# 8<sup>th</sup> Meeting of East Asia Air Traffic Management Coordination Group (EATMCG/8)

21-22 May 2015 Hong Kong

#### **MEETING REPORT**

#### 1 INTRODUCTION

- 1.1 The Eighth Meeting of the East Asia Air Traffic Management Coordination Group (EATMCG/8) was held at the Civil Aviation Department (CAD) Headquarters, Hong Kong Airport, Hong Kong, on 21 and 22 May 2015. The meeting was jointly hosted by CAD Hong Kong and the Hong Kong Air Traffic Control Association (HKATCA).
- 1.2 The meeting was attended by 32 delegates from Japan, the Philippines, South Korea, Taiwan and Hong Kong.

#### 2 MEETING OPENING

2.1 Mr Simon Li, Deputy Director General of CAD Hong Kong, presented the opening address to the meeting highlighting the continuing growth of air traffic and the number of airport and ATM development projects in the North East Asia region. The meeting chairman, Mr Mike O'Neill, IFATCA Vice President Asia Pacific Region, then gave a welcoming address to the visiting delegates.

#### 3 ADOPTION OF PROVISIONAL AGENDA

3.1 Working Paper 7, Revision of EATMCG Terms of Reference, was withdrawn. The meeting adopted the Provisional Agenda.

#### 4 DISCUSSION

#### 4.1 REVIEW OF MEETINGS

- 4.1.1 IFATCA gave a brief review of EATMCG/7 meeting and provided information on the Task List that was carried forward for this meeting's attention.
- 4.1.2 IFATCA provided relevant details from recent ICAO meetings held at the Asia Pacific Regional Office.
  - a) Regional Airspace Safety Monitoring Advisory Group (RASMAG) noted the large number of ATC coordination error reports from units that do not have AIDC automated coordination with adjacent units. ICAO considers the implementation of AIDC throughout the region must be a high priority item for ANSPs.

- b) Asia Pacific Air Traffic Flow Management Steering Group (ASP ATFM SG) is promoting the establishment of sub-regional groups to form an ATFM network within the Asia Pacific area. The North Asia Region ATFM Harmonization Group (NARAHG) consisting of China, Japan and South Korea has been formed and the Distributed Multi-Nodal ATFM Network, consisting of Australia, China, Hong Kong, Indonesia, Malaysia, Singapore, Thailand and Vietnam has been created.
- c) South China Sea Major Traffic Flow Review Group (SCS MTFRG) is reviewing the route structure between Hong Kong and the Philippines and the overall arrangement of the FLOS in the South China Sea area and the FLAS for the major traffic routes and the crossing routes.
- d) South-East Asia ATS Coordination Group (SEACG) noted the discrepancies in the coordinates that some States have published for their FIR boundaries and the duplication of reporting point names (five letter name codes or 5LNC) throughout the region. ICAO requested all States to provide accurate information on FIR boundary points and resolve the reporting point names problems with neighbouring states. Hong Kong, China commented that as Taiwan is not an ICAO contracting State they are unable to register in the ICARD system for their own 5LNC codes, therefore it will be difficult for them to resolve this issue.

(NOTE A list of duplicate 5LNC is provided at Attachment 1)

(POST MEETING NOTE The ICAO Regional Office hopes that where other EATMCG members have a duplicate 5LNC with Taiwan, they would assist Taiwan in this matter.)

- 4.2 Japan proposed a plan to reduce the radar separation on certain routes between Fukuoka FIR, Incheon FIR and Taipei FIR. Taiwan advised that because they have to provide 30 NM spacing with Hong Kong and 60 NM separation with the Philippines, they could not accept the proposed changes.
  - (NOTE At a subsequent side bar meeting agreement was reached on establishing new longitudinal radar spacing between aircraft when the following traffic is faster. It is hoped that further coordination between the parties will permit the amendment of the respective LoAs to be finalized.)
- 4.3 As a mark of gratitude for the close cooperation and assistance from their neighbours in the process of implementing CDR Z401, Taiwan presented tokens of appreciation to the delegates from Japan and South Korea.
- 4.4 Taiwan requested Japan and South Korea to consider an extension of operating hours for CDR Z401 to avoid possible confusion over the routing of flights during the current opening and closing times. Taiwan also requested Japan to consider adding FL390 to the FLAS for CDR Z401. In response Japan advised that FL390 was allocated to A593, the busy Shanghai-Tokyo route.

