



International Civil Aviation Organization

The Combined Sixth Meeting of the FANS Implementation Team, Bay of Bengal (FIT-BOB/6) and the Third Meeting of the FANS Implementation Team, South- East Asia (FIT-SEA/3)

Bangkok, Thailand, 22 – 25 November 2005

Agenda Item 5: Central Reporting Agency – South East Asia

FLIMSY No. 3

(Presented by Japan)

1. This Flimsy has been prepared following the discussions on WP/10, and seeks confirmation by the FIT-SEA on the following subjects:

- 1) FIT-SEA members and their roles (definition and listing of members);
- 2) Area of FIT-SEA CRA services;
- 3) Terms of Reference (TOR) of FIT-SEA CRA;
- 4) List of tasks of FIT-SEA CRA;
- 5) Arrangements of data confidentiality agreement between State, Airlines, Data Link Service Providers (DSPs) and the FIT-SEA CRA; and
- 6) Arrangements for submission of problem reports (PRs) to the FIT-SEA CRA.

2. FIT-SEA members and their roles (definition and listing of members)

2.1 The report of the Eleventh Meeting of the South-East Asia ATS Co-ordination Group (SEACG/11) and the First Meeting of the South-East Asia (FIT-SEA/1) held from 24 to 28 May 2004, records as follows (extract from the report):

2.5 The meeting agreed that in order to establish integrated ADS and CPDLC services for the provision of ATS services in the South-East Asia area, it would be necessary to establish a FIT-SEA. Membership of FIT-SEA would be open to all interested parties, including:

- a) South-East Asia States with CNS/ATM work stations;*
- b) Data Link Service Providers (DSPs) (ARINC, SITA & INMARSAT);*
- c) Aircraft manufactures (Boeing & Airbus);*
- d) ICAO;*
- e) International Organisations, and*
- f) Representatives of participating airlines.*

2.6 The FIT-SEA would need to establish the implementation plan, identify the airspace where data link services would be implemented and establish an operational trial. The meeting agreed that in setting up the FIT-SEA, consideration should be given to following the FIT-BOB model and adopting the FITBOB documentation as appropriate.

2.7 The meeting was updated by States responsible for the non-radar airspace over the South China Sea (SCS) on their preparedness to implement ADS and CPDLC. Only Singapore had implemented data link services and was operating ADS and CPDLC since 1997 for ATC in the Singapore FIR. The meeting recognized that as a result of the low level of equipage amongst SCS States, there would be some delay in commencing an integrated operational trial of ADS/CPDLC in the SCS area, probably not until 2006/2007. In light of the delays expected, the meeting agreed that the development of the main work programme would be deferred until the next meeting of FIT-SEA, at which time further information was expected to be available on the status of the facility upgrades of a number of States which were currently at an early stage, and the consequent preparedness of States to commence a trial.

2.8 IATA commented that the users expected States to provide surveillance capability for the non-radar airspace, as improving situational awareness for ATC had a positive impact on safety, as well providing significant benefits for operational efficiency and regularity of flights. On the SCS routes, there was a major area in the middle portion of the airspace outside radar and VHF coverage. Providing data link capability to fill the gap would derive benefits that the airline industry fully supported. IATA expressed disappointment in the delay by States to implement ADS and CPDLC especially in view of the large number of FANS-1/A equipped aircraft operating on these routes, and in view of the requirements of the Asia/Pacific ANP.

2.9 The meeting recognized that it was important to maintain momentum towards implementation and establishment of the FIT-SEA would facilitate this process. Preparatory work could be usefully undertaken to minimize delay in implementation once States were in position to commence an operational trial. Accordingly, the meeting agreed to form the FANS Implementation Team for the South-East Asia area (FITSEA).

2.10 Japan suggested to the meeting that when new ATM equipment was purchased that it should include data analysis tools to facilitate data being available for safety analysis, thereby avoiding the need to upgrade equipment after purchase. The meeting agreed that States should take this into account when planning for ATM system upgrades.

3.1 The meeting reviewed the Terms of Reference (TOR) (Appendix A) and initial Work Plan (Appendix B) proposed by the Secretariat. The proposal was derived from the TOR and initial work plan adopted by the FIT-BOB after discussions at the FIT-BOB/2 meeting (8-12 September 2003). The FIT-BOB meeting also included a review of the Pacific FIT TOR and Work Plan. The meeting agreed that the proposed TORs met the requirements for the establishment of the FIT-SEA and that the proposed Work Plan was suitable for its initial activities. The TOR and Work Plan were accepted by the meeting.

