TENTH WORKING GROUP MEETING OF AERONAUTICAL TELECOMMUNICATION NETWORK IMPLEMENTATION CO-ORDINATION GROUP (ATNICG WG/10)

Jaipur, India, 26 - 29 September 2011

Agenda Item 2: Review of relevant Meeting Reports (ATNICG/6, CNS/MET SG/15 & APANPIRG/22)

REPORT ON OUTCOME OF CNS/MET SG/15 AND APANPIRG/22 MEETINGS RELEVANT TO AFS AND AMS

(Presented by the Secretariat)

SUMMARY

CNS/MET SG/15 was held from 25 to 29 July APANPIRG/22 was held from 5 to 9 September, 2011 In Bangkok. Outcome of ATNICG/6 was reviewed by CNS/MET SG/15 and was presented to APANPIRG/22 with CNS/MET SG comments. This paper presents information on the AFS and AMS relevant outcome of the two meetings.

This paper relates to:

Strategic Objectives:
A – Safety
C – Environmental Protection and Sustainable Development of Air Transport

Global Plan Initiatives:
GPI 22 – Communication Infrastructure

1. Introduction

1.1 Fifteenth meeting of the Communication. Navigation and Surveillance/Meteorology Sub Group (CNS/MET SG/15) of Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) was held in ICAO Asia/Pacific Office, Bangkok from 25 to 29 July 2011. The meeting was attended by 111 experts from 24 States/Administrations, 2 International Organizations (IATA, IFALPA) and 2 Telecommunication Service Provider –SITA and ARINC. Meeting after reviewing the outcome of ATNICG/6 meeting and additional information provided through Working/Information Papers, developed recommendations for the consideration of APANPIRG/22 meeting.

1.2 Twenty Second meeting of Asia Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) was held in Bangkok from 5 to 9 September 2011. The meeting was attended by 127 participants from 24 Member States and 4 International Organizations (IATA, IACA, IFALPA and CANSO). The meeting was chaired by Mr. Norman Lo, Director General of Civil Aviation, Department of Civil Aviation, Hong Kong China and Chairman APANPIRG.

1.3 APANPIRG/21 adopted 43 Conclusions and 13 Decisions based on the presentations made and the recommendations of the APANPIRG Sub-Groups. Extract of the APANPIRG/22 report on Agenda Item 3.4 (CNS/MET) relevant for Aeronautical Fixed Services (AFS) and Aeronautical Mobile Services (AMS) is placed at the attachment. Full report of the meeting on Agenda Item 3.4 can be accessed on ICAO APAC Office website at the address:
http://www.bangkok.icao.int/apanpirg/apanpirg22/RPT%20on%20Agenda%20Item%203.4.pdf
APANPIRG reports are protected by password.

2. Discussion

2.1 CNS/MET SG/15 held from 25 to 29 July and the Twenty Second meeting of APANPIRG (APANPIRG/22) held from 5 to 9 September 2011, in addition to other items of agenda, reviewed issues related to the implementation and operation of Aeronautical Fixed Services (AFS) and Aeronautical Mobile Services (AMS). Some of the significant issues discussed in the two meetings are being reviewed below:

AMHS Technical Specifications

2.2 ATNICG identified that Asia/Pacific requirements for AMHS had been published in several manuals based on different versions of Doc 9705 and EUROCONTROL AMHS Manual and proposed that the regional AMHS Technical Specifications should be integrated and provided in a single document APANPIRG/22 supported ATNICG proposal to adopt a single document that captures the AMHS requirements for the region and that is based on the latest ICAO specifications in this regard. APANPIRG expressed appreciation for the efficient and good work completed by the Ad Hoc Working Group with members from India, Japan, Singapore, Thailand and USA and adopted 'Asia/Pacific AMHS Technical Specifications' through a Conclusion.

