

REPORT FROM SOUTHEAST ASIA SUB GROUP
Singapore, 12-13 November 2014

States Present

Australia
China
Indonesia
Thailand
Singapore
Vietnam

Previously Identified Projects

The South East Asia Group provide an update on the near term implementation of the following projects that were identified in the last task force meeting.

Project 1 – ADS-B Data Sharing Between Australia and IndonesiaPhase 1a

Indonesia and Australia sharing data from the following stations:

- Saumlaki ADS-B (Indonesia) (Installed)
- Merauke ADS-B (Indonesia) (Installed)
- Waingapu ADS-B (Indonesia) (Installed)
- Kintamani - Bali (Indonesia) (Installed)
- Thursday Island ADS-B (Australia) (Installed)
- Gove ADS-B (Australia) (Installed)
- Broome ADS-B (Australia) (Installed)
- Doongan ADS-B (Australia) (Installed)

Data Sharing Agreement signed in Nov 2010;

Benefits

Data used for air situational awareness and safety nets.

Enhanced Safety at FIR boundary.

Operational service commenced by Australia in Feb 2011;

Indonesia ~~will~~ published their ADS-B mandate ~~by 2013~~ to be effective after 2016.

Phase 1b

Indonesia and Australia sharing data from the following stations:

- Semarang (Indonesia) (Installed)
- Alor (Indonesia) (Installed)
- Timika (Indonesia) (Installed)
- Kupang (Indonesia) (Installed)
- Christmas Island (Australia) (Not yet installed)
- Timor Sea oil rig (Australia) (Not yet installed)

Data Sharing Agreement signed on 18 Jun 2014;

Project 2 – ADS-B Data Sharing In South China Sea.

Phase 1

Under the near term implementation plan, China, Hong Kong China, Indonesia, Singapore and Vietnam would share the ADS-B data from the following stations:

- Singapore ADS-B (Singapore provide data to Indonesia) (Installed)
- Natuna ADS-B (Indonesia provide data to Singapore) (Installed)
- Matak ADS-B (Indonesia provide data to Singapore) (Installed)
- Con Son ADS-B (Viet Nam provide data to Singapore) (Installed)
- Sanya ADS-B (China provide data to Hong Kong China) (Installed)
- Three more Sanya ADS-B (China provide data to Hong Kong China) (To be installed by end 2014)

VHF radio communication services (DCPC) would be provided from the following stations to Singapore and Hong Kong China. This is to enable implementation of radar-like separations in the non-radar areas within the Singapore FIR as well as routes L642 and M771.

- Natuna VHF (Install for Singapore by Indonesia) (Installed)
- Matak VHF (Install for Singapore by Indonesia) (Installed)
- Con Son VHF (Install for Singapore by Viet Nam) (Installed)
- Sanya VHF (Install for Hong Kong China by China) (Installed)

ADS-B Data sharing and DCPC services agreement between Singapore and Indonesia signed in Dec 2010.

ADS-B Data sharing and DCPC services agreement between Singapore and Vietnam signed in Nov 2011.

DCPC services agreement between China and Hong Kong China signed in 2005.

ADS-B Data sharing agreement between China and Hong Kong China **in progress**.

Operational Status

Singapore agreed on separation minima with Vietnam and have commenced on ADS-B operations.

All 4 administrations (China, Hong Kong China, Singapore, Vietnam) recommend that there should not be a need for operational approval.

Initial Benefits

The above sharing arrangement will benefit L642, M771, N891, M753 and L644. Enhanced safety and reduced separation ~~has been~~ **may be** applied. Mandate ~~was~~ **will be** effective in 2013.

Phase 2

The Philippines CNS ATM project (~~under the review by Department of Transportation and Communication~~) includes Manila ADS-B stations.

Singapore signed an MOU with the Philippines to share ADS-B data from Quezon Palawan.

Brunei previously in-principle agreed to share ADS-B data with Singapore and provide the VHF facilities for Singapore. The Brunei CNS ATM project includes ADS-B stations. The locations of the stations are yet to be determined.

China can share the three additional ADS-B stations in Sanya FIR with neighbouring States. Technical details will be discussed further.

Phase 3

Vietnam has ADS-B coverage at the Southern part of L625 and N892 and Vietnam is willing to share the ADS-B data with the Philippines and Singapore.

Project 3 – ADS-B data sharing between Indonesia and Malaysia (no updates, info based on previous reports)

Indonesia is willing to share the ADS-B data from the following stations:

- Aceh ADS-B (installed) - to help cover Kuala Lumpur FIR
- Tarakan ADS-B (installed) - to help cover Kota Kinabalu FIR
- Pontianak ADS-B (installed) - to help cover Kota Kinabalu FIR.

The project is still under discussion between Malaysia and Indonesia.

Initial benefits

Enhanced Safety at FIR boundary

Malaysia currently has 1 ADS-B station at Terrengganu. Malaysia plans to install more ADS-B stations before 2020. The stations may be shared in future.

