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ICAO AFI/MID

ASBU Implementation Workshop

ASBU Module B0-FICE Implementation

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RO CNS ICAO MID Regional Office

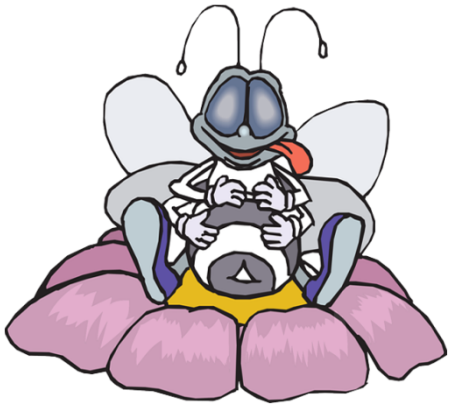
(Cairo, Egypt, 23-26 November 2015)

Outline

- Background
- MID AN Strategy and AFI Strategy
- Toward B0- FICE Implementation
- MIDANPIRG/15
- UAE Experience

Back Ground

- Individual initiatives
- ATN/IPS WG
- WP 38th Assembly
- AIDC Seminar
- AIDC/OLDI Implementation Strategy
- Implementation Phases



Performance Improvement Areas (PIA)	Module	Priority	Module Name
PIA 1: Airport Operations	APTA	**1**	Optimization of Approach Procedures including vertical guidance
	WAKE	2	Increased Runway Throughput through Optimized Wake Turbulence Separation
	RSEQ	2	Improved Traffic Flow through Sequencing (AMAN/DMAN)
	SURF	**1**	Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)
	ACDM	**1**	Improved Airport Operations through Airport-CDM
PIA 2: Globally Interoperable Systems and Data - Through Globally Interoperable System Wide Information Management	FICE	**1**	Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration
	DATM	**1**	Service Improvement through Digital Aeronautical Information Management
	AMET	**1**	Meteorological information supporting enhanced operational efficiency and safety
PIA 3: Optimum Capacity and Flexible Flights – Through Global Collaborative ATM	FRTO	**1**	Improved Operations through Enhanced En-Route Trajectories
	NOPS	**1**	Improved Flow Performance through Planning based on a Network-Wide view
	ASUR	2	Initial Capability for Ground Surveillance
	ASEP	2	Air Traffic Situational Awareness (ATSA)
	OPFL	2	Improved access to Optimum Flight Levels through Climb/Descent Procedures using ADS-B
	ACAS	**1**	ACAS Improvements
	SNET	2	Increased Effectiveness of Ground-based Safety Nets
PIA 4: Efficient Flight Path – Through Trajectory-based Operations	CDO	**1**	Improved Flexibility and Efficiency in Descent Profiles (CDO)
	TBO	2	Improved Safety and Efficiency through the initial application of Data Link En-Route
	CCO	**1**	Improved Flexibility and Efficiency Departure Profiles - Continuous Climb Operations (CCO)

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AFI Strategy

PIA	Module Description	Module	Category	Priority
PIA 1	Improve Traffic flow through Runway Sequencing (AMAN/DMAN)	B0-RSEQ	O	2
	Optimization of Approach Procedures including vertical guidance	B0-APTA	E	1
	Increased Runway Throughput through optimized Wake Turbulence Separation	B0-WAKE	S	2
	Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)	B0-SURF	O	2
	Improved Airport Operations through Airport-CDM	B0-ACDM	E	1
PIA 2	Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration	B0-FICE	E	1
	Service Improvement through Digital Aeronautical Information Management	B0-DAIM	E	1
	Meteorological information supporting enhanced operational efficiency and safety	B0-AMET	E	1

MID AN Strategy (Cont'd)

B0 – FICE: Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration			
Elements	Applicability	Performance Indicators/Supporting Metrics	Targets
AMHS capability	All States	Indicator: % of States with AMHS capability Supporting metric: Number of States with AMHS capability	70% of States with AMHS capability by Dec. 2017
AMHS implementation /interconnection	All States	Indicator: % of States with AMHS implemented (interconnected with other States AMHS) Supporting metric: Number of States with AMHS implemented (interconnections with other States AMHS)	60% of States with AMHS interconnected by Dec. 2017
Implementation of AIDC/OLDI between adjacent ACCs	All ACCs	Indicator: % of FIRs within which all applicable ACCs have implemented at least one interface to use AIDC/OLDI with neighboring ACCs	70% by Dec. 2017

