



Agenda Item 6: Assessment of operational requirements in order to determine the implementation of communications and surveillance (CNS) capabilities improvement for en-route and terminal area operations

FOLLOW-UP TO THE IMPLEMENTATION OF THE ACTION PLAN FOR THE INTERCONNECTION OF AMHS IN THE SAM REGION

(Presented by the Secretariat)

SUMMARY

This working paper presents a follow-up analysis to the activities taken under consideration in the Action Plan for the Interconnection of AMHS Systems in the SAM Region, examined during the Fifth Workshop/Meeting of the SAM Implementation Group.

References:

- Fourth workshop/meeting of the SAM Implementation Group (SAM/IG/4) (Project RLA/06/901) Lima, Perú, 19-23 October 2009; and
- Fifth workshop/meeting of the SAM Implementation Group (SAM/IG/5) (P Project RLA/06/901) Lima, Perú, 10 al 14 de mayo de 2010.

ICAO strategic objective:

D - Efficiency

1. Background

1.1 During the Fifth Workshop/Meeting of the SAM Implementation Group (SAM/IG/5), the action plan for the interconnection of the AMHS installed in the Region was updated, which is shown in the **Appendix** to this working paper.

1.2 The action plan drafted by the SAM Implementation Group takes into account the interconnection of the AMHS installed in Argentina, Brazil, Chile, Colombia, Panamá, Paraguay and Perú. In the SAM Region there is also an AMHS installed in Ecuador.

1.3 The AMHS in Ecuador only operates in the city of Guayaquil, but domestically, the electronic messaging service is the AFTN, whose main switching centre is installed in Quito. All international messages pass through the Quito AFTN switching centre, therefore, Ecuador has not been taken into account for the interconnection of AMHS in the SAM Region, it will be taken under consideration once the AMHS is installed nation-wide.

1.4 In mid-2010, the installation of an AMHS in Venezuela was completed, and it has been scheduled that by the next biennium (2011- 2012) AMHS will be installed in Bolivia, Ecuador, Guyana, Surinam and Uruguay.

2. **Analysis**

2.1 In the SAM/IG/5 meeting, as follow-up to Conclusion SAM IG/4-10 as well as the activities described in the action plan, initial Memoranda of Understanding (MoU) for AMHS interconnection between Argentina–Perú and Brazil–Perú were drafted.

2.2 These MoU should have been examined by the respective aeronautical authorities, with the aim that they are duly signed at the sixth workshop/meeting of the SAM Implementation Group.

2.3 The MoU between Colombia-Peru for the interconnection of automated systems was signed in mid-2010. In accordance with the signed MoU, the operational interconnection of both systems will be effective on November 2010.

2.4 It is expected that in this meeting Argentina, Brazil and Paraguay inform on the progress made in the interconnection of their AMHS, in accordance with the MoU signed between Argentina-Brazil, Argentina–Paraguay and Brazil- Paraguay.

2.5 It is also expected that at this meeting the review and signature of the MoU between Argentina–Chile, Argentina–Perú, Brazil–Colombia, Brazil–Perú, Chile–Perú and Colombia–Panamá can be completed, as taken under consideration by SAM/IG/5 meeting.

2.6 In addition, in view of the implementation of the AMHS in Venezuela, an MoU is required between Brazil-Venezuela, Colombia-Venezuela and Peru-Venezuela. In this respect, it is expected that during the Meeting, the respective MoU can be completed and, possibly, signed.

3. **Action proposed**

3.1 The Meeting is invited to:

- a) Take note of the information presented;
- b) Analyze the progress made in the interconnection of AMHS in the SAM Region, in accordance with the MoU signed and mentioned in paragraphs 2.3 and 2.4 of this working paper;
- c) Examine and proceed, if possible, with the signature of the MoU for the interconnection of AMHS between the States indicated in paragraphs 2.5 and 2.6 of this working paper;
- d) Update the action plan presented in the Appendix to this working paper, in accordance with the analysis made to the section 2 of this working paper; and
- e) Analyze other subjects in this regard that the Meeting might deem pertinent.