2.2 To ease the reference, the TOR of FIT-SEA and the FIT-SEA Work Plan agreed upon at the SEACG/11 & FIT-SEA/1 are reproduced and attached to this Flimsy.

2.3 It is proposed to re-examine the members of the FIT-SEA based on the agreed TOR of the FIT-SEA and the paragraph 2.5 of the report, and specify the names of members to the extent possible.

3. Area of FIT-SEA CRA services

3.1 FIT-SEA/3 meeting has recognized that it is essential to define the area of services that the FIT-SEA CRA is expected to provide. In this regard, it is proposed that the FIT-SEA CRA will provide CRA services for the airspace outside radar and VHF coverage within the Ho Chi Minh, Manila and Singapore FIRs, where implementation of ADS/CPDLC is considered to enhance surveillance capability, leading to significant benefits for operational efficiency and regularity of flights in the South China Sea area. See the attached chart.

4. Terms of Reference (TOR) of FIT-SEA CRA

4.1 In order to clarify that ADS and CPDLC systems to be implemented in the South China Sea area are based on “FANS-1/A” systems, it is considered more appropriate to revise the proposed TOR of FIT-SEA CRA in WP/10 as follows:

The objective of the FIT-SEA CRA is to assist the FIT-SEA members to plan and implement ADS and CPDLC systems, **which are based on FANS-1/A**, in the South China Sea area in accordance with the TOR of FIT-SEA.

4.2 It is also necessary to add the definition of area in the TOR once it is agreed.

5. Arrangements of data confidentiality agreement between State, Airlines, Data Link Service Providers (DSPs) and the FIT-SEA CRA

5.1 FIT-SEA/3 has confirmed that the offer of CRA services for the South China Sea area by the CRA-Japan is accepted by Indonesia and Viet Nam who were not present at FIT-SEA/2, in addition to the Philippines, Singapore, IATA, IFALPA and the ICAO Asia/Pacific Regional Office who supported the offer at FIT-SEA/2.

5.2 In order for the CRA-Japan to act as the FIT-SEA CRA under the authorization of the FIT-SEA, it is essential that the concerned 3 States, namely the Philippines, Singapore and Viet Nam, shall establish data confidentiality agreement with airlines who will operate in their responsible FIR and participate in the trial, so that PRs from airlines can be collected by the States and be submitted to the FIT-SEA CRA. It is equally important that these 3 States establish data confidentiality agreement with their DSP. Once States conclude such agreement with airlines and DSPs, the CRA-Japan will arrange data confidentiality agreement directly with the States concerned.

5.3 The CRA-Japan as the FIT-SEA CRA can be responsible for analysis of PRs, dissemination of de-identified information on PRs and preparation of periodic reports in accordance with the TOR agreed by the FIT-SEA, as far as PRs are provided by States who enter data confidentiality agreement with airlines, DSP and the CRA-Japan.

6. Arrangements for submission of problem reports (PRs) to the FIT-SEA CRA.

6.1 PRs will be submitted first to the States from ATS providers, airlines, DSPs in accordance with their data confidentiality agreement. The collected PRs will then be submitted to the FIT-SEA CRA without any process on PRs by the States. Submission of PRs to the FIT-SEA CRA from States can be either on a periodic basis, such as weekly or monthly, or whenever PR is available.

7. Conclusion

7.1 FIT-SEA/3 is requested to finalize the above-mentioned matters so that appropriate arrangements will have been made by the States and the CRA-Japan as the FIT-SEA CRA in a timely manner before any trials start in the Ho Chi Minh FIR in 2006 and in the Manila FIR in 2007.

FIT-SEA WORK PLAN

1. Develop and sign a data confidentiality agreement between South East Asia States, airlines using FANS 1/A in the South East Asia region, Data Link Service Providers (DSPs) and the CRA. This agreement ensures that team members can submit identified problem reports to the CRA to facilitate problem resolution and that all problem reports will be de-identified before dissemination to the entire FIT-SEA team.

Action: CRA/States/Airlines/DSPs coordinate with CRA to sign data confidentiality agreement

2. Adopt the FANS 1/A Operations Manual (FOM) and ICAO regional *Guidance Material on CNS/ATM Operation in the Asia/Pacific Region* to establish operating and reporting procedures in the South East Asia region.

Action: FIT-SEA members make appropriate arrangements to incorporate technical, training and documentation aligned with the FOM and ICAO Guidance Material.

