ATTACHMENT C

RLA/03/901 Regional Project
REDDIG Management System and Administration of the Satellite Segment

TRAINING ON TECHNOLOGICAL TOOLS FOR THE ANALYSIS OF VOICE AND DATA APPLICATIONS TRANSPORTED IN REDDIG

(Santiago, Chile, 16 to 18 October 2019)

1- Introduction

Taking into account the continuous and rapid advances of technology in telecommunications and networks, applied specifically to civil aviation, it is necessary that technical personnel, involved with applications of the aforementioned technologies, become familiar with concepts and tools that allow them to strengthen the knowledge acquired as a result of experience and daily work in telecommunications systems.

This training is aimed at renewing, strengthening and complementing the fundamental and advanced concepts in transmission systems used in the transport of voice and data applied to civil aviation and supported on the multiservice platform that constitutes REDDIG.

The proposed training is aimed at the operation and maintenance of the REDDIG station and the ability to analyze and learn about the different services that are transported through this network.

2- Place and duration

This training will take place within the period between October 16, 2019 and October 18, 2019, at the facilities provided by the National Directorate of Civil Aviation of Chile.

3- General Objective

Know the terminology, general, specific concepts and analysis tools of voice and data applications that are transported in the REDDIG, to contribute to its preventive and corrective maintenance.

4- Specific Objectives

That the participant (technician) knows the fundamentals of operation of the different services that are transported by REDDIG (AMHS, AFTN, AIDC, ASTERIX, ADS-B, ADS-c, etc).
That the participant can recognize topologies and situations typical of a networking scenario and applications that relate to services.
That the participant can recognize, depending on the services, the interfaces used, topologies, means of transport.
That the participant understands the importance and importance of the services provided in the regional context.
That the participant can differentiate REDDIG services from others.
That the participant becomes familiar with the monitoring tools for services.
That the participant can acquire the knowledge that allows the use of established standards to solve compatibility problems between different manufacturers and unify criteria for the implementation of

telecommunications systems.
Become familiar with networking protocols, tools and devices.

5- Requirements

Technical personnel that provide services in the field of competence of the REDDIG node.

6- Training structure

For the achievement of the proposed objectives, the training will be distributed in central chapters, including the development of theoretical and theoretical-practical contents, there being logical correlativity between them and based on the equipment contained in the nodes.

7- Dictation system

The training will take place in person, in hourly modules of 90 minutes each and with activities as tasks to complement.

8- Methodology

The training will be carried out in person, and with extracurricular tasks, through theoretical/practical training sections in the classroom, with active participation of the participant through analysis and problem solving in the respective study area. The knowledge acquired will be applied in the laboratory (or suitable place for this purpose) where the participant will simulate situations of traffic and performance analysis, solving the proposed problems.

The methodology also includes technical documentation readings, presentations of the different topics and group learning, with discussion on the applications and case studies proposed.

The participants will have at their disposal, on the web, all the necessary material to complete the training. This site will contain the necessary information according to the theoretical framework exposed during its delivery.

Eventually tools will be used in the same web environment to make available the practical ones that are programmed.

9- Training tools

The content will be developed with the specific documentary support required in this document.

Classes will be taught in a classroom equipped with blackboard, writing elements, eraser, banks / desks for participants, desk for the teacher. PC, cannon and projection screen.

The methodology used will be based on the hardware and software resources that are available.

Note: All required software will be supplied by the instructor; Only local administrator permissions are required on each computer for installation. The information, software and accessories will be hosted on the server or where designated by the computer staff that provides the support, with access to the participants and for exclusive use.

The material required above is not essential for training; eventually, it will be coordinated with the

personnel responsible for the place where the training is dictated to evaluate the aid that will be available in each case.

10- Instructor

The training will be delivered by Eng. Cristian Javier Vittor, Administrator of REDDIG.

11- Language

The training will be delivered in Spanish with interpretation to English if necessary.

12- Content

Below detailed is the content of the training. In addition, the digital version of the training content as well as complementary electronic files will be delivered to all participants.

1. General concepts about CNS services
2. Reference documentation
3. Concepts about AFTN and AMHS
4. Concepts about ASTERIX (radar and ADS data)
5. Concepts about AIDC
6. Concepts about ADS-B, ADS-C and CPDLC
7. Concepts about VHF / IP
8. Concepts of analog and IP telephony
9. Analysis tools and their use
10. Practices