AGENDA ITEM 2.3: ATS CO-ORDINATION GROUPS' ACTIVITIES

2.3 ATS Co-ordination Groups' Activities

2.3.1 The meeting noted the commendable work done by the various Co-ordination Group meetings. It was also noted that these Co-ordination Group meetings continue to address CNS/ATM implementation issues within their areas of responsibility, which is in accordance with APANPIRG Conclusion 8/32. A summary of these meetings is in **Appendix A** to the Report on Agenda Item 2.3.

2.3.2 The Bay of Bengal ATS Co-ordination Group did not meet in 2002, as was the case in 2001, as their primary work was integrated into the EMARSSH Task Force meetings, which is detailed in Agenda Item 2.1 of this Report.

2.3.3 The meeting noted the work regarding the Informal Pacific ATC Co-ordination Group (IPACG), the Informal South Pacific ATS Co-ordination Group (ISPACG) and the Russian/American Co-ordinating Group for Air Traffic Control (RACGAT) work programme. These important groups were instituted on either a bi-lateral or multi-lateral arrangement, to deal with ATC issues especially items such as ATS routes and procedures. The meeting recalled that each of these groups was responsible for implementing ATM operational enhancements along one or more of the major traffic flows of the Asia Pacific Region in full support of the activities of APANPIRG and ICAO. It was also recalled that the RACGAT forum was actively contributing to the work of the ICAO Informal Trans Asia/Trans Siberia/Cross Polar Routes High Level Steering Group (ITASPS), which is co-ordinating the implementation of ATS routes across Russia and surrounding States including the Polar Route Network.

2.3.4 In regard to this informal meeting, the meeting was advised that attendance by ICAO Officers incurred considerable time and expenses from the Regional Office resources and questions were raised as to the benefits gained in the overall regional programme.

2.3.5 The meeting was sympathetic to the constraints of the Regional Office, but was clearly of the view that ICAO attendance added considerable value to the work of such informal ATS Co-ordination Groups. Thus the meeting sought the continued support of the Regional Office. The meeting also considered that a review be made to ensure there was no excessive overlap by these informal groups.

2.3.6 The meeting was further advised that as a result of a decision of the Fourth Meeting of the ICAO Informal Trans-Asia/Trans-Siberia/Cross Polar Routes High Level Steering Group (ITASPS/4) meeting held in Paris, France in January 2001, Three Special Meetings between China, Mongolia, Russian Federation and IATA under the auspices of ICAO were conducted to study possibilities for further improvements in the alignment and use of cross-polar routes at their south ends.

2.3.7 The meeting was advised that two Special Coordination Meetings on Afghanistan were held in 2002. The first meeting was held in Dubai, U.A.E. on 9-10 May 2002. The purpose of this meeting was to review the present situation regarding the provision of Air Traffic Services within Afghanistan, including the authorization and promulgation of AIS (including NOTAM issue) and to develop a Contingency Air Traffic Management plan for the Kabul FIR, due to the lack of air traffic services within the Kabul FIR due to military action that had taken place as a result of the tragedy in the US on 11 September 2001.

2.3.8 A Second Special Coordination Meeting on Afghanistan was held in Bangkok, Thailand at the ICAO Regional Office on 29-30 August 2002, to discuss civil/military issues in and around the Kabul FIR in the theatre of military operations involving the Coalition Forces.

2.3.9 The meeting was advised that further meetings of this nature under the auspices of ICAO between the States concerned, the Coalition Forces and IATA would be scheduled every six months to continue the civil/military coordination which will ensure the safety of all aircraft in the

area concerned. It was agreed that the next meeting would be held in March 2003 at a date and venue to be decided.

2.3.10 The meeting was advised that with the present increase in military activity within and adjacent to the Asia Pacific Region, a heightened awareness in civil/military coordination is required. States need to exercise vigilance and continue their coordination with their neighbouring States as well as ICAO advising of any new activity or increase in military activity which may affect civil international operations.

2.3.11 The meeting was also advised that consideration should be given to convening a Regional Civil Military Seminar and, if necessary Sub-regional workshops on this subject, where there has been an increase in military operations.

2.3.12 The meeting noted the cooperative work achieved as a result of these two Special Coordination meetings on Afghanistan and gave their strong endorsement to the following conclusion.

Conclusion 13/34 – Strengthening the Civil/Military Coordination Programme

That, due to an increase in military activity within and adjacent to the Asia Pacific Region,

- 1. States are urged to:
 - a) remain vigilant with regard to military activity within or near their area of responsibility;
 - b) continue effective civil/military coordination with military authorities concerned; and,
 - c) advise and coordinate with adjacent States and ICAO of any significant increase in military activity which may have an affect on international aircraft operations.
- 2. ICAO to arrange an Asia/Pacific Regional Seminar on Civil/Military Coordination and, if considered necessary, to follow-up with sub-regional Civil/Military Co-ordination Workshops in areas as deemed appropriate.

SUMMARY OF ATS CO-ORDINATION GROUPS' ACTIVITIES

1. Special ATS Co-ordination Meeting between China, Mongolia, The Russian Federation and IATA (CMRI)

1.1 Three meetings have been held by the group to date to study possibilities for further improvements in the dignment and use of cross-polar routes at their south ends was arranged by ICAO Asia/Pacific. The last meeting was held in Beijing, China on 9-11 April 2002. There has been significant progress in work by States concerned to increase the number of entry/exit points from Cross-Polar routes (CPR) into/out of China.