3. States/ATSU Providers to ensure controllers are trained to operate their respective FANS 1/A workstations using the FOM and ICAO *Guidance Material on CNS/ATM Operations in the Asia/Pacific Region* as a basis for developing training.

Action: FIT-SEA ATSUs adopt training requirements.

4. Participating operators to ensure flight crews are trained to operate their respective FANS 1/A systems using the FOM and ICAO regional *Guidance Material on CNS/ATM Operations in the Asia/Pacific Region* as a basis for developing training. To obtain operational approval for FANS 1/A from their regulatory authorities as required, operators should take into account appropriate technical material such as: FAA documents “*Controller-To-Pilot Data Link Communication Operational Approval Information Package*” dated 25 February 1999 and FAA AC 120-70.

Action: Operators to implement training requirements as designated by appropriate regulatory authorities.

5. Co-ordinate with all FANS 1/A equipped operators prior to the start of ADS/CPDLC operational trials and urge them to participate.

Action: States/ATSUs to coordinate with operators and IATA for FANS 1/A trial participation.

**FANS IMPLEMENTATION TEAM (FIT-SEA)
FOR THE SOUTH CHINA SEA**

DRAFT TERMS OF REFERENCE

Composition of FANS Implementation Team (FIT)

The FANS Implementation Team (FIT) will consist of representatives from aircraft and ancillary equipment manufacturers, airlines, data communication service providers (DSP), ATS providers, IATA, ICAO, IFALPA, and IFATCA.

FIT-SEA Terms of Reference (TOR)

The FANS Implementation Team for the South East Asia region (FIT-SEA) shall be responsible for system configuration and oversee the end-to-end monitoring process to ensure the FANS 1/A systems are implemented and continue to meet their performance, safety, and interoperability requirements.

FIT-SEA shall:

- a) Determine the common operational architecture to support CPDLC and ADS;
- b) Support the implementation and operational benefits of CPDLC and ADS;
- c) Authorize and coordinate system testing and operational trials;
- d) Develop interim operational procedures to mitigate the effects of problems until such time as they are resolved;
- e) Review de-identified problem reports and determine appropriate resolution;
- f) Monitor the progress of problem resolution; and
- g) Assess system performance based on information in Central Reporting Agency periodic reports.

Preparation of Reports

The Central Reporting Agency (CRA) will report, as required, to FIT-SEA. FIT-SEA will report to the South East Asia ATS Co-coordinating Group (SEACG). ICAO will submit reports to appropriate sub-groups of APANPIRG.

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South China Sea Revised Route Structure

The map illustrates the South China Sea region with a revised route structure. Key features include:

- Geographical Labels:** Major cities and regions are labeled, including Hanoi, Bangkok, Manila, Jakarta, and various islands and coastal areas.
- Flight Paths:** Numerous routes are shown, color-coded and labeled with codes:
 - Red Dashed Lines:** Primary routes, including A1, G466, M767, M751, M758, M759, M761, M768, M769, M771, M775, M776, M777, M778, M779, M780, M781, M782, M783, M784, M785, M786, M787, M788, M789, M790, M791, M792, M793, M794, M795, M796, M797, M798, M799, M800, M801, M802, M803, M804, M805, M806, M807, M808, M809, M810, M811, M812, M813, M814, M815, M816, M817, M818, M819, M820, M821, M822, M823, M824, M825, M826, M827, M828, M829, M830, M831, M832, M833, M834, M835, M836, M837, M838, M839, M840, M841, M842, M843, M844, M845, M846, M847, M848, M849, M850, M851, M852, M853, M854, M855, M856, M857, M858, M859, M860, M861, M862, M863, M864, M865, M866, M867, M868, M869, M870, M871, M872, M873, M874, M875, M876, M877, M878, M879, M880, M881, M882, M883, M884, M885, M886, M887, M888, M889, M890, M891, M892, M893, M894, M895, M896, M897, M898, M899, M900, M901, M902, M903, M904, M905, M906, M907, M908, M909, M910, M911, M912, M913, M914, M915, M916, M917, M918, M919, M920, M921, M922, M923, M924, M925, M926, M927, M928, M929, M930, M931, M932, M933, M934, M935, M936, M937, M938, M939, M940, M941, M942, M943, M944, M945, M946, M947, M948, M949, M950, M951, M952, M953, M954, M955, M956, M957, M958, M959, M960, M961, M962, M963, M964, M965, M966, M967, M968, M969, M970, M971, M972, M973, M974, M975, M976, M977, M978, M979, M980, M981, M982, M983, M984, M985, M986, M987, M988, M989, M990, M991, M992, M993, M994, M995, M996, M997, M998, M999, M1000.
 - Green Dashed Lines:** Secondary routes, including A202, A203, A204, A205, A206, A207, A208, A209, A210, A211, A212, A213, A214, A215, A216, A217, A218, A219, A220, A221, A222, A223, A224, A225, A226, A227, A228, A229, A230, A231, A232, A233, A234, A235, A236, A237, A238, A239, A240, A241, A242, A243, A244, A245, A246, A247, A248, A249, A250, A251, A252, A253, A254, A255, A256, A257, A258, A259, A260, A261, A262, A263, A264, A265, A266, A267, A268, A269, A270, A271, A272, A273, A274, A275, A276, A277, A278, A279, A280, A281, A282, A283, A284, A285, A286, A287, A288, A289, A290, A291, A292, A293, A294, A295, A296, A297, A298, A299, A300, A301, A302, A303, A304, A305, A306, A307, A308, A309, A310, A311, A312, A313, A314, A315, A316, A317, A318, A319, A320, A321, A322, A323, A324, A325, A326, A327, A328, A329, A330, A331, A332, A333, A334, A335, A336, A337, A338, A339, A340, A341, A342, A343, A344, A345, A346, A347, A348, A349, A350, A351, A352, A353, A354, A355, A356, A357, A358, A359, A360, A361, A362, A363, A364, A365, A366, A367, A368, A369, A370, A371, A372, A373, A374, A375, A376, A377, A378, A379, A380, A381, A382, A383, A384, A385, A386, A387, A388, A389, A390, A391, A392, A393, A394, A395, A396, A397, A398, A399, A400, A401, A402, A403, A404, A405, A406, A407, A408, A409, A410, A411, A412, A413, A414, A415, A416, A417, A418, A419, A420, A421, A422, A423, A424, A425, A426, A427, A428, A429, A430, A431, A432, A433, A434, A435, A436, A437, A438, A439, A440, A441, A442, A443, A444, A445, A446, A447, A448, A449, A450, A451, A452, A453, A454, A455, A456, A457, A458, A459, A460, A461, A462, A463, A464, A465, A466, A467, A468, A469, A470, A471, A472, A473, A474, A475, A476, A477, A478, A479, A480, A481, A482, A483, A484, A485, A486, A487, A488, A489, A490, A491, A492, A493, A494, A495, A496, A497, A498, A499, A500.
 - Black Solid Lines:** Tertiary routes, including A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, A13, A14, A15, A16, A17, A18, A19, A20, A21, A22, A23, A24, A25, A26, A27, A28, A29, A30, A31, A32, A33, A34, A35, A36, A37, A38, A39, A40, A41, A42, A43, A44, A45, A46, A47, A48, A49, A50, A51, A52, A53, A54, A55, A56, A57, A58, A59, A60, A61, A62, A63, A64, A65, A66, A67, A68, A69, A70, A71, A72, A73, A74, A75, A76, A77, A78, A79, A80, A81, A82, A83, A84, A85, A86, A87, A88, A89, A90, A91, A92, A93, A94, A95, A96, A97, A98, A99, A100, A101, A102, A103, A104, A105, A106, A107, A108, A109, A110, A111, A112, A113, A114, A115, A116, A117, A118, A119, A120, A121, A122, A123, A124, A125, A126, A127, A128, A129, A130, A131, A132, A133, A134, A135, A136, A137, A138, A139, A140, A141, A142, A143, A144, A145, A146, A147, A148, A149, A150, A151, A152, A153, A154, A155, A156, A157, A158, A159, A160, A161, A162, A163, A164, A165, A166, A167, A168, A169, A170, A171, A172, A173, A174, A175, A176, A177, A178, A179, A180, A181, A182, A183, A184, A185, A186, A187, A188, A189, A190, A191, A192, A193, A194, A195, A196, A197, A198, A199, A200, A201, A202, A203, A204, A205, A206, A207, A208, A209, A210, A211, A212, A213, A214, A215, A216, A217, A218, A219, A220, A221, A222, A223, A224, A225, A226, A227, A228, A229, A230, A231, A232, A233, A234, A235, A236, A237, A238, A239, A240, A241, A242, A243, A244, A245, A246, A247, A248, A249, A250, A251, A252, A253, A254, A2