International Civil Aviation Organization · Organisation de l'aviation civile internationale · Organización de Aviación Civil Internacional · Международная организация гражданской авиации · منظمة الطيران المدني الدولي · 国际民用航空组织

LN 3/20-SA5411   18 May 2012

To: Mr. Pierre Dubois, Directeur Régional de l'Aviation Civile aux Antilles et en Guyane
            (France)
            Mr. Zulficar Mohamed, Director General, Civil Aviation Authority, Guyana
            Mr. Falisie Jozef Pinas, Minister of Transport, Communication and Tourism, Suriname

Subject: **RLA/03/901 REDDIG Management System and Administration of the Satellite
            Segment – Course on ATS Message Handling System (COM-AMHS) and
            Interconnection Aspects (Lima, 16 to 20 July 2012)**

Action
required: Your reply by 15 June 2012

Sir,

        I have the honour to refer to my letter LN 3/20-SA5339 dated 24 April 2012 requesting
your agreement to carry out the Course on the ATS Message Handling System (COM-AMHS) and
Interconnection Aspects, as part of the activities of Project RLA/03/901 for this year, which costs would
be charged to the project budget as allowed by its allocations.

        Since no adverse replies have been received to my above mentioned letter, the Course
will be held at the premises of this Regional Office from 16 to 20 July 2012.

        The course is designed for the technical and operational personnel in charge of the
installation, operation and maintenance of AMHS systems, and will be conducted by a specialist with
wide experience in AMHS, from EUROCONTROL's CNS/ATM INSTILUX Training Centre
(Luxembourg). Its detailed content is attached as **Appendix A** to this letter.

        The course objective is to present information on the technical design of an AMHS
system (data networks, server topology, user configuration, routing tables, monitoring and supervision
tools, interconnection with other AMHS systems, etc.), as well as on operational topics, such as the
design of an addressing and correct routing policy, strategies of flow migration from AFTN to AMHS,
and particular attention to the contents related to interconnection of AMHS systems and operating
procedures of resolution and escalation of incidences.

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The course is aimed at professional personnel in charge of the installation, maintenance and operation of the AMHS or AFTN systems, and it is expected that, by the end of the event, participants will have increased their knowledge of the AMHS system, acquiring the information necessary to facilitate the interoperability between AMHS systems installed in the region.

In accordance with the above, I am pleased to invite your Administration to nominate candidates if possible no later than **15 June 2012**, by sending the *Registration Form* included as **Appendix B** with the data of each participant and, if applicable, the ICAO *Fellowship Nomination Form* duly completed, (also attached), considering that the reservation of vacancies will be made on a first come first served basis to fill the places available.

To participate in the course, your Administration might consider the following financing alternatives:

a) Fellowships under an ICAO Project approved by your country;

b) Availability of a fellowship under the Regional Project RLA/03/901 for each State participating in this project that does not have the previous option. The administration concerned must provide round trip tickets;

c) Own resources of your Administration, if lacking any of the previous alternatives.

The course documentation will be distributed by electronic means, so it is recommended that participants carry a lap-top.

If further information is required, please contact Mr. Onofrio Smarrelli, CNS Regional Officer, at e-mail osmarrelli@lima.icao.int.

Accept, Sir, the assurances of my highest consideration.

Franklin Hoyer
Regional Director
ICAO South American Office
Lima

Enclosures
 As indicated

cc: Mr. Daniel Madiot, Chef du SNA (ai) aux Antilles et en Guyane (France)
        Mrs. Thelma Douglas Pinas, Permanent Secretary, Ministry of Transport, Communication and Tourism, Suriname
        Mr. Brian De Souza, Acting Director, CASAS, Suriname
        Mr. Stanley Betterson, Acting Director of Civil Aviation, Suriname
        REDDIG Counterparts
        C/FOS, C/PIU

APPENDIX A

**PRESENTATION ON ATS MESSAGE HANDLING SYSTEM (COM-AMHS) AND
INTERCONNECTION ASPECTS**

MODULE 01: THEORY FOR THE USER

1.   INTRODUCTION
       Module Objectives
       The References for this course

2.   DATA COMMUNICATIONS TECHNOLOGY
       Seven Layers
       Role of Communications in an ATM System
       ICAO Data Applications
       ATN Upper/Lower Layer Protocols
       The move to IP
       So, what is ATN?

