



**International Civil Aviation Organization  
South American Regional Office**

**FIFTH WORKSHOP/MEETING OF THE SAM IMPLEMENTATION GROUP (SAM/IG/5)  
REGIONAL PROJECT RLA/06/901**

**Lima, Peru, 10 - 14 May 2010**

**Agenda Item 6: Assessment of operational requirements for the improvement of communications, navigation, and surveillance (CNS) capabilities for en-route and terminal area operations**

**STUDY FOR THE REGIONAL IMPLEMENTATION OF A NEW COMMUNICATION NETWORK**

(Presented by the Secretariat)

<b>Summary</b>	
This working paper presents information for the conduction of a study for the implementation of a SAM digital network that will support both current as well as short-, medium-, and long-term service requirements.	
<b>References:</b>	
<ul style="list-style-type: none"><li>• Report of the SAM/IG/4 meeting (Lima, Peru, 19-23 October 2009);</li><li>• Report of the thirteenth meeting of the REDDIG Coordination Committee (RCC/13) (Lima, Peru, 9-10 March 2010); and</li><li>• Report of the third meeting of the Coordination Committee of Project RLA/06/901 (Lima, Peru, 22-23 April 2010).</li></ul>	
<b>ICAO Strategic Objectives:</b>	<i>A – Safety</i> <i>D - Efficiency</i>

**1. Introduction**

1.1 The new services foreseen for the short and medium term between regional ATS units, such as the interconnection of AMHS systems, the exchange of radar data, and the exchange of data messages (OLDI, AIDC), require an analysis of the availability and capacity of the South American Digital Network (REDDIG) to support these new requirements.

1.2 Likewise, considering that the REDDIG has been operating since 2003 and that some of its equipment is no longer being manufactured, a study for replacing the equipment with new technology is required.

1.3 In this respect, the SAM/IG/4 meeting considered the need to conduct a study for analysing the current REDDIG digital network, based on bandwidth requirements for the implementation of new services, an analysis of the current REDDIG infrastructure and the technological changes required, the architecture of a possible regional ground IP network, and the architecture of a mixed network. The selected network structure would constitute the ATN for the SAM Region.

## 2. Analysis

2.1 In order to determine the REDDIG bandwidth requirement based on the new requirements in the Region, trials are being conducted to determine the minimum bandwidth required to support new applications, such as the interconnection of AMHS systems. It is foreseen that these trials will be completed by late June 2010.

2.2 With reference to the study of the change of the REDDIG technological platform, the thirteenth meeting of the REDDIG Coordination Committee (RCC/13) took note of work done by an *ad-hoc* group made up by Argentina, Brazil and Peru on the preliminary studies to be carried out for changing the REDDIG technological platform, taking into account availability, BER, bandwidth, existing technology, type of services to be implemented, and single service provider of the current network. The work of the *ad-hoc* working group is shown as **Appendix A** to this note.

2.3 The third meeting of the Coordination Committee (RCC/3) of Project RLA/06/901 approved the mission of an expert to study the implementation of a new digital network for the SAM Region. The mission is scheduled from 16 to 27 August 2010. The terms of reference for the expert are shown in **Appendix B** to this working paper.

2.4 **Appendix C** to this paper contains a preliminary action plan for the implementation of a new digital network infrastructure for the SAM Region.

## 3. Suggested action

3.1 The Meeting is invited to:

- a) take note of the information contained in this paper;
- b) analyse and look into the aspects contained in the study on the change of the REDDIG technological platform presented in Appendix A;
- c) review the terms of reference described in Appendix B to this paper;
- d) review the tentative action plan for the implementation of the new network structure for the SAM Region; and
- e) analyse any other related matter that it deems necessary.

-----