ATNICG Terms of Reference and Subject/Tasks List

2.3 CNS/MET SG/15 meeting noted tasks accomplished by the Sixth Meeting of Aeronautical Telecommunication Network Implementation Coordination Group (ATNICG/6) and reviewed the Terms of Reference and the Subject/Tasks list for the group. CNS/MET SG agreed with the ATNICG view that the Terms of Reference of the Group had assigned in 2006, when the Group was formed and these needed to be reviewed in view of the developments that have taken place. After reviewing the revised Terms of Reference proposed by ATNICG/6, CNS/MET SG/15 recommended them for adoption by APANPIRG/22. The revised Terms of Reference for ATNICG were adopted by APANPIRG through a Conclusion. APANPIRG/22 also adopted the updated Subject/Tasks List for ATNICG based on the recommendation of CNS/MET SG/15.

ATN/AMHS Implementation Status in other regions

2.4 While reviewing the ATN/AMHS implementation status in EUR/NAT region, ATNICG/6 was informed that Fifteenth meeting of EUR/NAT Aeronautical Fixed Services Group (AFSG/15) had identified following operational requirements which need to be addressed in the AFS field:

a) Amendment 1 to PANS ATM Doc 4444 – FPL 2012 (15 Nov 2012)
b) xNOTAM using XML (planned in 2012 – 2016)
c) XML based OPMET (planned 2012/2013)

Following AFTN requirements were identified by AFSG, which will be essential to meet the requirement of new ATM enhancements:

a) capability of handling long messages (length to be defined)
b) extended line length (more than 69 characters); and
c) extended character set (restriction concerning some control characters)

APANPIRG agreed with the AFSG/ATNICG view that the current AFTN/CIDIN/AMHS would be able to meet the evolving operational requirements and no other network/technology would be needed. APANPIRG also agreed with ATNICG view that AFSG's contention that some of these requirements has already been accommodated on the basis of bilateral agreement and/or had been included in ICAO Annex 10 was not totally correct.

Special Implementation Project (SIP) AIDC Seminar

2.5 CNS/MET SG/15 meeting noted that a Special Implementation Project (SIP) Seminar on ATS Inter-facility Data Communication (AIDC) was held at ICAO Regional Office, Bangkok, Thailand from 12 to 13 October, 2010. The objective of the Seminar was to assist the States in the APAC Region in implementing AIDC as it would have significant favorable effects on the safety of operations and efficiency of air traffic management. It was recognized by the Seminar that complexities of implementation of AIDC require common efforts of a team consisting of members with both technical and operational background. It was also noted with interest that flexibility of implementation exists in the form of a dedicated standalone AIDC server or processor installed separately interconnecting with other ATCC via AFTN. The Seminar recommended implementation of AIDC in accordance with the regional air navigation plan and ICD for AIDC. Noting very limited data contained in the AIDC Implementation Planner presented to the Seminar, CNS/MET SG/15 meeting did not recommend adoption of the planner by APANPIRG.

3. Recommended Actions

a) the meeting is invited to note the outcome of ATNICG/6 meeting;

b) the meeting is also invited to note information provided regarding AIDC implementation seminar held in ICAO APAC Office on 12 and 13 October 2010 and adopt its recommendation in ATNICG Work Programme; and

c) note the revised Terms of Reference for the Group.

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3.4 **CNS/MET Matters**

3.4.1 The meeting reviewed the outcome of the Fifteenth Meeting of Communications, Navigation and Surveillance/Meteorology Sub-group (CNS/MET SG/15) of Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) held in Bangkok from 25 to 29 July 2011 as presented in WP/18. The meeting noted with appreciation work done by the Sub-group. The meeting also discussed the CNS/MET related issues and took following actions on the report of the CNS/MET SG/15.

Aeronautical Fixed Service (AFS)

Review Report of the Sixth Meeting of ATNICG (ATNICG/6)

3.4.2 The CNS/MET SG/15 meeting noted the tasks accomplished by the Sixth Meeting of Aeronautical Telecommunication Network Implementation Coordination Group (ATNICG/6) Meeting which was hosted by the Office of Civil Aviation, Ministry of Land, Transport and Maritime Affairs (MLTM) and Korea Airports Corporation (KAC) from 16 to 20 May 2011.

