

Fifth Bangladesh, India, Myanmar and Thailand
ATM Coordination Group Meeting BIMT-ATM/CG/5
18-21 September 2017, New Delhi, India

Agenda Item **. : ATS Inter-facility Data Communication (AIDC)

AIDC IMPLEMENTATION IN MYANMAR WITH ADJACENT ATS UNITS

(Presented by Department of Civil Aviation, Myanmar)

SUMMARY

This paper summarizes the present status of AIDC implementation in Yangon ATCC, Myanmar with adjacent ATSU units.

1 INTRODUCTION

1.1 ATS Inter-facility Data Communications (AIDC) is an effective data link application to reduce the need for verbal coordination and ground-ground coordination errors between adjacent ATSU Units.

1.2 Myanmar started AIDC technical testing after upgrading the ATC automation system at Yangon ATCC. AIDC testing with Bangkok ATCC and Kunming ATCC are started in 2016, after discussing with Thailand and China delegations.

2 DISCUSSION

2.1 Myanmar installed and operated the ATC automation System (THALES, TOPSKY-ATC) at Yangon ATCC in 2010. The APAC AIDC ICD version 2 is being used on ATC automation system installed at Yangon ATCC.

2.2 Myanmar has planned to do AIDC application with neighboring countries Thailand, China and India.

2.3 AFTN/AMHS connection and AIDC Interoperability test have been done with adjacent ATSUs, (Bangkok (Thailand) and Kunming (China)).

2.4 Yangon ATCC tested the sending basic core messages (ABI, EST, ACP, TOC, AOC) with Bangkok and Kunming ATCC. ABI, EST, ACP messages are set as Auto Mode in ATC automation System (TopSky-ATC Thales). TOC and AOC are used as Manual input.

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2.5 Pre-operational test and operational trial will be done between Yangon-Bangkok, Yangon - Kunming as:

- the details of the expected AIDC activities to be carried out together and tentative plan between Yangon ACC and Bangkok ACC

	Activity	Description	Estimated schedule
1	Pre-interoperability test	- AMHS connection Test - COP points	May – July 2016
2	Interoperability test	- Establish interoperability between ATSU's - Two ways AIDC message exchange - Verify workable AIDC messages	Aug 2016 – Aug 2017
3	Pre-operational test	- Test operational scenarios and verified content of the messages with live traffic and real flight plan - ATC to be familiar with automated mean of coordination - Establish automated coordination procedure - Introducing more complex operational scenarios to be tested - Parameter tuning to meet practical operational requirements - Review test result	Oct 2017 – June 2018
4	Operational trial	- Operational trial	July 2018 onward
5	Operational LOA review	- Review overall test results - Review LOA	August 2018

- the details of the expected AIDC activities to be carried out together and tentative plan between Yangon ACC and Kunming ACC.

	Activity	Description	Estimated schedule
1	Pre-interopability test	- Internal test using AIDC Simulator (Yangon ACC) - Internal test using AIDC Simulator (Kunming ACC) - Identify COP points	March 2017
2	Interoperability test	- Establish interoperability between ATSU's - Two ways AIDC message exchange - Verify workable AIDC messages	March. 2017
3	Pre-operational test	- Test operational scenarios using verified messages - Establish automated coordination procedure - Introducing more complex operational scenarios to be tested making use of flight plan track and surveillance track - Parameter tuning to support practical operational requirements	TBD
4	Operational trial	Operational trial with conditions - Specific messages - Specific COP points - Specific scenarios - Specific times	TBD
5	Operational LOA review	- Review overall test results - Review LOA	TBD

2.6 AIDC Data Set with Yangon ATCC and Kunming ATCC

	COP	Parameter (minutes)			XFL
		ABI	EST	TOC	CFL
1.	12 COP points	20	10	Manual	RFL
2.	1 COP point	20 (Consider about to omit sending ABI msg due to mismatch error.)	16	Manual	RFL

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2.7 The further AIDC testing on sending basic core AIDC messages between Yangon and Kolkata, is planned after direct AFTN/AMHS connection is established within two countries.

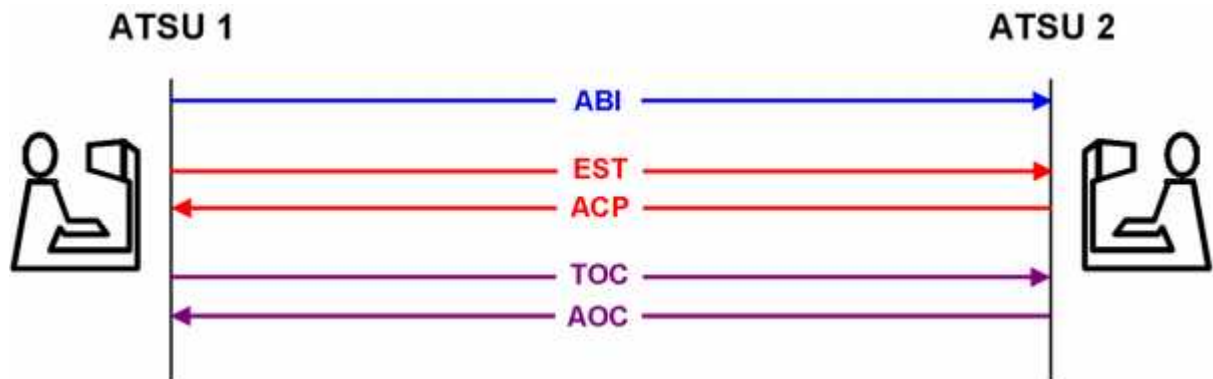
3 ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matter as appropriate.

END

Illustration of use and example message exchange scenarios of 5 core AIDC messages over a particular flight



Example message exchange scenario 1 – Perfect

Transmission/Receipt of	Activate state/HMI	Next expected message
ABI	-	LAM/LRM
LAM	Notifying	EST
EST	-	LAM/LRM
LAM	Coordinating	ACP
ACP	-	LAM/LRM
LAM	Coordinated	TOC
TOC	-	LAM/LRM
LAM	Transferring	AOC
AOC	-	LAM/LRM
LAM	Transferred	All timers reset

Display notification in HMI of ATC automation System , Yangon



AIDC message data in AMHS connection

;807;THA917;ABI;270746;
RCX0807;FF;270746;
VYYFAIDC;VTBBTOPS;
000804;;;170227074637;923A;
(ABI-THA917/A5173-EGLL-LIMLA/0756F350-VTBS-9/B77W/H-15/N0480F310 TEBOV BGO LIMLA)#

;2213;NONE;LAM;270747;
;FF;270747;
VTBBTOPS;VYYFAIDC;
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(LAM)#

;808;THA917;EST;270747;
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VYYFAIDC;VTBBTOPS;
000805;;;170227074722;BEDF;
(EST-THA917/A5173-EGLL-LIMLA/0756F350-VTBS)#

;2213;NONE;LAM;270747;
;FF;270747;
VTBBTOPS;VYYFAIDC;
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(LAM)#

;2213;THA917;ACP;270747;
;FF;270747;
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(ACP-THA917/A5173-EGLL-VTBS)#

;809;NONE;LAM;270747;
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VYYFAIDC;VTBBTOPS;
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;812;THA917;TOC;270749;
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000809;;;170227074932;9971;
(TOC-THA917/A5173-EGLL-VTBS)#

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