1.2 Nevertheless, the lack of a procedure to allow the airline to change to a different international route/entry point into China on the day of flight, does not allow the airline the option to effectively manage the critical elements of flight planning for these Cross-Polar operations. Therefore, airlines flying CPR flights today choose an entry point that allows the greatest number of cross-polar options into their single approved Chinese point of entry. The only intersection that allows transitions from all four cross-polar tracks, is INTEK on A575.

1.3 Until these flight-planning issues are resolved, the Cross-Polar Track System cannot realise its potential as a viable route system for long range non-stop service between Asia and North America. Unfortunately, many of the routes developed over TELOK, MORIT, or SIMLI could not be used because the operational and/or commercial risks are too high if only one of these points mentioned above were to be designated as the single point of entry into China. If 4-5 of these border-crossing points could be pre-approved by China then most flight plan requirements would be covered.

1.4 The ICAO secretariat suggested that an interim solution which would allow an airline up to three approved border crossings into China per scheduled flight should be considered. IATA advised that the solution offered by ICAO would greatly benefit flight operations and if combined with a favourable air transport agreement with China, Russia and Mongolia should transform the cross-polar tracks into a marketable track system with new city pair services between Asia and North America.

1.5 China advised that they would consider the ICAO interim proposal and report back to ICAO with its findings.

2. 11th Meeting of the Russian/American Coordinating Group for Air Traffic Control (RACGAT) 12 – 15 November 2001, Moscow, Russian Federation

2.1 The meeting was attended by representatives of the SCAA of Russia, the United States FAA, the Civil Aviation Bureau of Japan, the Civil Aviation Authority of Mongolia, NAV CANADA, International Civil Aviation Organization (ICAO), International Air Transport Association (IATA), Russian State ATM Corporation, the Russian Main Air Traffic Flow Management Center (MATFMC), Russian meteorological services, Russian ATC Enterprises from Northern Siberian and Far East Regions of the Russian Federation, Anchorage ARTCC, FAA Alaskan Region, Cathay Pacific Airways, Japan Airlines, All Nippon Airways, U.S. Airlines (United, Northwest, Continental, UPS), the Russian air carriers (Aeroflot, KrasAir, Sibir Air, Transaero, Volga-Dnepr) and The Boeing Company.

2.2 Discussion of action items took place in the Air Traffic Services (ATS) and Air Traffic Control Modernization Committee (AMC) Sub-groups. An Air Traffic Flow Management (ATFM) sub-group was created by the ATS sub-group to address ATFM issues.

2.3 The Russian Federation Representative advised that RACGAT gains growing interest of the users who actively participate in decision-making process. Within the framework of the group several projects have been launched, including operations over the Arctic Ocean along Cross Polar routes. The project proved to be attractive to the world aviation community and in the Russian Federation. President of the Russian Federation Mr. V. Putin had been made aware of the project. Various companies have operated over 1,000 flights, mainly North to South via RFE, and backwards via NORAC routes. Representatives of the Users who participate in RACGAT meetings did not limit themselves to establishing the routes, they followed these activities till their implementation. The flights have demonstrated some shortcomings: quality of communication in some areas, volcanic activities, and necessity of air traffic management. Attractiveness of these routes also depends on the enhancement of their alignment within Mongolia and China. Further development of the route structure will ensure the growth of passenger interest and better evaluate RACGAT activities.

2.4 The US advised that work continues despite the tragic events on September 11 and their effects on the aviation industry. In the past few weeks, dramatic reductions in demand occurred across many of the airways that RACGAT is concerned with. The US stated that the objective in this meeting was to accomplish the technical work that improves the safety and efficiency of the air traffic management system. He advised the meeting of specific objectives identified by the United States to improve service in the near-term: Kamchatka Four and Polar 4A, volcanic activity reporting within our respective meteorological weather systems, the progress made between Russia, Mongolia and China toward adding capacity across their common FIR borders, improving the state of communication systems between our respective regions and to refining the operating agreements to take advantage of the lessons we learn together in operating this air traffic system. Steve advised the group that these goals or tasks cannot be achieved without their participation. He encouraged all participants to add their ideas in the search for solutions.

2.5 Outstanding action items were discussed in sub-group meetings who then reported back to the Plenary Meeting of RACGAT/11. A list of action items is listed below:

- a) R1-ATS-2 SCAA and JCAB will evaluate Kamchatka Four as a new route 100nm north of R220
- b) R3-ATS-5 To allow aircraft to transition between assigned altitudes (to/from meters-feet) on G-583 in Russian airspace where the aircraft is laterally separated from R-220
- c) R7-ATS-4 Ensure funding for the Kamchatka Volcano Eruption Response Team (KVERT)
- d) R9-ATS-1- Establish a general aviation VFR route between Nome, Alaska, to Providenya Bay in the Chukotka region.
- e) R10-ATS-1- New Transition Route from Polar 4 to B337 via UESO direct to BA (NDB) direct to ODORA. Altitudes requested are 9600 meters, 10,600 meters, and 11,600 meters
- f) R10-ATS-2 To provide availability for FANS equipped aircraft to operate on A218 at 9600 meters west of Mys Schmidta. **Completed and closed**
- g) MR5-ATS-3 Assess the feasibility of Reduced Vertical Separation Minima (RVSM) within Oceanic Airspace Delegated to Russian Federation
- h) R11-ATS-1 New Routes for Investigation in Regions