3.4.3 The meeting, after reviewing the updates proposed by ATNICG/6 to the Terms of Reference and the Subject/Tasks list, adopted following Decision formulated by the ATNICG/6 and recommended by CNS/MEG SG/15:

Decision 22/16 - Revised TOR and Subject/Tasks List of ATNICG

That, the revised Terms of Reference and the updated Subject/Tasks List of ATNICG provided in **Appendix A** to the Report on Agenda item 3.4 be adopted.

ATNICG Working Group Meetings

3.4.4 The CNS/MET SG/15 meeting was informed about the outcome of the Eighth Working Group Meeting of ATNICG hosted by Airways New Zealand in Christchurch from 29 September to 1 October 2010 and the Ninth Working Group Meeting hosted jointly by Aeronautical Radio of Thailand (AEROTHAI) and ICAO Asia and Pacific Office in Bangkok from 25 to 26 January, 2011. The meeting reviewed the progress achieved in the two meetings and appreciated the assistance and support provided by Airways New Zealand and AEROTHAI.

Amendment to FASID Tables CNS 1B, CNS 1C and CNS 1E

3.4.5 The meeting noted that CNS/MET SG/15 Meeting had reviewed the updated Asia and Pacific Regions Air Navigation Plan (Doc 9673) Volume II, FASID Table 1B – Aeronautical Telecommunication Network (ATN) router plan, Table 1C – ATS Message Handling System (AMHS) routing plan and Table 1E – ATS Inter-facility Data Communication (AIDC) routing plan and adopted following Conclusion adopting the updated tables.

Conclusion 22/17 - Amendment to FASID Tables – CNS 1B, 1C and 1E

That, FASID Tables CNS 1B – Aeronautical Telecommunication Network (ATN) router plan**,** Table CNS 1C – ATS Message Handling System (AMHS) routing plan and Table CNS 1E – ATS Inter-facility Data Communication (AIDC) routing plan be replaced with the updated Tables provided in **Appendices B, C and D** to the Report on Agenda item 3.4 in accordance with the established procedure.

AMHS Planning Documents and Implementation Status in other Regions

3.4.6 The Fifteenth Meeting of EUR/NAT Aeronautical Fixed Services Group (AFSG/15) identified following operational requirements which need to be addressed in the AFS field:

a) Amendment 1 to PANS ATM Doc 4444 – FPL 2012 (15 Nov 2012);
b) xNOTAM using XML (planned in 2012 – 2016); and
c) XML based OPMET (planned 2012/2013)

3.4.10 Following AFTN requirements were identified by AFSG, which will be essential to meet the requirement of new ATM enhancements:

a) Capability for handling long messages (length to be defined);
b) Extended line length (more than 69 characters); and
c) Extended character set (restrictions concerning some control characters)

3.4.11 ATNICG agreed with AFSG view that the current AFTN/CIDIN/AMHS would be able to meet the evolving operational requirements and no other network/technology would be needed, ATNICG however did not agree with AFSG's contention that some of these requirements had already been accommodated on the basis of bilateral agreement and/or had been included in ICAO Annex 10.

3.4.12 Sixth Meeting of ICAO South American Regional Implementation Group (SAM/IG/6) (18 to 22 October, 2010) concluded that implementation dates committed were being shifted thus delaying the project and adopted a conclusion urging States to request support from system providers to complete successful connection and to get their staff trained.

3.4.13 AMHS Implementation Task Force in AFI region was established by the AFI Planning and Implementation Regional Group (APIRG) through Conclusion 17/17 and a Workshop on AMHS and the First Meeting of the Task Force was organized from 17 to 20 May 2011 at ICAO Nairobi office.

Directory Service Requirements

3.4.14 Application of Directory Service (using X.500) will involve a number of operational aspects including management of data, local availability, synchronization, manageability, support for regional structures and transition. Ideal structure proposes to have three levels: global level, regional level and national level. It was confirmed that AMC service will continue to be used in the near term and States are required to follow the guidelines provided on the subject. The CNS/MET SG/15 meeting was informed about many other issues like maintenance of AIRAC cycle, distribution management, routing table etc. which were discussed in ATNICG meeting.

ATN/AMHS Documentation Tree

3.4.15 The CNS/MET SG/15 meeting noted that the ATN/AMHS Documentation Tree was updated by ATNICG/6. The updates had been reflected on the APAC website and the updated documentation tree can be accessed at the following webpage: http://www.bangkok.icao.int/apac_projects/atn/chart/atn_doctree.asp.