Details on ATM systems to support implementation

State	Focal point contact for AIDC/ OLDI	ATM System	Protocol and Version used	Number of adjacent ATSUs	No of adjacent ATSUs connected by AIDC/OLDI & type of connection	ATM System Capability		Current use		Planned Use		Intention of using AIDC only	Reasons and Remarks
						AIDC	OLDI	AIDC	OLDI	AIDC	OLDI		
Bahrain	Mr. Mohamed Ali Saleh masaleh@caa.gov.bh	Thales TopSky-C	OLDI 2.3 FMTP 2.0	7	None	√	√			√	√	No	OLDI to connect to neighbouring ATSUs

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Toward B0- FICE Implementation (cont.)
Detailed implementation Plan

State/Administration	Location of AIDC/OLDI end system	AIDC/OLDI Pair		AIDC/OLDI standard used	Target date of Implementation	Remarks
		Correspondent Location	Correspondent State/Administration			
1	2	3		4	5	6
Bahrain	Bahrain ACC	Jeddah ACC	Saudi Arabia	OLDI	Q1 2016	
	Bahrain ACC	Riyadh ACC	Saudi Arabia	OLDI	Q1 2016	
	Bahrain ACC	Dammam ACC	Saudi Arabia	OLDI	Q1 2016	
	Bahrain ACC	Doha ACC	Qatar	OLDI	Q4 2015	
	Bahrain ACC	Kuwait ACC	Kuwait	OLDI	Q4 2015	
	Bahrain ACC	Abu Dhabi ACC	UAE	OLDI	Q4 2015	
	Bahrain ACC	Tehran ACC	Iran	OLDI	TBD	

MIDANPIRG/15

CONCLUSION 15/18: MID REGIONAL GUIDANCE FOR IMPLEMENTATION OF AIDC/OLDI

That, the MID Region guidance for the implementation of AIDC/OLDI (Edition 1.1, June 2015) is endorsed as MID Doc 006.

MID Doc 006 (Table of Contents)

B0-FICE Summary

- To improve coordination between air traffic service units (ATSUs) by using ATS interfacility data communication (AIDC) defined by the ICAO *Manual of Air Traffic Services Data Link Applications* (Doc 9694).

- An additional benefit is the improved efficiency of the transfer of communication in a data link environment.

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OLDI Experience Sharing - UAE

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Director ATM

UAE GCAA Strategy

- Integrate ATM systems to the maximum extent possible
- Introduce integrated OLDI where FDPS to FDPS communication is possible
- Introduce standalone OLDI terminals where FDPS to FDPS communication is not possible
- Centralise SSR Code allocation

OLDI Technology

- Communication Protocol
  - TCP/IP
- Message Exchange Protocol
  - EUROCONTROL FMTP 2.0
- OLDI Version
  - OLDI 4.2 (INFPL Compliant)

UAE Message Types

- PAC – Preliminary Activation
- ABI – Advance Boundary Information
- ACT – Activation Message
- COD – SSR Code request
- LAM – Logical Acknowledge Message

UAE Current Implementations

1. Internal
   - Abu Dhabi Airport – April 2009 (standalone – serves Abu Dhabi, Al Bateen and Al Dhafrah)
   - Al Ain Airport – October 2010 (integrated)
   - Sharjah Airport – February 2011 (integrated)
   - Ras Al Khaima Airport – March 2011 (integrated)
   - Dubai Airport – June 2012 (standalone – serves Dubai International, Dubai World Central and Minhad)
2. International
   - Doha Airport – January 2010 (standalone – serves Doha and Al Udeid)

UAE Gains

1. No manual intervention for flights between OLDI partners
2. Reduction in coordination failures
3. Elimination of human errors
4. Better management of SSR codes by automatic allocation of SSR code from a centralised SSR pool
5. Up to 90% reduction in telephone calls
6. Efficient work prioritisation for Flight Data Operators

UAE Future Plans

1. Internal
   - Integrated OLDI with Dubai AT3 system
   - Integrated OLDI with Abu Dhabi THALES system
   - Integrated OLDI with Fujairah ALES system
2. International
   - Integrated OLDI with Doha SELEX system
   - Integrated OLDI with Bahrain THALES system
3. Several round of tests have completed with certain partners in both categories