- i) New Route segments proposed by IATA at RACGAT/11:
 - i) LISKI Pevek Oymiakon Chagda
 - ii) N72°00 W168°58.4 Pevek Omolon Takhtayamsk
 - iii) N72°00 W168°58.4 VIKBI
 - iv) Chokurdah Oymiakon Okhotsk Okha LIKON AKSUN
 - v) Okhotsk Nikolaevsk-na-Amure
- R11-ATS-2 Expand Available Altitudes Between LISKI and Mys Schmidta to Include 9600 Meters
- k) R11-ATS-3 Evaluate Use of A218 West of Mys Schmidta by Non-FANS-Equipped Aircraft
- R11-ATS-4 Evaluate and propose possible ways of improving the NOTAM exchange in order to support the flights on Cross-polar and RFE routes. Completed and closed

3. 6th Mini-Russian-American Coordinating Group for Air Traffic Control (RACGAT) Meeting, 20-23 May 2002

3.1 The Mini-RACGAT/6 meeting was held in St. Petersburg, Russia, on 22-25 April 2002. Mr. Yuri Averianov of the State Civil Aviation Authority of Russia (SCAA) and Mr. Steve Creamer of the Federal Aviation Administration (FAA) chaired the meeting.

3.2 The meeting was attended by representatives of the SCAA of Russia, the United States FAA, the Civil Aviation Bureau of Japan, the Civil Aviation Authority of Mongolia, NAV CANADA, International Civil Aviation Organization (ICAO), International Air Transport Association (IATA), Russian State ATM Corporation, Russian ATC Enterprises from North West, North East, Chukotka, Kamchatka, Northern Siberian and Far East Regions of the Russian Federation, FAA Alaskan Region, Cathay Pacific Airways, Japan Airlines, U.S. Airlines (United, Northwest, Continental, Delta), and Jeppesen.

3.3 The Representative from the United States gave the national and regional reports for United States and Anchorage ARTCC. A report was given on the Anchorage airspace delegation issue. After careful consideration, Anchorage will not delegate a portion of their Arctic FIR to NAV CANADA. The shape of the airspace demands careful coordination, communication and procedures with Russia and NAV CANADA. The United States reported on several technical issues including RVSM and reduction of longitudinal separation. The FAA has submitted an amendment to ICAO DOC 7030 to reduce the longitudinal separation from 20 minutes to 10 minutes within the Anchorage Arctic FIR. Reduction of ATFM separation has also been accomplished. On 21 March the Anchorage ARTCC has the ability to adjust the slot time allocations in the RFE from 25 to 20 minutes. Anchorage is still using 25 minutes over LISKI via A218. Anchorage is awaiting ICAO amendment approval to reduce separation. Mr. Creamer also reported on work with ARINC at Barrow, Alaska. A HF Data link facility is operational and Anchorage is working on exploring voice capability. The system would not be air traffic certified, however the facility could be used as a back-up facility. The US also advised the meeting of the work on ADS-A in Anchorage airspace and the implementation of a new Flight Data processing system in Nov 2001.

3.4 The Russian Federation Representative advised that the technical modernization plans that serve the cross-polar and RFE routes was a complicated task, including new buildings and technology including CNS/ATM. Radar sites will be equipped with secondary RADAR. Plans include installation of 11 node and 77 end-user satellite stations to provide communications between ACCs. It also involves remote VHF relay stations, HF systems, VOR and DME installation.

3.5 He reported on RVSM implementation in Kalinigrad on 24 March 2002. This year, the SCAA plans to test RVSM in Rostov FIR over the "high seas." In conclusion, Yuri advised that several new link routes were submitted for approval, however not all have been approved due to coordination requirements with MOD.

- 3.6 The following outstanding action items were discussed:
 - a) SCAA and JCAB will evaluate Kamchatka Four as a new route 100nm north of R220
 - b) Install permanent satellite voice line between Anchorage ARTCC and ACCs at Petropavolvsk-Kamchatsky and Anadyr
 - c) To allow aircraft to transition between assigned altitudes (to/from meters- feet) on G-583 in Russian airspace where the aircraft is laterally separated from R-220
 - d) Install AIDC systems (system of interaction between air traffic controllers in the data transmission mode)
 - e) Ensure funding for the Kamchatka Volcano Eruption Response Team (KVERT).
 - f) Air-ground communication requirements for polar routes
 - g) HF air-ground data link system
 - h) Installation of additional remote VHF stations.
 - i) Implement a VFR general aviation route between Wales, Alaska, direct to Providenya on the Chukotka peninsula at a minimum altitude of 1500 meters.
 - j) Establish voice communications between the ACCs of Chita, Blagoveshchensk, Khabarovsk, Irkutsk, Kyzyl, Barnaul, Vladivostok and their adjacent ACC's in China, Mongolia and North Korea
 - k) Develop a new transition route from Polar 4 to B337 for aircraft destined Japan, Republic of Korea, China and Hong Kong
 - 1) Study the availability for FANS equipped aircraft to transient A218 at 9600 meters west of Mys Schmidta. **Completed and closed**
 - m) Investigate options for back-up interfacility communications for Anchorage and the RFE centers
 - n) Implement interim and final solutions to transmit MET information for operations on polar and RFE routes
 - o) Assess the feasibility of Reduced Vertical Separation Minima (RVSM) within Oceanic Airspace Delegated to Russian Federation
 - p) Develop Catalogue for New Routes for Investigation in Regions. Completed and closed
 - q) Expand Available Altitudes Between LISKI and Mys Schmidta to Include 9600 Meters

