ASBU and Implementation Challenge

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How SITAONAIR is supporting DECEA ATM transformation

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The Brazilian strategic program that will transform the ATM environment
Data link activities (PFF010):

- To integrate D-ATIS services to ATN in the selected Brazilian airports;
- To integrate DCL services to ATN in the selected Brazilian airports;
- To implement CPDLC in the areas of interest in the Brazilian continental airspace.

Objectives:

- To improve efficiency using data link communication systems;
- Provide better air traffic services, with less misunderstanding in the controllers /pilots communications;
- Improvement of the operational safety.
The Context - The ICAO ASBU Block 0

Performance Improvement Areas (PIA):

- Airport Operations
- Globally Interoperable Systems and Data
- Optimum Capacity and Flexible Flights
- Efficient Flight Path

Block 0
- 5 Modules
- 2013

Block 1
- 3 Modules
- 2018

1. Optimised Approach Procedures including Vertical Guidance
2. Increased Runway Throughput through Optimised Wake Turbulence Separation

1. Improved Operations through Enhanced En-route Trajectories
2. Improved Flow Performance through Planning based on a Network-wide view
3. Initial Capability for Ground Surveillance
4. Air Traffic Situational Awareness (ATSA)

1. Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration
2. Service Improvement through Digital Aeronautical Information Management
3. Meteorological Information Support Enhanced Operational Efficiency Safety

1. Improved Flexibility and Efficiency in Descent Profiles using Continuous Descent Operations (CDO)
2. Improved Safety and Efficiency through the Initial Application of Data Link En-route
3. Improved Flexibility and Efficiency Departure Profiles — Continuous Climb Operations (CCO)
### CHALLENGES
- To provide SIRIUS program with state-of-art air ground data link communication technology
- To respond continued traffic growth in Brazil
- Major step on SISCEAB modernization strategy to support big events (World soccer games in 2014 and Olympics in 2016)

### SAFETY
- To enhance communication between ATC and aircraft users, by adding data to voice
- To ensure communication integrity, specially with foreign airline crews

### EFFICIENCY
- For both ATC and aircraft users:
  - To reduce ATCO and Crew workload by replacing voice by data on routine communication,
  - To reduce the use of voice radio frequencies
- For aircraft users:
  - To improve flight operations
Data link evolution timeline in Brazil

What happened so far...

- 2003: DECEA FANS trial ACC AO
- 2004: ACC AO FANS + stand alone ACW
- 2008: ACC AO FANS X4000
- 2009: DECEA PRE-FANS DATIS (GIG/GRU) DCL (GRU)
- 2010: DECEA PRE-FANS D-VOLMET
- 2012: DECEA PRE-FANS expansion program Dec/2013
- 2013: ATN router Delivery Dec/2015
- 2015: DECEA PRE-FANS expansion concluded DATIS (23 airports) DCL (24 airports). To continue through 2018 by add SDU and VCP
- 2016: SAGITARIO flight trials and ACC AO SAT
- 2017: DECEA VHF Concession RFP

Brazil VHF concession program: 53 ground stations ACARS/VDL M2, ACARS processor and ATN router.

AZUL, AVIANCA and GOL adopted SITAONAIR Flight tracker monitoring tool
Optimizing efficiency and safety at airport operations

- Full adoption by users: today Brazilian airlines (TAM, GOL, AZUL) represent nearly 91% of total generated traffic;
- GRU airport represents 25% of total DKL traffic for D-ATIS.
The next SIRIUS move: continental CPDLC

- Additional Communication Channel
- Safety Improvement
- Increase Capacity
- Reduce Workload
- Reduce Channel Congestion
VHF Data link concession is the foundation for Continental CPDLC.

It provides ACARS and VDL M2 full coverage on Brazilian airspace above FL245 and selected Terminal Areas (TMAs).
SITAONAIR is fully committed to support ANSPs worldwide in implementing ASBUs, from Block 0 to Full 4D Trajectory
muito obrigado !