F. informed group that Order 8900.1, Volume 15 has an entire section on Remedial Training for when pilots have a Pilot Deviation involving an RI or RE event and need to receive additional training.
- Alex G. offered to assist Joe F. with training/outreach to NBAA members/pilots. □ AFS-410 LED Lighting Update □
- AFS had a presentation on the LED lighting topic and how this type of lighting is being evaluated by the FAA. There are testing efforts underway to study this lighting from the
- **Runway Safety Council**
  - Discussed operational perspective, how pilots visually acquire this type of LED lighting, how it is different from incandescent lighting systems and what are the safety/risk impacts of this lighting.
  - Steve Jangelis provided his perspective on LED lighting and is our RSC POC for LED lighting topic. □
  - RSC viewed some of the online training videos that are being developed under the Call to Action outreach and education activities. There was collective agreement that these videos produce great value to the pilot community and more efforts like this should be pursued. □
  - Suggestion that videos be produced at airports to orient pilots to hot spots and ground/taxi operations in a manner that realistically depicts this environment. □
  - Request made to Justin Towles, AAE to help coordinate production of some videos at airports. Some suggested use of small, portable camera platforms, possibly UAS (drones), to video tape at these airports. There were challenges discussed such as access to airports, and use of drones in an airport environment (need for FAA authorization to conduct these operations). □ NOTAM Distribution Project □ Emily Banuelos provided a briefing on the NOTAM Distribution Project. This effort would more effectively disseminate NOTAM information at airports to ensure timely notification of information like runway closures is sent to all parties. She provided an example at Telluride airport in Colorado of an event that occurred when an arriving aircraft for landing did not get this NOTAM of runway closure and landed while a snow plow was operating on the landing runway. □
- **Next Meeting/Closing** □
  - The next RSC meeting was confirmed for July 13, 2016, at ALPA (DC office location). The following meeting is tentatively scheduled for October 12, 2016 (might shift one day to 13th, as the 12th is Yom Kippur holiday). The location for the October meeting is TBD. Jim Fee mentioned there might be the possibility of a delegation from Russia/Eastern Europe that might be attending the October RSC as observers. More information will be provided at the July meeting. □
    - Final comments were provided by Jim Fee and Steve Jangelis, thanking the active participation by all RSC members and stressing



the importance of the RSC as leading advocates for runway safety.

□ **7. Action Items** □ The following are action items resulting from the Runway Safety Council Meeting on May 11, 2016:

- AJI-1410 to collect data on Part 91 PDs on a month by month basis to provide to RSC, specifically Joe Foresto, on the GA percentage increases.
  - Kelly Kohring (KK, AJV-82) – Review differences per 7110.65 between progressive taxi instructions vs. detailed taxi instructions (they are not the same). □
  - RSG will make some revisions to both charters (add some more detail to the vision and goal statements) and re-circulate at the July 13, 2016 RSC meeting for further discussion. □
- **Runway Safety Council**
    - Pat McKay and Jim Fee will coordinate on how to discuss/process recommended changes to the 7110.65 Order.
    - These recommendations have been generated at previous RSC meetings and there should be a more defined process for getting changes incorporated into the Order, since it can be a time-consuming process.
      - This suggestion is also in the Call to Action plans.

**UNMANNED AIRCRAFT SYSTEMS (UAS):** Jeff Richards (ZAU) and Steve Weidner (ZMP) are the primary representatives for UAS activities for NATCA. Below is a report from Mr. Weidner.

- **UAS Unmanned Traffic Management**
  - NASA is leading a research effort to determine the feasibility of a low altitude, unmanned traffic management system. Essentially this would be an air traffic system for low altitude, uncontrolled airspace. NASA recently conducted a large scale test on this system which was a major step forward.
  - The test involved all six FAA test sites and over 20 twenty drones in the air at those six locations (<http://www.avweb.com/avwebflash/news/NASA-Tests-Drone-Traffic-System-226142-1.html>). Mr. Weidner and Mr. Richards continue to engage on this project.
- **Pathfinder 4**
  - You may have read the recent news articles about a reported mid-air collision between a drone and a British Airways B727. Mr. Weidner coordinated with one of his counterparts who works international UAS issues. British authorities believe the collision was real. However it is unknown if DNA testing was done to the aircraft surface to rule out a bird strike. In two instances of reported drone/manned aircraft collisions in the US, DNA tests were done on the collision surface and found that the reported drone strikes were actually bird strikes.

- Mr. Weidner and Mr. Richards are part of the FAA's Pathfinder 4 project. This project is a multi-agency project, working on the testing and development of UAS detection equipment.
- The long range goal is to have equipment that can detect and potentially disable UAS that are being operated in unauthorized areas.
- **Part 107 - The Small UAS Rule**
  - The FAA expects to publish 14 CFR Part 107 - the Small UAS Rule - sometime this summer. While the details of Part 107 have not yet been released, in general this rule will cover UAS operations at low levels for UA's that are generally less than 55 lbs, during daylight hours and within visual line of site of the operator. Part 107 is going to enable - with certain parameters - flight in B, C, D, E and G airspace. Mr. Weidner and Mr. Richards are engaged with the agency on preparation for release and implementation of this new rule. Expect further details and training when the rule is published.
- **XPONENTIAL - AUVSI Conference**
  - Mr. Weidner and Mr. Richards attended the Association for Unmanned Vehicle Systems International (AUVSI) conference in New Orleans earlier this month. This is the largest UAS conference in the world.
  - Mr. Weidner and Mr. Richards attended several sessions relative to UAS integration.
  - In addition to attending sessions and speaking with vendors, Mr. Weidner and Mr. Richards had several meetings with industry and government officials regarding UAS in the NAS.
- **FAA Drone Advisory Council**
  - Earlier this month Administrator Huerta announced the formation of a Drone Advisory Council (DAC) to provide the agency with guidance on how to safely integrate UAS into the NAS.
  - The Administrator has asked Intel CEO, Brian Krzanich to chair the DAC.
  - As a significant safety stakeholder in the NAS, NATCA has applied for membership on this committee.
- **RTCA - Detect and Avoid (DAA) Safety Risk Management Panel (SRMP)**
  - RTCA's Special Committee (SC) 228 is scheduled to deliver its Minimum Operational Performance Standards (MOPS) for DAA by the end of 2016. In preparation for the committee's MOPS recommendations, a SRMP is being conducted to assess the hazards associated with introduction DAA equipment into the NAS. Mr. Weidner is participating on this panel.