- r) Evaluate Use of A218 West of Mys Schmidta by Non-FANS-Equipped Aircraft
- s) Evaluate and propose possible ways of improving the NOTAM exchange in order to support the flights on Cross-polar and RFE routes. **Completed and closed**
- t) Develop an interfacility communications architecture that supports polar, RFE, and associated routes. This architecture should be harmonized with national modernization plans
- u) Identify weather requirements to support VFR General Aviation route B369, including requirements for MET products from Providenya Bay and Lavrentiya airports
- v) Identify the means of exchange of volcanic ash information
- w) Identify appropriate flight level assignment to address RVSM and the feet/meter conversion issue while maintaining conventional vertical separation at the common Anchorage/Magadan and Anchorage/Murmansk FIR boundary
- x) Standardize separation minima in the Arctic Region between SCAA, NAV CANADA and FAA
- y) The MATFMC, ATCSCC and NAV CANADA Flow Management will compile data on flights using the Cross-polar and trans-east routes for use in traffic analysis and forecasting
- z) Investigate Increased Access to B233 for Flights Operating During Weekdays

4. 17th Meeting of the Informal Pacific ATC Co-ordinating Group (IPACG/17) 15 - 19 April 2002, San Francisco, California, U.S.A.

4.1 Some notable items which were discussed at this meeting included:

50 NM ADS Longitudinal Separation Minimum in the NOPAC and CENPAC

4.2 JCAB briefed on the implementation of 50 NM automatic dependent surveillance (ADS) longitudinal separation minimum in the North Pacific (NOPAC) and Central Pacific (CENPAC) airspace. JCAB advised that the Oceanic ATC Data Processing System (ODP-3) required a software upgrade and system evaluation prior to a phased implementation of 50 NM longitudinal separation minimum. The initial plan is to replace controller-pilot data link communications (CPDLC) waypoint reporting with ADS waypoint reporting. The application of 50 NM longitudinal separation minimum for step climbing and descending aircraft will be introduced in 2003 within Tokyo oceanic airspace. JCAB intends to implement the 50 NM longitudinal separation minimum using ADS for aircraft at cruise when MTSAT-1R becomes operational in 2004.

Implementation of RNP10 in the Japan/Hawaii PACOTS

4.3 JCAB presented a working paper describing a plan for the implementation of RNP10 in the Japan/Hawaii PACOTS. The implementation plan proposed that Tokyo ACC and Oakland ARTCC could begin generating tracks on the Japan/Hawaii PACOTS with at least 50 NM separation on 3 October 2002. The tracks would be expanded to a minimum of 2 degrees 100 NM track spacing if convective weather was forecasted.

Enhancement of airspace capacity between Hong Kong, Tokyo and beyond to North America.

4.4 IATA requested the group's consideration for additional ways to enhance airspace capacity for aircraft departing from Hong Kong and Taipei entering Naha and Tokyo ACC's airspace bound for North American destinations. JCAB agreed to consider the possibility of reducing the 15-minute requirement and will study the parallel route issue and present their progress at the next meeting.

4.5 Various issues were discussed at the Fans Interoperability Team (FIT) Meeting. These included:

- a) Uplinks with Multiple Message Elements;
- b) North and Central Pacific Operations Manual;
- c) Status of New JCAB CRA and CRASA;
- d) Problem Report Summary;
- e) CPDLC Auto Transfer;
- f) Statistical Analysis on CPDLC Message Type;
- g) Statistical Analysis on CPDLC Response Time to ATC Clearances;
- h) CPDLC Altitude Reports; and,
- i) ADS Emergency

Proposed Seminar on Datalink Operations

4.6 JCAB proposed that it would be beneficial for the operators and providers if a seminar on datalink operation were held. IATA strongly supported the proposal and suggested that the NCPOM should be used for such a seminar.

5. 16th Meeting of the Informal South Pacific ATS Coordinating Group (ISPACG)

5.1 The sixteenth meeting of the Informal South Pacific ATS Coordinating Group (ISPACG) was hosted by Le Service d'État de l'aviation Civile en Polynesie Française (SEAC) and held at the Beachcomber Intercontinental Hotel, Papeete, French Polynesia, from 11-15 February 2002.

- 5.2 Accomplishments of the meeting
 - a) Agreed to a trial in which RNP-10 would be required on PACOTS Tracks 20, 21, W and X;
 - b) Agreed to include a standard clause on data management in the letters of agreement;
 - c) Reviewed the lost communication procedures and identified differences for resolution;
 - d) Reviewed existing contingency plans and agreed that they are adequate;
 - e) Satisfactorily resolved concerns from airlines regarding reductions in distancebased longitudinal separation though application of the time-based "Rule of 11's"; and
 - f) Development of a capacity enhancement/action table for use by ISPACG to track the progress toward implementation of operational benefits to airspace users. This table is included as part of the report and is to be reviewed and updated for the next meeting as on ongoing agenda item.

6. Special ATS Coordination Meeting on Afghanistan (SCM/AFG/1), Dubai, UAE – 9/10 May 2002

6.1 On 9-10 May 2002, a Special ATS Coordination Meeting between States concerned and the Coalition Forces, was held in Dubai, United Arab Emirates under the auspices of ICAO. The purpose of the meeting was to review the present situation regarding the provision of Air Traffic Services within Afghanistan, including the authorization and promulgation of AIS (including NOTAM issue) and to develop a Contingency Air Traffic Management Plan (CATMP) for Transit of the Kabul FIR by International Civil Aircraft. The meeting was attended by Afghanistan, I.R. Iran, Pakistan, Tajikistan, United States of America, the Coalition Forces (CF) including the Regional Air Movement Control Centre (RAMCC), United Nations Joint Logistics Centre, ICAO MID and APAC offices and the International Airline Transport Association (IATA).