APPENDIX

ACTION PLAN FOR THE INTERCONNECTION OF AMHS SYSTEMS IN THE SAM REGION

| ITEM | ACTIVITY | RESPONSIBLE | EXPECTED RESULT | STATUS | FINALIZATION DATE |
|------|--|---|--|--|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | Review of the ATN Regional Plan as regards AMHS implementation | Secretariat | Revised ATN ground applications plan (Table CNS 1Bb) | Completed | Jun 2009 |
| 2 | Review and assignment of intra-regional routers IP addressing | Secretariat | Assignment of IP addressing | Completed | Jun 2009 |
| 3 | Review of CAAAS addressing plan | SAM States | Revised CAAS addressing Plan | Completed | Jun 2009 |
| 4 | Prepare interconnection protocol tests to determine bandwidth required for transmission of AMHS messages between MTAs through REDDIG | RLA/06/901 project CNS Expert | Protocol interconnection tests. A guide for the operational interconnection of AMHS systems was drafted | Completed | Dec 2009 |
| 5 | Preparation of Guide for the Operational Interconnection of AMHS Systems in the SAM Region | RLA/06/901 project CNS Expert | Guide for the operational interconnection of AMHS systems in the SAM Region | Completed | Oct 2009 |
| 6 | Drafting of a model MoU for the interconnection of AMHS | Argentina | Model MoU for the interconnection of AMHS | Completed | Oct 2009 |
| 7 | MoU for the interconnection of AMHS currently implemented in the SAM Region: a) Argentina-Brazil b) Argentina-Chile c) Argentina-Peru d) Argentina-Paraguay e) Brazil-Colombia f) Brazil-Paraguay g) Brazil-Peru h) Chile-Peru i) Colombia-Perú j) Colombia-Panama | SAM States involved | MoU for interconnection of AMHS systems between SAM States having AMHS implemented. | Valid a, d & f) Completed | Dec 2010 |
| 8 | Phase I Interconnection trials between MTAs of: a) Argentina-Brazil b) Argentina-Paraguay c) Brazil-Paraguay Types of tests to carry out: Network transportation; Network connectivity; Message exchange; Preparatory phase. | Argentina, Brazil, Paraguay and REDDIG Administration | Interconnection trials between Argentina, Brazil and Paraguay MTAs | Valid a) network transportation and connectivity trials carried out with the Manaus node. MoU was updated, since Brazilian entrance node will be Curitiba. Network connectivity, and transport and exchange of messages tests will be repeated b) network transportation and connectivity, and message exchanges trials carried out. c) MoU was updated, as entrance node to Brazil will be Curitiba, and the network connectivity, and transport and exchange of messages tests will be carried out. | Aug 2010 |

| ITEM | ACTIVITY | RESPONSIBLE | EXPECTED RESULT | STATUS | FINALIZATION DATE |
|------|---|---|---|---|--|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 9 | <p>Phase II Interconnection trials between MTAs of:</p> <p>a) Argentina-Chile b) Argentina-Peru c) Brazil-Colombia d) Brazil-Peru e) Chile-Peru f) Colombia-Peru g) Panama-Colombia</p> <p>Types of tests: Network transportation; Network connectivity; Message exchange; Preparatory phase.</p> | Argentina, Brazil, Chile, Colombia, Panama y Perú | Interconnection trials between AMHS systems listed in column 2 of this table. | <p>Valid</p> <p>a) Network transportation tests carried out</p> <p>b) Network transportation and connectivity tests carried out. Draft MoU was presented.</p> <p>c) Network transportation and connectivity tests carried out. Draft MoU was presented.</p> <p>d) Network transportation and connectivity tests carried out. Draft MoU was presented.</p> <p>e) No tests were carried out.</p> <p>f) Network transportation and connectivity tests carried out as per EUR AMHS Manual, Appendix E.</p> <p>g) No tests were carried out.</p> | <p>a) Nov 2010 B) Oct 2010 c) Oct 2010 d) Oct 2010 f) Nov 2010 g) Dec 2010</p> |
| 10 | <p>Operational interconnection implementation at the following MTAs:</p> <p>a) Argentina-Paraguay b) Argentina-Brazil c) Argentina-Chile d) Argentina-Peru e) Brazil-Colombia f) Brazil-Paraguay g) Brazil-Peru h) Chile-Peru i) Colombia-Peru j) Panama-Colombia</p> | Argentina, Brazil, Chile, Colombia, Panama, Paraguay and Peru | Operational implementation of AMHS systems. | <p>a) In accordance with MoU</p> <p>b) In accordance with MoU</p> <p>d) In accordance with MoU</p> <p>f) In accordance with MoU</p> <p>g) In accordance with MoU</p> | <p>a), b), d) f y g) Dec 2010 c),e), h) & i) Dec 2011</p> |