AMHS Technical Specifications

3.4.16 ATNICG had identified that Asia/Pacific requirements for AMHS had been published in several manuals based on different versions of Doc 9705 and EUROCONTROL AMHS Manual. The meeting supported ATNICG's proposal to adopt a single document that captures the AMHS requirements for the region and that is based on the latest ICAO specifications in this regard. The meeting expressed appreciation for the efficient and good work completed by an Ad Hoc Working Group with members from India, Japan, Singapore, Thailand and USA. The meeting reviewed the APAC AMHS Technical Specifications and adopted following Conclusion:

Conclusion 22/18 – Asia/Pacific AMHS Technical Specifications

That, the Asia/Pacific AMHS Technical Specifications provided in the **Appendix E** to the Report on Agenda item 3.4 be adopted.

Note of appreciation

3.4.17 The CNS/MET SG/15 meeting expressed its gratitude to the MLTM and KAC for hosting ATNICG/6 meeting, the excellent arrangements made and the activities organized during the meeting including a technical visit to the Aeronautical Communication Center at GIMPO Airport. The meeting also noted India's offer to host the next ATNICG Working Group meeting in Jaipur in end September, 2011 and placed on record its appreciation for the offer.

Status of ATN implementation in Mongolia (IP/23)

3.4.18 Mongolia informed the meeting about the status of Mongolia's ATN/AMHS implementation and 2 Mbyte high speed circuit implemented in October 2010 between Mongolia and China over optical fiber cable. The newly commissioned ground circuit supports AFS including AFTN and ATS direct speech circuit between Ulaanbaatar and Beijing. The circuit will also be employed to conduct ATN/AMHS based AIDC pre-operational trials involving comprehensive connection tests. The planned AMHS and AIDC connection will use the ground circuit which has become part of the Aeronautical Fixed Service infrastructure. This improvement is achieved as a result of continuous efforts made by both CAA Mongolia and CAAC in accordance with APANPIRG Conclusion 11/15.

ATN/AMHS Implementation and Operational status in Republic of Korea

3.4.19 Republic of Korea informed CNS/MET SG/15 meeting about the completion of ATN/AMHS implementation between Seoul and Beijing on 1 June 2011 and that the implementation between Seoul and Fukuoka, as per regional Air Navigation Plan will be coordinated with Japan. Republic of Korea was congratulated for this achievement and meeting was reminded about the completion of ATS/AMHS implementation between Singapore and India in March 2011.

ATN/AMHS Implementation in India (WP/06)

3.4.20 India informed the meeting that ATS Message Handling Service between Mumbai and Singapore, commenced from 23 March 2011 has demonstrated reliable interoperability for the exchange of aeronautical messages. Interoperability tests on AMHS interconnection between Mumbai and Beijing (BBIS) were recently completed. The test results conformed to the defined requirements. The preoperational trials for AMHS interconnection between Mumbai and Karachi (BIS) are also in final phase of completion and efforts are being made for commencing regular operation for both the circuits in the 4th quarter of 2011.

3.4.21 Regarding inter-regional connection between Mumbai and Muscat (Oman), the traffic is presently carried on AFTN over TCP/IP through AMHS gateway. Efforts are being made to coordinate with Oman for commencing AMHS trials. India is keen to commence AMHS trials immediately with Thailand (BBIS) and other BIS stations in Sri Lanka, Nepal, Bhutan and Kenya. However, readiness is awaited from these States. Action has been initiated to install software for AMHS AMC files import function and New FPL-2012 Format to implement ICAO Amendment 1 of PANS-ATM Doc-4444 to be completed before the end of October 2011.

3.4.22 India will host 10th Working Group Meeting of ATNICG in Jaipur from 26th to 29th September 2011. India urged other BBIS/BIS States to complete the implementation for compatible operation in line with ICAO APAC Regional Implementation Plan. The meeting appreciated efforts and initiatives taken by India and adopted following Conclusion.