6.2 This meeting was extremely productive and allowed all parties, to better understand the CF requirements with respect to Afghanistan and adjacent airspace. A revised NOTAM procedure was agreed to assist in identifying the lower airspace requirements and restrictions compared to ATS routes within the band of airspace between FL310 and FL390, previously released to the Afghanistan Ministry of Civil Aviation and Tourism for transiting international civil aircraft to operate through the Kabul FIR by the CF. The meeting was also presented with a Draft Contingency Air Traffic Management Plan (CATMP) for Transit of the Kabul FIR by International Civil Aircraft. This plan required changes to the present route structure which had been previously agreed to by the CF within the same band of flight levels plus some additional necessary adjustments. The meeting should note that subsequently, the CATMP has been agreed to by the CF, approved by the President of the ICAO Council in accordance with ICAO procedures and implemented on AIRAC date of 5 September, 2002.

7. Special Coordination Meeting on Afghanistan (SCM/AFG/2) Bangkok, Thailand, 29–30 August 2002

7.1 At the request of the President of the ICAO Council, the ICAO APAC office held the second Special Coordination Meeting on Afghanistan (SCM/AFG/2) Bangkok, Thailand, 29 - 30 August 2002. The purpose of this meeting was to endeavour to better understand the civil/military requirements for airspace in and adjacent to the Kabul FIR and to find solutions to current problems that would continue the safety and efficiency of operations in accordance with ICAO Standards by international civil aircraft operating in this area.

7.2 The meeting was attended by Afghanistan, India, Oman, Pakistan, United States of America, members of the CF operating airspace in Afghanistan and the International Airline Transport Association (IATA).

7.3 Over the past three months, there had been four reported serious incidents between international civil aircraft and military transport or combat aircraft in or close to the Kabul FIR. On all occasions, the military aircraft involved was flying at the same IFR altitude as the civil aircraft with no known ATC clearance, crossing ATS routes which had been reserved for civil aircraft by agreement with the CF.

7.4 All of these occasions required the civil passenger aircraft to take avoiding action, either by following the TCAS resolution advisory (RA), or by an ATC instruction to change heading.

7.5 ICAO Annex 2, Appendix 3 para b) to the Convention on International Civil Aviation lists the altitudes for VFR Flight above FL290 as even altitudes, e.g. FL300, FL320, FL340 etc. It therefore seemed appropriate that, in order to harmonize civil and military operations for the benefit of all concerned, when military aircraft have an urgent operational requirements to cross routes which have been allocated to international transiting aircraft through the Kabul FIR or within an adjacent FIR, they do so either at FL290 and below or if necessary, at even VFR altitudes above FL290.

7.6 Under the current arrangements control authority rests with the CF for the Kabul FIR. The Coalition had delegated five ATS routes or corridors through the Kabul FIR with restricted flight levels bands to be managed by MOCAT for international civil overflights operating between Asia and Europe. Two routes, V838 and V888 (FL 310-390) are the primary trunk routes where the incidents described above had occurred.

7.7 At the SCM/AFG/1 meeting at Dubai, the CF representative pointed out that strict procedures were in place for military aircraft that were required to operate the ATS routes (corridors) delegated to MOCAT. All such aircraft, when under the control of the Airborne Early Warning (AEW) aircraft, were not permitted to climb or descend within a radius of 20 NM around the civil aircraft. If this could not be achieved, the military aircraft would change level outside the lateral limits of the ATS route(s) concerned.

7.8 It was pointed out by the representative of CF that under Article 3 of the Convention on International Civil Aviation, the annexes to the Convention were not applicable to State aircraft, and that Contracting States undertake, when issuing regulations for their State aircraft that they will have due regard for the safety of navigation of civil aircraft. In this regard, the meeting was advised that the US voluntarily applies the Convention and annexes to its State aircraft operations. The meeting noted that State aircraft operating over sovereign territory comply with ICAO provisions to obtain approval to operate and that they follow published ATS procedures including filing of flight plans. In international airspace, State aircraft operate under the principle of due regard and in visual conditions. The meeting discussed the preferred option of military aircraft operating above FL 290 in non-RVSM international airspace to fly at FLs in accordance with Annex 2 - Rules of the Air, Tables of Cruising Levels, Appendix 3, paragraph b) for VFR flights, i.e. even flight levels. This would allow 1000 ft vertical separation between military and civil aircraft. The CF representative advised that he would recommend to the Coalition Forces Air Component (CFAC) that the Annex 2 provisions on selection of VFR cruising levels in Appendix 3, paragraph b) be adopted for CF aircraft operating under due regard.

7.9 It was noted that arrangements have been agreed between CAA Pakistan and the CF to establish corridors of airspace in the Pakistan FIRs to accommodate Coalition aircraft operations. Effective coordination and communication procedures are in place, and there has been a significant reduction of incidents since these improvements were introduced.

7.10 The Coalition representative reiterated that, whenever operations permit, flight plans and traffic information would be provided to the ATC authority for international airspace in a timely manner. Further, in regard to follow up to be taken by the CF for incidents involving CF/civil aircraft, arrangements need to be established, whereby incident reports received by ATS providers and IATA are channeled through ICAO to the Office of the Executive Director of the Department of Defense Policy Board on Federal Aviation.