3.   MESSAGING AND E-MAIL
       What is a Message?
       The Postal Analogy
       Point to Point Messaging
       Store and Forward / Retrieve Messaging

4.   ATC MESSAGING AND AFTN
       The ATC Requirement for Messaging
       Current Messaging Requirements
       Messaging Application - an ATC Example
       ICAO Protocols and Standards
       Services provided by the AFTN
       AFTN Procedures
       AFTN Addressing
       ICAO Regions
       Message Formats
       AFTN Inter-Centre Communication
       AFTN Limitations
       Why migrate to AMHS
       Benefits of AMHS
       The Way Forward

5.   X.400: DEFINING THE TERMS
       What is MHS?
       Standards Development
       What is a Message Handling System?
       Message Structure
       MHS Information Objects
       MHS Services
       The MHS Architecture
       (A)MHS components: (ATS) Message Server
       (A)MHS components: (ATS) User Agent
       (A)MHS Components: The Message Store
       (A)MHS Components: Access Units
       The Journey of a Message
       Management Domains
       ADMDs and PRMDs
       AMHS Management Domains
       'XX' Country Codes

MODULE 02: AMHS SYSTEM DESIGN AND TECHNICAL ISSUES

1.   INTRODUCTION
        Objectives

2.   DRIVERS FOR AFTN MIGRATION
        Reminder: Why migrate to AMHS

3.   AMHS SYSTEM DESCRIPTION
        AMHS System Description
        General AMHS Overview
        ATSMHS traffic flows
        How does an X.400 system work?
        AMHS information model
        AMHS Objects
        Flow of Information Objects in AMHS
        AMHS activity over underlying networks
        ATM applications over UNDERLYING NETWORKS
        Topology of AMHS servers: centralised vs. distributed
        Network characteristics determined by topology
        European ATS Messaging Profile
        AMHS QoS Requirements

4.   AMHS SYSTEM DESIGN CRITERIA
        Phases for AMHS Deployment
        Transaction Examples
        Technical Criteria
        Modular Solution
        Scalable and Portable Solution

5.   AMHS USER TYPES
        Evolution/Migration of Users
        TYPE of ATM COMs SERVICES
        Objectives for the User Migration Process
        How does a User Agent Work?
        What does the User do?
        ... and what tools does the user have?
        UA: Free Text Format Message
        UA: Auto-Formatting AIS Messages
        UA: Auto-Formatting ATS Messages
        UA: Auto-Formatting MET Messages
        UA: Non Delivery Reports (NDR)
        UA: Receipt Notifications (RN)
        UA: Tracking Sent Messages
        UA: Filtering Tool
        UA: Message Backup
        AU: Access Unit
        Logical Connections for the ICARO/AMHS Solution
        Access Unit: EAD Solution
        EURONOTAM (I): COMMUNICATIONS FLOW
        EURONOTAM (II): PHYSICAL TOPOLOGY
        Exercises