Conclusion 22/19 – Expedite ATN/AMHS Implementation

That, States be urged to expedite the implementation of ATN/AMHS interconnection for compatible operation in accordance with ICAO Asia/Pacific Regional Implementation Plan in a time bound manner.

Special Implementation Project (SIP) AIDC Seminar

3.4.23 The CNS/MET SG/15 meeting noted that a Special Implementation Project (SIP) Seminar on ATS Inter-Facility Data Communication (AIDC) was held at ICAO Regional Office, Bangkok, Thailand from 12 to 13 October 2010. The objective of the Seminar was to assist the States in the APAC Region in implementing AIDC as it would have significant favorable effects on the safety of operations and efficiency of air traffic management.

3.4.24 It was recognized that complexities of implementation of AIDC require common efforts of a team consisting of members with both technical and operational background. It was also noted with interest that flexibility of implementation exists in the form of a dedicated standalone AIDC server or processor installed separately interconnecting with other ATCC via the AFTN. It fetches the Flight Plan information from the ATM system. A sample of such kind of implementation was presented to the Seminar by Hong Kong China.

3.4.25 The Seminar recommended implementation of AIDC in accordance with the regional air navigation plan and the ICD for AIDC. Noting very limited data contained in the AIDC Implementation Planner presented to the seminar and that a main ACC in a State would have no more than 5 AIDC links with ACCs in the neighboring States, the CNS/MET SG/15 meeting did not recommend the planner for adoption by APANPIRG and, the secretariat was requested to urge States to provide required data through a state letter.

Pan Regional ICD for AIDC

3.4.26 USA provided to CNS/MET SG/15 Meeting updates on the process to consolidate the Interface Control Document (ICD) for the North Atlantic and Asia/Pacific (APAC) Regions, to provide a harmonized Air Traffic Services Inter-facility Data Communications (AIDC). A draft ICD version 0.4 was consolidated based on Version 3 of APAC ICD for AIDC and NAT CC ICD, v1.2.7 May 2009. The coordinated draft "*Pan Regional Interface Control Document for ATS Interfacility Data Communications (PAN ICD)"* with thorough bi-directional tracking of content was presented to the meeting. The comment resolution form was also noted. The NAT CNSG/5 will review the draft in its next meeting scheduled for 26 to 30 September 2011 in Bodo, Norway.

3.4.27 The CNS/MET SG/15 meeting encouraged the States to provide comments on the draft version. Meeting also noted one of the principles agreed by NAT SPG as follows: "Since the ICD would apply to oceanic regions only, the title of the future document should be "Pan Regional ICD for Oceanic AIDC". In this regard, the meeting recalled that APANPIRG/21 had adopted Conclusion 21/26 to inform NAT SPG that the title "Pan-regional ICD for Oceanic AIDC" is unacceptable as the Asia/Pacific ICD for AIDC is applicable for use by all ATS and ATM facilities in both the oceanic and the continental areas within the Asia Pacific Region and that the document should be titled "Pan-Regional ICD for AIDC". USA was requested to forward this comment to the drafting group for further consideration. It was suggested that the specific use of the ICD for Oceanic Area in the NAT Region may be included in the "FORWARD" of the document.

Aeronautical Mobile Service (AMS)

Second Satellite Data-link Operational Continuity (SOCM/2) meeting

3.4.28 To meet the requirements of APANPIRG Conclusion 19/24, First Satellite data-link Operational Continuity Meeting (SOCM/1) was held from 26 to 28 August, 2009. Based on the recommendation made by SOCM/1 to organize second SOCM after receiving inputs from FANS System Improvement Team (FSIT), APANPIRG adopted Conclusion 20/32 inviting ICAO to organize the second meeting in 2010. SOCM/2 meeting could not be organized, because FSIT did not hold its meeting and hence no updates could be received for review by the SOCM/2. Subsequently, APANPIRG decided that the meeting should be organized even if no input from FSIT is received. The meeting also noted that a considerable progress had been made in improving the performance of satellite data-link communication. In view of foregoing, the SOCM/2 meeting has now been scheduled for 15-18 November 2011. Letter of invitation for the meeting was issued on 24 June 2011 by ICAO APAC Office. It has also been decided to organize a one and a half day Seminar on Satellite Data-link Communication in conjunction with the meeting. States were invited to participate in the meeting and the seminar. Based on the recommendation of CNS/MET SG/15, the meeting adopted following Conclusion:

Conclusion 22/20 – Second Satellite Data-link Operational Continuity Meeting (SOCM/2) and Seminar on Satellite Data-link Communication

That, the States be urged to nominate suitably qualified personnel to participate in the Seminar on Satellite Data-link Communication and the Second Satellite data-link Operational Continuity Meeting (SOCM/2) scheduled from 15 to 18 November, 2011 in Bangkok, Thailand.