(NOTE At the side bar meeting this item was discussed at length, but the issues could not be resolved.)

- 4.5 South Korea requested Japan and Taiwan to permit southbound traffic on CDR Z401 between 1100-1500 (outside the peak period for northbound traffic). Japan and Taiwan both stated that this proposal would increase traffic at already busy intersections. (NOTE At the side bar meeting this item was discussed with several counter proposals being offered, but no conclusions were reached. However all parties agreed to conduct further discussions on this matter.)
- 4.6 South Korea also requested Japan to consider rerouting traffic inbound to Gimhae/Daegu via SALMI-MIKES-CDR Z401-RUGMA, to relieve the congestion at ATOTI. They also stated that they could accept traffic at RUGMA at any even level during the early morning hours of 1930-2200 UTC.
  (NOTE At the side bar meeting Japan stated they wished to retain the current routing of SALMI-B576-BOLOD-MIKES-CDR Z401-RUGMA, and noted that FL390 at POTET was allocated to the busy A593 route (Shanghai-Tokyo).
- 4.7 Japan informed the meeting of their planned major airspace restructure programme which will commence in 2018 with the replacement of Naha ACC by a new ACC at Kobe. By 2020 a new radar data processing system will be operational to handle the expected increase in traffic for the Olympic Games that will be held in Tokyo in the summer of that year. By 2022 the western en-route airspace within the Fukuoka FIR will be redesigned and by April 2025 the eastern en-route airspace will be restructured.
- Taiwan reported on the increasing number of unknown military flights operating within their airspace. Many of these flights show Mode C altitudes, but because there is no communication with the flight, the levels cannot be confirmed. They requested the adjacent units to pass any traffic information on such flights to them. They also enquired how adjacent units handled such flights It was noted that these flights typically operate with the military 'due regard' procedure of 500' vertical and 3 NM horizontal separation from civil flights. As the intentions of these flights are not known, it was suggested that ATC provides traffic information to civil aircraft and let the pilot decide on the appropriate action.
- 4.9 The Philippines provided details of their ATS Contingency Plan, prepared in accordance with the ICAO Regional Office ATM Contingency Plan.
- 4.10 Japan requested the Philippines to consider revising the FLAS on B462 to the ICAO standard FLOS levels. The Philippines advised that the South China Sea FLAS allocates both odd and even flight levels on B462 due to L625 merging with it at MEVIN. It was noted that this item is directly linked to the review of the South China Sea FLOS/FLAS reported in para 4.1.2 (c) above. With the continuing growth of traffic, the transitions to and from the South China Sea FLOS and the ICAO standard FLOS at the edge of the South China Sea area is causing increasing controller workload.

- 4.11 Japan provided information on the North Asia Region ATFM Harmonization Group (NARAHG) formed by China, Japan and South Korea. They are developing a plan to exchange information on an ATFM Daily Plan (ADP) in line with the ICAO Regional ATFM Plan framework for a sub-regional ATFM network. Japan proposed that discussion about harmonization between NARAHG and the Multi-Nodal ATFM Network should be included in the agenda of future EATMCG meetings.
- 4.12 Hong Kong then gave a presentation on the development of the Distributed Multi-Nodal ATFM Operational Trial Project which currently involves Singapore, Thailand and Hong Kong, with Australia, China (Sanya FIR), Indonesia, Malaysia and Vietnam monitoring the process. It is planned to commence a trial of the project in June 2015 with a 3 month table top exercise to establish the correct flow of information and the communication process for an effective ATFM structure. This will be followed by a further 3 month exercise commencing in October 2015 with exercises to address capacity-demand imbalance. A third stage is planned to commence in February 2016 with the issuing of calculated take-off times (CTOTs) with revisions and cancellations. The trial will also involve airport authorities, some major airlines and the establishment of A-CDM operations at the relevant airports.
- 4.13 Hong Kong provided information on their plan for the transfer of all ATM-related services from the current ACC to a new ACC. Details of contingency plans and ATFM measures during the transition phase were provided.