7.11 IATA advised the meeting that the airways delegated to MOCAT by the CF for civil operations (V838, V888, A466 and V876) met the basic needs for long-haul civil aviation. However, the restriction of FL310 to FL390 for operation on V838, V888 and to a lesser extent on A466 limited westbound operations, as very few aircraft could reach FL350 by the Lahore/Kabul FIR boundary and that FL390 was virtually unusable for the heavy flights westbound for Europe. Therefore, IATA requested that CF consider a FL280 - FL370 corridor on at least V838/V888 (named L750/N644 effective 5 Sept). The CF advised the meeting that if FL390 was given back to them, it would be very useful for their operations. They requested if IATA would consider relinquishing this level. Unfortunately, the CF could not commit to release any lower flight levels back to civil operations but would consider the request based on their operational requirement. IATA stated they would coordinate this request with airlines concerned and would advise the CF as well as ICAO.

7.12 With regard to future routes, the CF representative advised that they would consider all requests made through MOCAT and, as operations permit, would approve additional routes and flight levels.

7.13 The representative of MOCAT provided information on the prevailing conditions in Afghanistan concerning the status of the civil aviation infrastructure and air navigation facilities. It was noted that as a result of 23 years of war most of the airports, communications and navigation aids, VSAT system, runways, taxiways, terminal buildings, meteorological stations, fire fighting equipment and stations, and other essential facilities were destroyed or severely damaged. Some recovery had taken place and the VSAT was now operating at Herat, Kabul and Mazar-I-Sharif. Improvements were being made to some terminal buildings, especially at Kabul Airport. MOCAT has a plan to rehabilitate the civil aviation infrastructure as soon as funding is obtained. The meeting was advised on the need for improvements to equipment to provide flight safety and air navigation services, and funding was urgently required to support these needs.

7.14 Afghanistan further advised that with the opening of a limited number of ATS routes for transiting international civil aircraft through the Kabul FIR, air navigation charges have been reestablished which has given consequential revenue to Afghanistan. Under the circumstances of bringing peace to Afghanistan, the action being taken by the CF is fully supported and it is understood that they would return the airspace control to MOCAT as soon as circumstances permit.

7.15 AIS arrangements for preparation and distribution of NOTAMs for Afghanistan were reviewed. It was confirmed that MOCAT did not have an AIS capability and their AFTN system based on VSAT was only partially operational. Earlier difficulties with handling NOTAMs, as reported at the SCM/AFG/1 Meeting at Dubai, had been largely overcome. The Civil Aviation Authority of Singapore (CAAS) had provided assistance to RAMCC to distribute their NOTAMs and will continue to assist both the CF and Afghanistan MOCAT in AIS matters.

7.16 The meeting considered its future role and it was agreed that this forum provided an essential means of coordination and information exchange and should continue on a regular basis. It was suggested that two meetings a year should be arranged under the auspices of ICAO, and for the next meeting to be held in the spring of 2003. The US DOD and ICAO will coordinate a suitable time and venue for this meeting and advise other participants accordingly.

Summary of Action to be taken

7.17 In summary, the meeting agreed to the following actions:

- a) the CF representative will recommend to CFAC that the Annex 2 provisions on selection of VFR cruising levels in Appendix 3, paragraph b) be adopted for CF aircraft operating under due regard;
- b) for all flights arriving and departing in the Kabul FIR via published VFR ATS routes, the CF will reinforce the operation of existing procedures;
- c) when operations permit, CF aircraft operating under due regard will advise the appropriate ATC unit on the radio frequency in use for the airspace concerned;
- d) the CF will give priority to re-establishing a liaison link in Kabul with MOCAT; and
- e) as this forum provided an essential means of coordination and information exchange between civil and military providers and users, two meetings a year should be arranged under the auspices of ICAO. The next meeting to be held in

the spring of 2003. The US DOD and ICAO will coordinate a suitable time and venue for this meeting and advise other participants accordingly.

8. Tenth Meeting of the South East Asia ATS Coordination Group (SEACG/10) – Denpassar, Indonesia, 18 – 22 March 2002

8.1 Due to the limited time that was available, the SCS/TF/7 post implementation meeting agreed that follow-up action on several outstanding items be addressed at the SEACG/10 in order to maintain the continuity of work pertaining to ATS operations in the South China Sea area. It was recognized that the following tasks would need to be further discussed:

- a) update on development of communication and surveillance in Sanya AOR;
- b) update on monitoring of aircraft navigation errors for RNP 10 operations over the South China Sea;
- c) weather deviation procedures proposed by Hong Kong, China;
- d) remedial action by Indonesia on SIDs/STARs for Jakarta (both Soekarno-Hatta and Halim) which were not aligned with the new route structure;
- e) change proposals to the route structure; and
- f) flight planning procedures proposed by Malaysia.

<u>Monitoring of Aircraft Navigation Errors for RNP 10 Operations over the South China Sea</u> (SCS)

8.2 An essential aspect of the SCS project was the establishment of RNP 10 monitoring arrangements along four of the routes, *i.e.* L625, M771, N884 and N892. Hong Kong China, Philippines and Singapore were made responsible for the collection of relevant data concerning flight operations along these routes. These States were also required to forward the data collected, each month, to the Civil Aviation Authority of Singapore (CAAS), which is the monitoring authority for RNP 10 operations over the South China Sea.