Interregional SATCOM Voice Task Force (IRSVTF)

3.4.29 The IRSVTF was established by the North Atlantic Systems Planning Group (NAT SPG Conclusion 46/5) and Asia-Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG Conclusion 21/27) with the objective to produce a globally applicable SATCOM voice guidance material (SVGM) for air traffic service (ATS) communications. The first meeting of ICAO Inter-Regional SATCOM Voice Task Force (IRSVTF) was held from 25-27 January 2011, in Paris, France.

3.4.30 The CNS/MET SG/15 meeting noted that the IRSVTF plans to complete its work by the end of 2011 and present SVGM edition 1.0 to NAT SPG/48 for approval in June 2012. The ATM/AIS/SAR SG/22 and CNS/MET SG/16 are expected to review the guidance material and make recommendation for consideration by APANPIRG/23 in September 2012.

3.4.31 Draft SATCOM Voice Guidance Material v 0.5TC associated with Master Comment Matrix was provided to the CNS/MET SG/15 meeting. States in the Asia and Pacific Regions, in particular member States of IRSVTF were encouraged to participate in IRSVTF/2 meeting and to provide comments on the guidance material though ICAO APAC Office.

3.4.32 The meeting noted that the NAT SUPPs proposal for amendment to the use of SATCOM voice was formally approved by the President of ICAO Council on 11 May 2011. This was considered by NAT SPG/47 as an important milestone that would formally enable using the SATCOM voice in the NAT region for routine ATS communications. The CNS/MET SG/15 meeting also noted that one of the scenarios considered in the NAT approval is to allow SATCOM voice as a substitute for the carriage of one of the two required HF Long Range Communication System (LRCS) only.

3.4.33 Australia presented a paper highlighting SATCOM Voice issues. A trial in the North Atlantic region was undertaken that led to the subsequent legitimatization of the normal use of one HF set plus one SATCOM on some routes in that region "**if the ground counterparts are equally suited for SATCOM"**. Following points were noted:

a) This is not an approval for SCV to be a stand-alone Long Range Communication System (LRCS);

b) At least one HF must continue to be carried and be serviceable;

c) SCV can only be used in airspace where ATS are capable and authorized to use the capability; and

d) In most ATS infrastructure arrangements, SCV is operated through 'third party' communications protocol that precludes it being suitable for some separation standards.

3.4.34 Informal discussions have indicated that some States in APAC Region have already experienced flights being planned with SCV as the only available Long Range Communication System. Given the European approval, further examples of this could be expected and will need to be managed. IFALPA informed the CNS/MET SG/15 meeting that pilots used SATCOM Voice for communication with ATC in case other preferred means were not available.

SELCAL Code Issue

3.4.35 Australia informed the CNS/MET SG/15 meeting about existing arrangements for allocating Selective C**a**ll (SELCAL) codes. Under existing arrangements, only 10920 combinations for SELCAL codes are possible using four tones, but 27,285 codes have been allocated to meet the requirements from the user. Hence a situation can arise where two (or more) aircraft operating within the same HF area will have identical SELCAL codes and this can lead to the possibility of one aircraft responding to the call for another aircraft. The meeting was informed that Aviation Spectrum Resource Inc. (ASRI), the organization responsible for the allocation of SELCAL codes to aircraft operators agreed to institute a programme of recording instances of multiple aircraft responding to the same SELCAL code. A possible solution being discussed is to expand the existing 2 x 2 tone system to a 3 x 2 tone system. The CNS/MET SG/15 meeting was warned about the requirement of updating the airborne systems in addition to the ground based systems, if this proposal was agreed. After discussing the issue, the meeting adopted following Conclusion urging the States using HF voice communication to report instances of two (or more) aircraft operating in the same HF area with identical SELCAL codes.