  (NOTE A side bar meeting between Hong Kong and Taiwan to discuss AIDC tests during the new system's trial period was held. Schedules for conducting technical and interoperability tests were agreed together with the AIDC message formats to be trialled. A detailed test programme will be coordinated prior to commencement of the

trials on 15 October 2015.)

- 4.14 Taiwan gave details of the traffic delays being experienced at Taoyuan Airport due to single runway operations whilst major reconstruction work is being carried out on the second runway. They advised that they are reviewing the current flow control measures and their plans for implementing further restrictions due to the heavy workload that controllers are currently experiencing. The reconstruction work is scheduled to be completed in January 2016.
- 4.15 Japan presented a proposal for collecting traffic data which is related to particular international flow control measures that have been implemented in the past and analyzing the international flow control multilaterally. Hong Kong and Taiwan requested more information on the purpose and outcomes of the study.
  - (NOTE At the side bar meeting Hong Kong asked Japan to advise them of the data Japan needs for the analysis.)

4.16 Japan presented the results of the analysis of the data submitted annually by each State in the Common Report Form on ATFM in East Asia. In addition, Japan requested the ANSPs to use the revised form when submitting their return. There was some confusion as to which version of the form was the 'revised' format. Japan said they would send the new form to all users. Hong Kong noted that the new form required more data concerning FIR boundary times and flight levels. Japan was informed that each State provides the ICAO Regional Office with comprehensive traffic data for the month of December as part of their annual traffic survey. It was suggested that Japan approach ICAO to utilize the data that is already available, as the ANSPs may have difficulty in justifying the need for further data collection now being requested by Japan.

#### 5 NEXT MEETING

5.1 The delegates were requested to consider to location for the next meeting, EATMCG/9. The venue and date of next meeting is currently 'to be notified'.

(POST MEETING NOTE After the meeting had closed, the Air Traffic Control Association Japan offered to host EATMCG/9.)

#### **6 CLOSING REMARKS**

6.1 The Chairman thanked Mr Simon Li, the Deputy Director General of CAD Hong Kong and HKATCA for hosting the meeting. He also thanked the delegates for the very informative presentations and the constructive nature of the dialogue and discussions throughout the meeting. This clearly indicated the cooperative nature of all participants and the value of EATMCG meetings.

## Appendix 1

## TASK LIST FOR EATMCG/9

| No. | Description                                                                                                                                                        | Responsibility                              | Remarks                                                                                                                                                    |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5-1 | Philippines to consider withdrawing use of FL360 on B462 for traffic to Fukuoka FIR                                                                                | Philippines<br>Japan                        | Go through by bilateral discussion between Philippines and Japan. To be updated and reported at EATMCG/8.  ONGOING CLOSED (See 8-2)                        |
| 6-3 | Consider introduction of new radar handover procedures without verbal coordination through automated AIDC system                                                   | South Korea<br>Japan<br>Taiwan<br>Hong Kong | Japan confirms TOC/ AOC could be adopted with Taipei after system modification. Japan will update the test schedule and test plan to Taipei ONGOING CLOSED |
| 7-1 | Review proposal for Hong Kong to pass flow control information direct to Japan and South Korea                                                                     | South Korea<br>Japan<br>Taiwan<br>Hong Kong | Superseded by NARAHG<br>and Multi-Nodal ATFM<br>Plans<br>ONGOING<br>CLOSED                                                                                 |
| 7-2 | Each POC will send the last year's common report form to all POC before 30 April each year by the attachment of email and Japan will collect and share the results | Japan<br>Taiwan<br>Hong Kong                | Forms submitted each year  ONGOING CLOSED (See 8-4)                                                                                                        |
| 7-3 | Designate Hong Kong as liason between ICAO ATFM Steering Group and EATMCG to share ATFM development information                                                    | Hong Kong<br>IFATCA                         | Information provided at each EATMCG Meeting ONGOING CLOSED                                                                                                 |
| 7-4 | FL320 on B576 should be fully released to Fukuoka ACC according to the conclusion of EATMCG/6                                                                      | Japan<br>Taiwan                             | New MoU between Fukuoka ACC and Taipei ACC implemented on 18 September 2014 ONGOING CLOSED                                                                 |
| 7-5 | Notification of RCTP Runway Reconditioning Schedule and Relevant Procedure od Flow Control to be reviewed                                                          | Taiwan<br>Japan                             | Taipei should review the current scheme to see if any solution can be made to reduce the delays  ONGOING  CLOSED (See 8-3)                                 |
| 7-6 | The operation of CDR Z401                                                                                                                                          | Japan,<br>Taiwan<br>South Korea             | Successfully implemented 18 September 2014 ONGOING CLOSED                                                                                                  |

