INTERNATIONAL CIVIL AVIATION ORGANIZATION
South American Regional Office

REGIONAL PROJECT RLA/03/901
REDDIG SYSTEM MANAGEMENT AND SATELLITE SEGMENT ADMINISTRATION

THIRTEENTH REDDIG COORDINATION COMMITTEE MEETING (RCC/13)

(Lima, Peru, 9-10 March 2010)

Agenda Item 3: Work plan for 2010

ACTIVITIES SCHEDULED FOR 2010

(presented by the Secretariat)

SUMMARY

This paper presents information related with the activities scheduled to be carried out by REDDIG Project RLA/03/901 in 2010.

1. Background

1.1 The main activities scheduled to be carried out in 2010 are the following: continue with the activities for the implementation of MEVA II / REDDIG interconnection; the 2010 training programme, , the REDDIG NCC and Management Centre operation alternation, implement new services, plan for the renewal of the whole REDDIG platform, and study the need to increase the bandwidth.

2. Description

Continuation of activities for the implementation of MEVA II / REDDIG interconnection

2.1 The activities related with the implementation of the MEVA II / REDDIG interconnection are indicated in the action plan contained in Appendix D to WP/03.

2010 Training programme

2.2 In accordance with the REDDIG 2008-2010 Training Plan, prepared by the REDDIG Administration and the Ad-hoc Group, this year the course Communications Networks and Data Transmission, is scheduled to be held, which agenda is shown in Appendix A to this working paper.

REDDIG NCC and Management Centre operation alternation

2.3 Taking into account that the alternation of operation of the REDDIG NCC and Management Centre is a continuous procedure in order to keep the network's respective redundancy, it has been foreseen that the NCC and Management Centre operation be transferred this year for three weeks from Brazil to Argentina, at a date to be determined within the second semester of 2010.

Implementation of new services

2.4 During 2010, the implementation of new services as results of MEVA II / REDDIG interconnection are scheduled, such as radar data and flight plan exchange due to the automation activities planned to be implemented in the Region, and the start-up of AMHS International circuits among different States of the Region.

2.5 It is important to highlight that the implementation of new services with an optimized use of the necessary band width, will determine the future projection of REDDIG's satellite band width.

Plan for the total renewal of the REDDIG platform

2.6 Regarding the plan for the total renewal of the REDDIG platform, activities contemplated in WP/07 will be carried out, same which will be approved in this Coordination Meeting.

Study on the need to increase bandwidth and on Regional ATN architecture

2.7 Will continue with foreseen trials for determining minimum bandwidth for AMHS communications among Regional MTA; in the same way, will continue analyzing the requirement of bandwidth for data exchange among adjacent automated ACC.

2.8 Likewise, will continue with the study of the new regional ATN network.

3. Suggested Action

3.1 The Meeting is invited to:

a) take note of the information provided;

b) analyze the activities scheduled for 2010, indicated in Section 2 of this working paper; and

c) any other consideration related with RLA/03/901 REDDIG Project activities for 2010 that the Meeting might consider necessary.

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APPENDIX A

REDDIG COURSE 2010

COMMUNICATION NETWORKS AND DATA TRANSMISSION

1. LAN networks
- a. Architecture types
- b. Access methods
- c. 802 Project and standards
- d. Network comparison

2. Commuting
- a. Circuits commuting
- b. Packages commuting
- c. Messages commuting

3. Telephone network applications
- a. PPP protocol
- b. ISDN service

4. Frame Relay (Plot retransmission)
- a. Operation
- b. Levels and congestion control
- c. Traffic control
- d. REDDIG applications and use

5. Network devices and networks interconnection
- a. Repeaters
- b. Bridges
- c. Routers and algorithm
- d. Protocol converters (Gateways)

6. TCP/IP Protocols set
- a. TCP/IP – Internet – OSI
- b. Network level – IP Protocol
- c. Addressing and sub-networks
- d. Other protocols at network level
- e. Transportation level
- f. Client – server model
- g. Client – server applications: TELNET, FTP, SMTP, SNMP
- h. Routers programming
- i. REDDIG applications and uses

7. IP aeronautical applications
- a. AMHS
- b. Radar data exchange
- c. GNSS
- d. CNS/ATM applications integration

8. Communications systems generalities
- a. Data transmission
- b. Networks and their criteria
- c. Protocols and standards

9. Basic concepts

a. Link configuration
b. Topology
c. Transmission mode
d. Network classes

10. OSI Mode

a. Architecture and model levels
b. Functions and levels interconnection

11. Signals, Coding and Modulation

a. Digital signals
b. Digital to digital conversion
c. Analogical to digital conversion
d. Digital to analogical conversion
e. Analogical to analogical conversion

12. Data transmission interfaces

13. Data transmission media

a. Guided media (Plaited pair cable, coax cable, wave guide and optical fibre)
b. Non-guided media (radio frequency and propagation, microwaves, via satellite)
c. Transmission deterioration
d. Media comparison

14. Multiplexation

a. Frequency division (FDM)
b. Time division (TDM)
c. Applications and ranks

15. Error correction and link control

a. Type of errors
b. Detection and error correction
c. Flux control
d. Error control

16. Data link protocols

a. Asynchronical and synchronic protocols
b. Character-oriented protocols
c. Bit-oriented protocols (HDLC)