Conclusion 22/21 – Identical SELCAL Codes

That, ICAO be invited to conduct a survey to assess the instances (per annum) of two (or more) aircraft using identical SELCAL codes in the same HF area in the Asia/Pacific Region.

3.4.36 The CNS/MET SG/15 meeting was of the view that the States should be informed about the issue while asking them to respond to the survey. In response to the query, if any other system was being considered for the replacement of SELCAL system, it was informed that no information about any replacement was available.

Data-link Performance Monitoring

3.4.37 New Zealand provided data-link monitoring results from the Auckland Oceanic FIR for last three years. The CNS/MET SG/15 meeting noted the encouraging results of data-link performance which had shown significant improvement since July 2010. The statistical data collected from December 2008 to June 2011 indicates that the safety targets for network availability are being achieved since July 2010 and data link performance generally shows improvement. While the safety targets for network availability are being achieved at present, it is clear that considerable improvement is necessary if the efficiency target is to be met. The efficiency target supports operational efficiency and orderly flow of air traffic. The nominal times for CPDLC and ADS-C continuity are being achieved, but some improvement is necessary to reach the target for expiration time.

Near term future plan of MTSAT

3.4.38 The CNS/MWT SG/15 meeting was informed that the End of Life (the EOL) of MTSAT-1R is expected to occur during Japanese Fiscal Year 2014 and the EOL of MTSAT-2 is JFY 2015. A comprehensive study for next generation satellite was conducted in 2010 by JCAB. JCAB decided not to replace MTSAT-1R, but to continue to provide AMSS through MTSAT-2 after the termination of MTSAT-1R AMSS payload. The calculation of remaining fuel showed that MTSAT-2 has an outlook of four year expansion of its life. JCAB believes that MTSAT System by single satellite will still meet the requirements of Communication Service Provider portion of RCP240 defined in Global Operational Data Link Document (GOLD) mainly due to the high availability of communication satellite and redundancy of ground system.

Contingency Arrangement of Aeronautical Mobil Satellite (Route) Services

3.4.39 Japan presented a case to CNS/MET SG meeting reconfirming the importance of contingency arrangement in aeronautical safety communication infrastructure, based on Japan's experience in the wake of big earthquake in eastern Japan in March 2011. In order to realize uninterrupted data link communication in such events, the MTSAT system has been designed as follows:

- Safety critical functions of the system are multiplexed
- The changeover time of multiplexed systems is of the order of second to millisecond.
- Two ASCs are disposed with about 600 km separation on Japan Mainland for space diversity.

3.4.40 The AMSS provided by the MTSAT continued operating during the earthquake period. Although electricity recovered in two days, repair and calibration of the equipment took almost one month. Hitachiota ASC went back-on-normal in April 2011. The experience gained from the earthquake in Japan this year shows that a certain level of redundancy of system is needed for the continuity of aeronautical satellite communication. It was concluded that contingency arrangement in the design of global or regional air navigation systems such as AMS(R)S System is one of the salient issues that needs to be considered for the assurance of continuity and availability of air navigation service.

Indonesia FSS Restructurization

3.4.41 The CNS/MET SG/15 meeting was informed that Indonesia has a plan to restructure its existing 14 Flight Service Sectors (FSS) by the year 2014. FSS will cover airspace under FL245 which is not within VHF coverage. The planned FSS restructurization will have 2 FSS in the Western FIR, 3 FSS in the Eastern FIR and additional centralized FSS units located in Jakarta and Ujung Pandang respectively.

HF Reception Performance over Colombo FIR

3.4.42 Sri Lanka presented the summarized HF reception data observed during 2010/ 2011 within Colombo FIR with specific attention to fading characteristics of HF signals. The meeting noted that the distribution of fading hours concentrate during the period 1930 – 0100hrs (UTC) and higher outage figures were observed during May – September 2010. It was also noted that the outage figures from February 2011 onwards have been significantly lower.

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