| No. | Description                                                                         | Responsibility       | Remarks                                                                                   |
|-----|-------------------------------------------------------------------------------------|----------------------|-------------------------------------------------------------------------------------------|
| 8-1 | Reduction of radar spacing at transfer points                                       | Japan                | LoAs to be amended                                                                        |
|     | BULAN, MOLKA and SALMI                                                              | Taiwan               |                                                                                           |
|     |                                                                                     |                      | ONGOING                                                                                   |
| 8-2 | Philippines to consider withdrawing use of FL360 on B462 for traffic to Fukuoka FIR | Philippines<br>Japan | Use of FL360 in accordance with South China Sea FLOS/FLAS. SCS MTFRG to review FLOS/FLAS. |
| 0.2 | N. C. C. CRCED                                                                      | T. :                 | ONGOING                                                                                   |
| 8-3 | Notification of RCTP Runway                                                         | Taiwan               | Taiwan will revise ATFM                                                                   |
|     | Reconditioning Schedule and Relevant                                                | Japan                | plan to reduce airborne                                                                   |
|     | Procedure od Flow Control to be reviewed                                            |                      | delays                                                                                    |
|     |                                                                                     |                      | ONGOING                                                                                   |
| 8-4 | Use of revised ATFM Common Report Form                                              | Japan                | Japan will resend new                                                                     |
|     |                                                                                     |                      | form to all users                                                                         |
|     |                                                                                     |                      | ONGOING                                                                                   |
| 8-5 | The analysis of International Air Traffic Flow<br>Control Measures                  | Japan                | Japan will discuss the details with the states concerned                                  |
|     |                                                                                     |                      | ONGOING                                                                                   |

### LIST OF EATMCG/8 DELEGATES

| HONG KONGMike O'NeillVice President IFATCAPatrick YeungSenior Operations Officer, CADMs Sarah WongSenior Operations Officer, CADBen WongSenior Standards and Quality Officer, CADThomson LukEvaluation Officer, CAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| Patrick YeungSenior Operations Officer, CADMs Sarah WongSenior Operations Officer, CADBen WongSenior Standards and Quality Officer, CAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Ms Sarah WongSenior Operations Officer, CADBen WongSenior Standards and Quality Officer, CAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Ben Wong Senior Standards and Quality Officer, CAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| Thomson Luk Evaluation Officer CAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| I wishing the contract of the |
| Wesley Yung Project Officer, CAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Lucius Fan Chief ATM Standards                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| John Wagtsaff Project Officer, CAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| JAPAN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Yoshimichi Hamahata Special Assistant to the Director, ATC Division                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Hiromu Hayashi Special Assistant to the Director, ATC Division                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Mitsutaka Nakamura Chief, ATC Division                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Yukio Imada Air Traffic Management Officer, ATMC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Yasutaka Hashimoto ATC Operation Officer, Fukuoka ACC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Kaoru Taketa ATC Operation Officer, Naha ACC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Deputy Director ATCA Unternational                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Toshio Yoshida Cooperation Service                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Mitsuhiko Ota Corporate Member of ATCAJ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Tatsuya Suzuki Corporate Member of ATCAJ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| PHILIPPINES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Ferdinand Dienzo Chief EnRoute Control Division CAAP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Ms Judy Ann Basimal Supervisor Manila ACC, CAAP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| SOUTH KOREA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Joo Cheul Lee Deputy Director, ATC Incheon ACC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Jun Ho Lee ATC Incheon ACC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Ki Jeon Song ATC Incheon ACC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Hyang Gyu Park Director KATCA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Dong Han Bae KATCA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Kyung Won Park KATCA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| TAIWAN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Daniel Shiue Senior Technical Specialist, CAA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Ms Shen Chia Yu  Technical Specialist, CAA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Ms Tsou Hui Ti Senior Controller, CAA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Liou Chih-Jen Deputy Chief, Taipei ACC, ANWS,CAA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Tony C.T. Lin Supervisor, Taipei ACC, ANWS, CAA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Yao Huan-Shen Coordinator, Taipei Approach, ANWS, CAA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Chen Yi-Wei Controller, Taipei ACC, ANWS, CAA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## Attachment 1