MODULE 03: AMHS OPERATIONAL ISSUES

1.   AMHS OPERATIONAL ISSUES
        Main AMHS Operational Issues
        AMHS Addressing: CAAS
        AMHS Addressing: XF
        AMHS Addressing: CAAS and XF
        AMHS Addressing: CAAS vs. XF
        How to define a national CAAS scheme
        AMHS Addressing Registry
        XF Address Conversion: Use of the ICAO registry
        CAAS Addr. Conversion: Use of the ICAO registry
        Global AMHS Address Registration
        International Topology and Routing Strategy
        Conversion between an AMHS IPM and an AFTN message
        Mapping priorities
        Conversion of AFTN Service Messages
        Acknowledgement of SS-priority messages
        Reception of an AMHS message with ATS-Message-header SS and RN not requested
        Reception of an AMHS message with ATS-Message-header no SS and RN requested
        Reception of RN with subject message not generated by the AFTN/AMHS GW
        AMHS to AFTN Direction (reception of a Non-Receipt-Notification)
        Message rejection due to the use of an unknown addressee indicator or recipient
        Rejection of an AFTN-to-AMHS message: Transfer of NDR to the control position
        Reception of NDR with subject message not generated by the AFTN/AMHS GW
        AFTN to AMHS direction: Unsuccessful conversion of addressee indicator in incomi
        AFTN to AMHS Direction (unsuccessful conversion of origin OGN indicator)
        AMHS to AFTN Direction (unsuccessful conversion)
        AMHS to AFTN Direction (non-delivery and out-of-line situations)
        Legal AMHS Recording
        Legacy Procedures
        Management of MTA names and passwords
        Associations between MTAs: Dialogue mode
        Simultaneous P1 associations
        Application and network timers optimization
        AMHS operational issues

2.   OPERATIONAL AFTN MIGRATION TO AMHS
        AFTN to AMHS Migration
        Decisions during AMHS Planning
        Pre-requisite tasks
        Tasks to be performed with every AMHS COM centre
        Testing phases
        Preoperational scenario
        Details of the preoperational phase
        AFTN Flows migration to AMHS: Objectives
        AFTN Flows migration to AMHS: Initial situation
        AFTN Flows migration to AMHS: Step 1
        AFTN Flows migration to AMHS: Step 2
        AFTN Flows migration to AMHS: Step 3
        AFTN Flows migration to AMHS: Step 4a
        AFTN Flows migration to AMHS: Step 4b
        Operational AFTN migration to AMHS
        Interconnection considerations

3.	THE FIRST PROJECT ACTIVITIES
	Current Status
	FIRST
	Outcomes of the FIRST Team
	First Operational IP Link: MADRID-FRANKFURT
	FIRST Team: Testing Structure
	FIRST Team: Testing Development

4.	CONCLUSION, DOCUMENTATION AND GLOSSARY
	ICAO documentation
	AMHS SARPs sub-volume 3
	Need for Amendment to SARPS (PDRs)
	Glossary
	Conclusion

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APPENDIX B /APÉNDICE B

INTERNATIONAL CIVIL AVIATION ORGANIZATION
ORGANIZACIÓN DE AVIACIÓN CIVIL INTERNACIONAL

RLA/03/901 Regional Project
Proyecto Regional RLA/03/901

PRESENTATION ON ATS MESSAGE HANDLING SYSTEM (COM-AMHS) AND INTERCONNECTION ASPECTS /
PRESENTACIÓN SOBRE EL SISTEMA DE MANEJO DE MENSAJES ATS (COM-AMHS) Y ASPECTOS DE INTERCONEXIÓN

Lima, Peru, 16 to 20 July 2012 / Lima, Perú, 16 al 20 de julio de 2012

REGISTRATION FORM / FORMULARIO DE REGISTRO

1. Estado/*State:*
   Organismo/*Organization:* _____

2. Nombre/*Name:* _____

3. Cargo/*Position*: _____

4. Dirección oficial */*
   Business address: _____
   _____
   _____

5. Tel.: _____   E-mail: _____

6. Hotel o dirección en la ciudad/ *Hotel or local address:* _____

7. Información de vuelo/ *Flight information:*
   Vuelo llegada/ fecha/ hora/ *Arrival flight/ date/ hour:* _____

   Vuelo salida/ fecha/ hora/ *Departure flight/ date/ hour:* _____

Firma/ *Signature:* _____   Fecha/ *Date:* _____

Enviar este formulario debidamente completado a:*: mail@lima.icao.int*