- 8.3 Singapore provided the meeting with the latest report as follows:
 - a) no unintended lateral or longitudinal deviation was recorded since RNP 10 monitoring began on 2 November 2001; and,
 - b) there was, however, one incident reported, which involved an aircraft operating for about 10 minutes in the eastbound direction on a westbound RNAV route in the South China Sea. This incident was assessed by an expert group at RVSM/TF/13 as a violation of the flight's clearance. The Task Force agreed that the circumstances of the event did not involve any operational or ATC loop error.

Weather Deviation Procedures for South China Sea Airspace

8.4 The meeting was presented with a proposal to establish a set of common ATC operating procedures to cater for weather deviation situations on RNAV Routes P901, L642, M771, N892 and L625 within the airspace where Hong Kong, Sanya, Manila and Ho-Chi-Minh ACCs are responsible for provision of air traffic services.

8.5 The procedures would be supplementary to the relevant procedures laid down in the ICAO Regional Supplementary Procedures of Middle East/Asia (Doc7030/4 MID/ASIA/RAC-4). They would be applicable before and after 1930 UTC 31 October 2002, when Hong Kong and Sanya ACCs would join the other ACCs in the South China Sea region in RVSM implementation.

8.6 In view of the frequent occasions of tropical cyclones and inclement weather in the South China Sea area, extensive weather deviations can be expected, particularly during the summer months. As the newly established RNAV routes within the South China Sea area are designed with 60 NM minimum lateral separation standard and transit a number of FIRs/AOR, the workload induced to pilots and ATC under weather deviation scenarios can be significant. The phased implementation of RVSM on different dates further complicates the issue. The need to establish a standard set of weather deviation procedures within the South China Sea area had therefore been identified by the SCS/TF as one of the outstanding tasks requiring urgent attention. It was necessary to finalize the procedures before the onset of the next typhoon season.

8.7 There were two scenarios provided; one for small scale, localized weather deviations and the second for large scale, extensive weather deviations which would normally be associated with a typhoon, which frequent the area in the summer months, known as *The Typhoon Season*.

8.8 With regard to large scale weather deviations, a Flight Allocation Scheme during these times was developed.

8.9 With regard to Small Scale Weather Deviations, procedures would be left to the ACC concerned with appropriate coordination as required if this deviation was likely to impact on an adjacent FIR.

Change Proposals to the Route Structure and Associated Procedures

8.10 The SCS/TF decided not to change any of late proposals in the South China Sea ATS route structure leading up to the implementation date of 1 November 2001, but to wait till after the route system had settled down before looking at these issues.

8.11 The three main areas of concern were:

- a) Hong Kong Jakarta Hong Kong;
- b) Brunei Middle East/Europe Brunei; and
- c) alternate routing due congestion of many inbound and outbound routes to/from Kuala Lumpur over PEKAN (PK).

<u>Hong Kong – Jakarta – Hong Kong</u>

8.12 As a result of the revised South China Sea route structure, airlines operating on this route segment are suffering severe operational penalties with regard to excessive flight times. On a round trip between the two locations additional penalty is approximately 30 minutes. This was not only a cost in fuel but also causes additional costs in maintenance on the aircraft as well as affecting flight crew limitations.

8.13 Considerable time was spent in looking at various options to accommodate a more direct route between these locations. The possible impact, such as disruptions to traffic flying on other South China Sea routes associated with flight safety were also considered. Singapore was of the view that the most viable option was as follows:

- a) Hong Kong Jakarta route: L642-ENBOK-MONBO-N892-MELAS-LUSMO-G220
- b) Jakarta Hong Kong route: G220-LUSMO-L625-ARESI-DULOP-M771

8.14 Compared to the current routings, the savings in terms of distance under this option would be as follows:

- a) Hong Kong Jakarta: 91 NM
- b) Jakarta Hong Kong: 84 NM

8.15 The meeting agreed that affected States would look into whether the proposed route could be implemented in their respective FIRs. IATA was asked to work with these States to arrive at a viable solution.

<u> Brunei – Middle East/Europe – Brunei</u>

8.16 A request from Brunei Darussalam on behalf of Royal Brunei Airlines to shorten the route from Brunei Darussalam to Phuket for their flights to/from the Middle East and Europe was proposed.

8.17 The new route for aircraft flying from Brunei Darussalam to the Middle East/Europe was an increase of 110 NM one way and a time penalty of 16 minutes with approximately 700 kg excess fuel over the route previously flown.

8.18 Various options to overcome the additional distance being flown by these aircraft were discussed. Brunei Darussalam advised that they would have further discussions with Royal Brunei Airlines and advises States, ICAO and IATA on the outcomes. IATA advised that they would pursue this matter on behalf of Royal Brunei Airlines; however, the Sub-Group was advised that Royal Brunei Airlines would not pursue this matter for the time being.

Alternative routing into Kuala Lumpur from the South China Sea

8.19 Due to the congestion over PEKAN (PK) of inbound and outbound aircraft to/from Kuala Lumpur, Malaysia proposed an alternative route for arriving aircraft from Hong Kong to Kuala Lumpur. Although this proposal would reduce congestion over PK, IATA suggested that a more direct routing via a parallel route to the present PK-VKL route should also be considered.

8.20 It was agreed that the new parallel route proposal proceed which would relieve the problems in the PK area. Malaysia and Singapore would coordinate arrangements to introduce this parallel route scheme into/out of Kuala Lumpur.

