CANARIAS ACC OCEANIC SECTOR: COORDINATION AND COMMUNICATION LIMITATIONS

SAFETY HOTSPOT?

Fernando Marián de Diego
Head of the Technical and Safety Department (APROCTA)
v.tecnica@aprocta.es
GCCC OCE SECTOR FACTS

- Non Radar
- Procedural Control MEA/FL460
- Limits GND-MSL/FL999
- VHF/HF COM Not Assured
- 6+2 ATS Units as Collaterals
- Day Flow vs. Night Flow
- EUR/SAM Corridor Monitored by ICAO (SATMA)
- Arr+Dep @ 2 Airports
- RVSM+RNP10
- Offset Approved
- Free Route is Accepted
- Random Routes Accepted
- Class F Airspace Mandatory ATC
- ADS-CPDLC Not Mandatory

FSF 2014 SAFETY FORUM – AIRBORNE CONFLICT (AIRSPACE BUILT IN SAFETY), FERNANDO MARIÁN DE DIEGO (SPANISH ATCO PROFESSIONAL ASSOCIATION – APROCTA)
GCCC OCE OPERATIONAL PROCEDURES FACTS

- FL CHANGES NOT RECOMMENDED
- TIME BASED SEPARATION W/MACH NUM IN EUR/SAM CORRIDOR
- GEOGRAPHIC AND VOR SEPARATION
- TIME BASED AND RNAV LONGITUDINAL SEPARATION
- ADS-C BASE SEPARATION NOT ALLOWED (SACCAN ONLY FOR MONITORING)
- PSEUDOTRACKS SEPARATION NOT ALLOWED
- ADS-PSEUDOTRACK SEPARATION NOT ALLOWED
- SECTOR RESPONSABLE TO COMPLY W/LoA
GCCC OCE WORKING POSITION FACTS

• SACCAN: Sistema Ads/Cpdlc de CANarias

• SACTA: Sistema Automático de Control de Tránsito Aéreo

• SACCAN HMI ≠ SACTA HMI

• ACTIONS BY EC NOT SENT TO PC

• NON RADAR POSITION

• DISPLAY WITH ADS TRACKS + PSEUDOTRACKS

• HF COM HANDLED BY NON ATC STAFF

• OLDI ONLY VIA SACTA (PC)

• NO STCA/MTCA

FSF 2014 SAFETY FORUM – AIRBORNE CONFLICT (AIRSPACE BUILT-IN SAFETY). FERNANDO MARIÁN DE DIEGO (SPANISH ATCO PROFFESIONAL ASSOCIATION - APROCTA)
GCCC OCE INCIDENT ANALYSIS

RECOMMENDATIONS RELATED TO

- Handover Issues
- Training Issues
- ATCO Tasks
- Equipment
- HF COM Office
- Phraseology
- Collaterals/AO

FSF 2014 SAFETY FORUM – AIRBORNE CONFLICT (AIRSPACE BUILT-IN SAFETY). FERNANDO MARIÁN DE DIEGO (SPANISH ATCO PROFESSIONAL ASSOCIATION - APROCTA)
GCCC OCE OPERATIONAL ENVIRONMENT ANALYSIS

- AENA handovers every 37.5 minutes vs. average time flying at the sector is 45 minutes (M078): **SECTOR ROTATION**
- Minimum time for ATCO at OCE is 40’/60 days (usually the standard).
- Max sector occupancy happens at 01am to 03am.
- Number of non-ATS tasks to be done by ATCO in SACCAN are increasing.
- CPDLC HMI prone to error when selecting aircraft callsign: [CPDLC HMI](#)
- Bad VFH/HF COM coverage in non-radar sector enhances limitations for ATCO actions (both for GCCC-GVSC FIR/UIR boundary).
- Canarias HF radio station operates on the FPL w/o checking with crew.
- **SACCAN PHASE 3 (May 2012): HMI SIMILAR TO SACTA (RADAR).**
GCCC OCE WORKING POSITION CONCLUSION

• ATCO works for SACCAN, not SACCAN for ATCO.
• Too many professionals involved in the decision-making: 2 ATCO and 1 radio operator only with verbal coordination.
• Non-ATS task overload in a non friendly HMI impacts on traffic and system monitoring (flight strips, ADS, CPDLC, SACCAN, SACTA and OLDI).
• Non radar working procedures (flight strips) left as secondary vs. SACCAN.
• SACCAN does not monitor/updates pseudotracks FPL; ADS tracks only every 15’; SACTA does it with radar tracks.

• CONCLUSION: OCE has become a bureaucratic sector
WHY ARE THERE MORE INCIDENTES EVERY YEAR?

APROCTA’s PoV:

1. INCREASE IN NON-ATS TASKS TO BE DONE INCREASE THE CHANCE TO MAKE ERRORS: SACCAN IMPLIES WORKLOAD W/O A REAL BENEFIT ON SAFETY?

2. “AUTOMATION” DOES NOT HELP DECREASE WORKLOAD

3. DECREASE IN ATCO PROFICIENCY DUE TO:
   1. VERY FEW (QUALITY) HOURS IN THE SECTOR.
   2. CLOSE TO NONE SECTOR TRAINING OVER THE YEARS.
   3. ATCO COMPETENT ASSESSMENT WITHOUT TRAFFIC.
ICAO SATMA ABOUT 2011-2012 EUR/SAM

CORRIDOR FPL DEVIATIONS: 99% are operational coordination errors in the ATC to ATC transfer or control responsibility: HHFF ISSUES

<table>
<thead>
<tr>
<th>Detail of the operational coordination errors (56 LHD’s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 LHD’s are due to entry into airspace at incorrect Flight Level</td>
</tr>
<tr>
<td>01 LHD is due to entry into airspace at incorrect estimate &amp; Flight Level</td>
</tr>
<tr>
<td>11 LHD’s are due to total lack of data (traffic without estimate over the boundary fix point)</td>
</tr>
<tr>
<td>14 LHD’s are due to no revision by the transferring ACC of the estimate over the boundary fix point</td>
</tr>
<tr>
<td>2 LHD’s are due to estimate for different COP</td>
</tr>
<tr>
<td>1 LHD is due to flight crew climbed without ATC Clearance.</td>
</tr>
<tr>
<td>1 LHD is due to technical issues</td>
</tr>
</tbody>
</table>

REPORT OF THE LHD MONITORING TEAM
EUR/SAM Corridor
ANALYSIS OF REPORTED LHD DURING 2012
ARE THE RECOMMENDATIONS ISSUED POINTING AT THE RIGHT DIRECTION?

EFFECTIVE vs. INEFFECTIVE

- HANDOVER CHECKLIST
- PROCEDURE REFRESHING TRAINING
- ADS TASK CHECKLIST
- PUBLISHING THE ASR INVESTIGATION ONLINE (INTRANET)
- NON SPECIFIC INCIDENT REVIEW

2011: Aprox 50% of safety recommendations were just some kind of a “reminder” to ATCOs
2012: 65%
2013: 67%...
HOW TO REALLY IMPROVE COORDINATION AND COMMUNICATION LIMITATION?

• MANDATORY ADS-C/CPDLC IN THE CORRIDOR

• SPLIT EUR/SAM ROUTES FROM EUR-GVSC ROUTES (MEDIUM HAUL A/C NOT ADS EQUIPPED)

• REAL SACCAN AUTOMATION UNTIL SACTA INTEGRATION

• ATCO TRAINING: ON-THE-JOB + SIMULATOR

• SWITCH POSITIONS IN THE CWP