MIDANPIRG/7
Appendix 6B to the Report on Agenda Item 6

STATES BRIEFING ON CNS/ATM IMPLEMENTATION ACTIVITIES

1. BAHRAIN

1.1 Mono-pulse Radar System, has been installed and commissioned at Bahrain International Airport. The Radar has a range of 256nm and covers the whole FIR excluding the southern part over the Empty Quarter. The radar is also integrated with a sophisticated Flight Data Management System (FDMS) which updates the stored flight plans automatically through the AFTN system. The new Radar has the following features:

- Upgradeable to Mode S
- Short Term Conflict Alert (STCA)
- Conflict Prediction
- Multi Range and Bearing capability
- On line/off line map generation
- MSAW

1.2 Mandatory carriage of ACAS II with effect from July 2001 has been implemented in accordance with MIDANPIRG/6 Conclusion 6/7 in whole of Bahrain FIR and Flight Level 250 and above in the Dammam CTA.

1.3 Communication, Bahrain has agreed with Oman and UAE to install a long range VHF remote station at a convenient location. This will provide VHF coverage for the southern part of the FIR and replace the existing HF communication, and will also provide Direct Controller Pilot Communication (DCPC) which will enable the reduction of longitudinal time separation in that area.

1.4 Digital ATIS (d-ATIS) system has been implemented in February 2000 through SITA network and some equipped aircraft reported successful access. In addition, digital VOLMET is also included in the system.

1.5 An ATN working group has been established to carry out studies on ATN and also monitor the developments of the ATN globally.

2. EGYPT

2.1 The GNSS Task Force for the MID region had elected Egypt to be the coordinator for the Action Group for implementation of (ISTB) with ENAV (Italy) and Telspazio for activities to be performed by ENAV to perform test and demonstration using three EGNOS System Test-BED (ESTB) reference stations for early SBAS trials in the MID region.

2.2 Within the framework of the air traffic control overall system upgrading and modernization plan, Cairo ATC Center has been modernized since January 2001 with not only the most up to date technologies but also to the most modern criteria as regards safety and reliability as well as offering all the new capabilities used in modern Air Traffic Management Systems recommended by ICAO. An experimental system position for ADS/CPDLC is operating as a stand-alone position but it will be integrated into the operating ATC units by mid. 2002 after successful trials and demonstrations.

2.3 RNP 5 airspace has been implemented instead of RNP/RNAV routes for RNAV operations within the Cairo FIR with effect from 9 August 2001above FL285, excluding that portion of southwest in Cairo FIR which is not covered by radar. Navigation error monitoring system was implemented from 1 January 2001 at a total of 5 points in Cairo FIR according to the agreed procedures in the LOA. RNP 5 approval procedures are in place using JAA guidance material on airworthiness and operational criteria. An AIC on the use of GNSS as a supplementary means of navigation in Cairo FIR with effect from January 2002 is in the process of being issued.

2.4 RVSM, an AIC indicating the intention to implement RVSM in the Cairo FIR, effective 27 Nov. 2003 was issued on 2 Oct. 2001. Moreover, Seminars and workshops have been held in Cairo Air Navigation Center for the air traffic controllers to familiarize them with all RVSM procedures. Finally, Modification of ATS system with RVSM will be completed before the implementation date of RVSM.

2.5 The new automated ATM system in Cairo ACC has incorporated the following capabilities: -

- Short Term Conflict Alarm.
- Restricted Area Intrusion Alert.
- Minimum Safe Altitude Warning.
- Cleared Adherence Monitoring.
- Route Adherence Monitoring
- Conflict Prediction.
- OLDI.

3. IRAN

3.1 The Civil Aviation Organization (CAO) of the I.R. of Iran, due to high demand of overflight, international and domestic flights, upgraded the COM, Navigation and Surveillance system as well as introduced new ACC for enhancing of safety, regulatory and efficiency in the Air Navigation Field.

3.2 To meet the above objectives, The SINA project (system of Iranian National ATM) consisting of 12 MSSR radar, 2 primary radars, 5 new RCAGs in addition to the previous 13 RCAGs have been put into operation (6 RCAGs are under tender for purchasing/installation) 10 new ATS routes as part of EMARSSH Route structure have been established and 4 of these routes have already been implemented.

3.3 Transition Plan from old to new ACC which is furnished with an updated/modernized simulators for training purposes have been completed successfully on 31 October 2001.

3.4 New airspace organization/sectorization from 7 to 8 sectors for ease of traffic handling, including 17 sectors can operate in peek period of traffic.

3.5 Following the introduction of radar coverage in Tehran FIR. The introduction of training programme for area controllers including area radar, en-route radar and terminal radar has been concluded. It is expected that after a period of 6 months (1 June 2002), the area radar service will be provided within Tehran FIR when Radar Training Program is completed.

3.6 With reference to the above mentioned items, the minimum longitudinal separation will be reduced to 40 NM instead of 80 NM (10 minutes), the concerned coordination/cooperation and LOA modification with adjacent states/FIRs are under study/implementation.

3.7 Review of air navigation charges in Iranian Airspace taking into account the interest of airlines economical consideration has been accomplished.

3.8 In compliance with ICAO Annex 15, the AIS of I.R. of Iran has developed and introduced Automated NOTAM process in accordance with the principles of AIS Manual (Doc 8126).

3.9 The Iranian Civil Aviation Training College is a member of the ICAO TRAINAIR and in close cooperation with TRAINAIR is preparing STPs. Presently 4 STPs in the area of ADS/CPDLC, Instructor Development Plan (IDP), Engineering and maintenance have been conducted.

4. JORDAN

4.1 A Mono-pulse Radar system head up-gradable to Mode S, Eurocat1000 Radar Data Processing and Display system integrated with Flight Data Processing System with a range of 180-230NM covering some of the space of adjacent FIRs has been operational since last May 2001.

4.2 Eurocat1000 Radar Processing and Display system consists of the usual Radar Data Processing System (RDPS) and its Display systems integrated with the Flight Data Processing System (FDPS). The main features of Eurocat1000 are:

- Minimum Safe Altitude Warning.
- Conflict Alert

4.3 Communication, a new project Voice Communication Switching Systems to be installed in all ATC units. The system will be including an Automatic Terminal Information Service (ATIS) system. The system is expected to be installed and commissioned by July 2002.

5. KUWAIT

5.1 Kuwait Civil Aviation Administration has implemented 1st Phase of its Technical Master Plan by installing an approach Radar and long range MSSR, which consists of the following:

- Primary Radar covering 120 nm
- MSSR covering 250 nm and can be extends to 300 nm
- Minimum safe altitude warning system (MSAW)
- Short Term Conflict Alert System (STCA) and it is according to ICAO requirements
- Target tracking and prediction system
- The system is open architecture design to allow it to interface with a large variety of other future ICAO CNS/ATM System
- Distance From Touchdown Indicator (DFTI) fixed at the tower control
- Low Level Wind Sheer Alert System (LLWAS) to achieve utmost safety

6. YEMEN

6.1 Yemen in early 2000 installed a MSSR Radar station with a range of 250 nm to cover

6.2 Five VSAT stations have been installed in different locations, in order to cover most of

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