## LIST OF DUPLICATE REPORTING POINT NAMES (5LNCs)

| PROXIMATE 5LNC DUPLICATES - ASIA/PACIFIC |            |              |               |  |  |
|------------------------------------------|------------|--------------|---------------|--|--|
| 5LNC                                     | FIR        | LATITUDE     | LONGITUDE     |  |  |
| DELTA                                    | VIENTIANE  | N 16 00 0000 | E 105 45 0000 |  |  |
| DELTA                                    | BANGKOK    | N 17 20 3500 | E 100 56 0580 |  |  |
| ROBIN                                    | HONG KONG  | N 21 02 4500 | E 114 16 0600 |  |  |
| ROBIN                                    | TAIBEI     | N 25 25 0900 | E 122 12 2800 |  |  |
| SANDY                                    | FUKUOKA    | N 33 43 0995 | E 130 21 3389 |  |  |
| SANDY                                    | INCHEON    | N 37 29 2000 | E 126 34 5900 |  |  |
| BAKER                                    | HONG KONG  | N 21 13 0200 | E 114 39 0700 |  |  |
| BAKER                                    | TAIBEI     | N 25 38 3600 | E 121 52 4800 |  |  |
| OCEAN                                    | HONG KONG  | N 21 48 4300 | E 114 48 4800 |  |  |
| <b>OCEAN</b>                             | TAIBEI     | N 22 07 4857 | E 120 24 5803 |  |  |
| BETTY                                    | HONG KONG  | N 21 29 1080 | E 114 33 3190 |  |  |
| BETTY                                    | FUKUOKA    | N 24 12 2014 | E 125 18 0384 |  |  |
| CHAMP                                    | FUKUOKA    | N 27 55 0709 | E 128 32 0505 |  |  |
| CHAMP                                    | INCHEON    | N 37 32 0200 | E 126 33 3700 |  |  |
| SEPIA                                    | INCHEON    | N 37 21 0900 | E 126 05 4700 |  |  |
| SEPIA                                    | TAIBEI     | N 25 29 1305 | E 121 34 3173 |  |  |
| SKATE                                    | HONG KONG  | N 21 31 5500 | E 115 08 4000 |  |  |
| SKATE                                    | MANILA     | N 17 22 1117 | E 124 25 3655 |  |  |
| HALMA                                    | FUKUOKA    | N 25 53 3496 | E 130 42 4005 |  |  |
| HALMA                                    | TAIBEI     | N 23 11 5536 | E 120 13 4881 |  |  |
| PERID                                    | FUKUOKA    | N 38 09 4480 | E 141 07 4943 |  |  |
| PERID                                    | KHABAROVSK | N 49 20 2500 | E 141 07 4943 |  |  |
| QUEEN                                    | FUKUOKA    | N 31 13 3462 | E 131 33 3657 |  |  |
| QUEEN                                    | FUKUOKA    | N 26 08 2223 | E 122 01 1348 |  |  |
| SANKO                                    | SHENYANG   | N 38 15 0000 | E 122 27 1200 |  |  |
| SANKO                                    | FUKUOKA    | N 33 33 3443 | E 131 16 1723 |  |  |
| SIKOU                                    | HONG KONG  | N 20 50 3600 | E 111 30 0000 |  |  |
| SIKOU                                    | TAIBEI     | N 24 02 3291 | E 119 58 4217 |  |  |
| UXENA                                    | CHENNAI    | N 12 27 4491 | E 080 49 4520 |  |  |
| UXENA                                    | MUMBAI     | N 19 34 4500 | E 080 56 5100 |  |  |