Proposed changes to RNAV routes N892 and L625

8.21 During discussions on weather deviation procedures mentioned above, especially with regard to large deviations by aircraft in the typhoon season, it was suggested that consideration should be given to straightening both N892 and L625 so that they would be direct lines between MABLI and Hengchun on N892 and between LUSMO and MEVIN on L625. This would allow an increase in the distance between the routes and give more flexibility to ATC in coping with weather deviations.

8.22 As this would require an in-depth look into the present route structure, SEACG/10 decided to hold over this suggestion to a later appropriate date.

Flight Planning Procedures

8.23 The current repetitive flight plan (RPL) format does not provide for a field where information regarding RNP10 and RVSM capability may be inserted. Obtaining such essential information from individual aircraft increases controller workload.

8.24 It was noted that if an aircraft scheduled to fly under RPL suffers a degradation in the aircraft's system resulting in the aircraft's inability to comply with RNP10 and/or RVSM requirements, the RPL shall be replaced with a FPL.

8.25 In this connection, *Procedures for Air Navigation Services-Rules of the Air and Air Traffic Services* (PANS-RAC, Doc 4444) addresses relevant procedures in Appendix 2-Flight Plan, Section 7-Instructions for the completion of RPL listing form, Item Q, which states:

"*INSERT* items of information as required by the appropriate ATS authority, items normally notified in Item 18 of the ICAO flight plan and any other information pertinent to the flight of concern to ATS."

Implementation of RVSM in the Western Pacific/South China Sea Area

8.26 This subject is detailed in the RVSM section mentioned in another part of this report.

Implementation of Radar Handover Procedures

8.27 States within South East Asia have been making significant efforts to develop safe and efficient air traffic control systems on a sub-regional basis in order to meet the ever-increasing demand of air transportation in the region.

8.28 As part of ATC modernization system upgrade, many States have installed new radars or plan to do so. Consequently, a major part of South East Asia airspace is now covered by radar, except for the middle section of the South China Sea.

8.29 The *Procedures for Air Navigation Services-Air Traffic Management* (PANS-ATM, Doc 4444) states that States should, to the extent possible, facilitate the sharing of radar information in order to extend and improve radar coverage in adjacent control areas (paragraph 8.1.5) and that States should, on the basis of regional air navigation agreements, provide for the automated exchange of co-ordination data relevant to aircraft being provided with radar services, and establish automated coordination procedures (paragraph 8.1.6) in Chapter 8, Radar Services.

8.30 PANS-ATM states that transfer of radar control should be effected whenever practicable so as to enable the uninterrupted provision of radar service (paragraph 8.7.5.1).

8.31 Transfer of radar control, in other words radar handover, is commonly in use not only between adjacent ATC units in the same State but also between adjacent States even where different radar systems are used. This procedure enables air traffic controllers to provide continuous service for aircraft and to apply further reduced longitudinal separation when agreed on through Letters of Agreement between the ATC units concerned. This leads to better utilization of airspace and enhancement of efficiency of ATC operations in a cost-effective manner.

8.32 Areas were identified where States could apply radar hand-over procedures at a common FIR boundary. An action plan was developed to implement radar handover procedures where this is currently not applied.

Dissemination of Aeronautical Information

8.33 Considerable discussion took place on the importance of accurate and timely notification of changes to AIS information. current aircraft navigation systems and automated ATM systems are driven by databases, which are dependent on accurate information. Consequently, corrupt or erroneous information can have an adverse affect on flight safety. Similarly, if accurate changes are not received in sufficient time, then databases cannot be upgraded and airlines and ATS Providers could find themselves using inconsistent and/or out of date data.

8.34 In reviewing the "Lessons learned" from recent major regional changes involving several States, the importance of timely, accurate and integrated dissemination of changes to aeronautical information cannot be over-emphasized. It was recognized that late delivery of essential aeronautical information, and in some instances, publication of inaccurate data, could compromise the safe implementation of major changes to the air traffic service system.

COM Action Plan

8.35 The status of implementation of the COM Action Plan was reviewed. It was noted with appreciation that most of the COM action items were implemented in time established by SEACG.

Implementation of the new CNS/ATM systems in the Region

8.36 States gave an update on their progress in the implementation of the New CNS/ATM systems.

8.37 Hong Kong, China sought continued cooperation and support of all parties concerned in their effort to work with other ATC authorities regarding the feasibility of conducting joint trials/evaluations and/or sharing experience on CNS/ATM development and implementation.

New Air Traffic Control Center in Ho-Chi-Minh

8.38 Viet Nam advised that a feasibility study of Ho-Chi-Minh ATC system and a new building for ACC was completed. In support of ATM automation, ADS/CPDLC functions as well as AIDC will be integrated into the new system with radar data and flight plan data. The installation of equipment in the new building of Ho-Chi-Minh ATC center is scheduled to be completed before the end of 2004. From the year 2005, Ho-Chi-Minh ACC and Tan Son Nhat Approach Unit will be located in this new ATC center.

Review Functions of SEACG

8.39 The meeting reviewed the composition of the Group. Recognizing that the South East Asia area is situated in the centre of the major traffic flow *South-East Asia and China, Republic of Korea and Japan* (AR-9) listed in Chapters 6 and 10 of *the Asia/Pacific Regional Plan for the New CNS/ATM Systems*, it was considered beneficial if other States pertaining to AR-9 are involved in the future discussions of SEACG. ICAO was requested to take appropriate follow-up action.

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