Project 4 – ADS-B data sharing between Cambodia, Thailand and Viet Nam (no updates, info based on previous reports)

Cambodia is willing to share the ADS-B data from the following stations:

- Phnom Penh International Airport ADS-B (installed)
- Siem Reap International Airport ADS-B (installed)
- Stung Treng City ADS-B (installed)

Vietnam is planning to install stations in the south of HCM FIR from 2015 to 2016. Vietnam is willing to share with Cambodia and Thailand.

Discussions between the three States are on-going.

Initial benefits

For redundancy

Project 5 – ADS-B data sharing between Indonesia and the Philippines (no updates, info based on previous reports)

Indonesia is willing to share the ADS-B data from the following stations:

- Manado ADS-B (installed)
- Galela ADS-B (installed)
- Tarakan ADS-B (installed)

Where possible, Indonesia would like to receive ADS-B data from the Philippines from ADS-B stations near the Manila FIR – Ujung Pandang FIR boundary

Currently, the Philippines has no plans to install ADS-B stations at the Southern part of Manila FIR.

The project is still under discussion between Indonesia and the Philippines.

Initial benefits

Situational awareness

Project 6 – ADS-B data sharing between Australia, Indonesia and Papua New Guinea

Data Sharing between Australia and Papua New Guinea

- Thursday Island (Australia) (installed)
- Gove (Australia) (installed)
- Kintore (Australia) (installed)
- Burns Peak – Port Moresby (PNG) (tender awarded)
- Mt Dimo Dimo (PNG) (tender awarded)
- Mt Robinson (PNG) (tender awarded)

Data Sharing between Indonesia and Papua New Guinea

- Burns Peak (PNG) (tender awarded)
- Mt Nauwein (PNG) (tender awarded)
- Mt Robinson (PNG) (tender awarded)
- Merauke (Indonesia) (installed)
- Timika (Indonesia) (installed)
- Biak (Indonesia) (installed)

The project is still under discussion between Australia, Indonesia and Papua New Guinea.

Harmonization Plan for L642 and M771

No.	What to harmonize	What was agreed	Issue / what needs to be further discussed
1	Mandate Effective	SG, HK, VN ^[YCN1] : 12 Dec 2013 CN: Dec 2015.	
2	ATC Operating Procedures	No need to harmonize	Refer to SEACG for consideration of the impact of expanding ADS-B surveillance on ATC Operating Procedures including Large Scale Weather procedures.
3	Mandate Publish Date	No need to harmonize	To publish equipment requirements as early as possible.
4	Date of Operational Approval	Recommended to do without operational approval	Pending endorsement by APANPIRG
5	Flight Level	SG, HK, VN, CN: - At or Above FL290 (ADS-B airspace) - Below FL290 (Non-ADS-B airspace) SG: AIC issued 28 Dec 2010, AIP Sup issued 6 Nov 13 VN: AIP Sup issued 31 Oct 13 HK: AIC issued 24 May 2011, AIP Sup issued 29 Oct 13	CN (need to be confirmed) ^[YCN2]
6	Avionics Standard (CASA/AMC2024)	SG - CASA or AMC2024 or FAA (ES) HK - CASA or AMC2024 or FAA (ES) VN - CASA or AMC2024 or FAA (ES) CN (TBC) ^[YCN3] SG, HK and VN confirmed that their ADS-B GS can accept DO260, DO260A and DO260B.	ADS-B Task Force agreed that DO260B will be accepted as well. States should include supplement to include the FAA standard. Status for CN to be confirmed. Indonesia will consider and have a willingness to

			upgrade their stations shared with other States.
7	Aircraft Approval		
7a)	Procedures if Aircraft Not Approved or Aircraft without a Serviceable ADS-B Transmitting Equipment before Flight	SG: FL280 and below. HK, CN, VN: Dependent on situation. ADS-B equipped aircraft will be given priority to operate above FL280.	
7b)	Aircraft Approved but Transmitting Bad Data (Blacklisted Aircraft)	For known aircraft, treat as non ADS-B aircraft. (China, Hong Kong - China and Singapore)	Share blacklisted aircraft among concerned States/Administration.(Hong Kong China, Singapore and Vietnam) China to be confirmed.
8	Contingency Plan		
8a)	Systemic Failure such as Ground System / GPS Failure	Revert back to current procedure.	
8b)	Avionics Failure or Approved Aircraft Transmitting Bad Data in Flight	Provide other form of separation, subject to bilateral agreement. From radar/ADS-B environment to ADS-B only environment, ATC coordination may be able to provide early notification of ADS-B failure.	Address the procedure for aircraft transiting from radar to ADS-B airspace and from ADS-B to ADS-B airspace.
9	Commonly Agreed Route Spacing	SEACG	Need for commonly agreed minimal in-trail spacing throughout.