Agenda Item 4: Assessment of operational requirements to determine the implementation of improvements in communication, navigation and surveillance (CNS) capabilities for operations in route and terminal area

TECHNICAL PROPOSAL OF REDUNDANCY FOR THE MEVA III – REDDIG II INTERCONNECTION

(Presented by the Secretariat)

SUMMARY

This working paper presents a technical proposal to implement nodes of the REDDIG backup network (MPLS) in some States/Organizations of MEVA III network, that have communication with REDDIG States through a sole existing via, the MEVA III – REDDIG II interconnection.

References:

- Contract REDDIG 22501200.
- REDDIG II Technical Specifications – Terrestrial network (MPLS)

ICAO strategic objectives:	*A – Safety* *B – Air navigation capacity and efficiency*

1 Background

1.1 The two networks deployed in NAM/CAR (MEVA III) and SAM (REDDIG II) have as common characteristic the usage of the same satellite (Intelsat IS 14). This allowed the implementation of an interconnection between the two networks, by just adding equipment of MEVA III network (FRAD Memotec 9230 and MODEM Skywan 2570) to the REDDIG´s nodes of Bogota and Caracas. By the other hand, REDDIG II equipment (Router Cisco 2901 y MODEM Skywan 1070) were also added to the MEVA node of Tegucigalpa (COCESNA). Figure 1 depicts a conceptual scheme to adequate Bogota and Caracas node for the MEVA III – REDDIG II interconnection.

2 Discussion

2.1 The adopted scheme has a common point of failure for all communications if the Tegucigalpa node (COCESNA) presents a severe problem.

2.2 Assuming the importance of these communications stablished by the MEVA III – REDDIG II connection, to have an alternative via, as redundancy, must be considered.

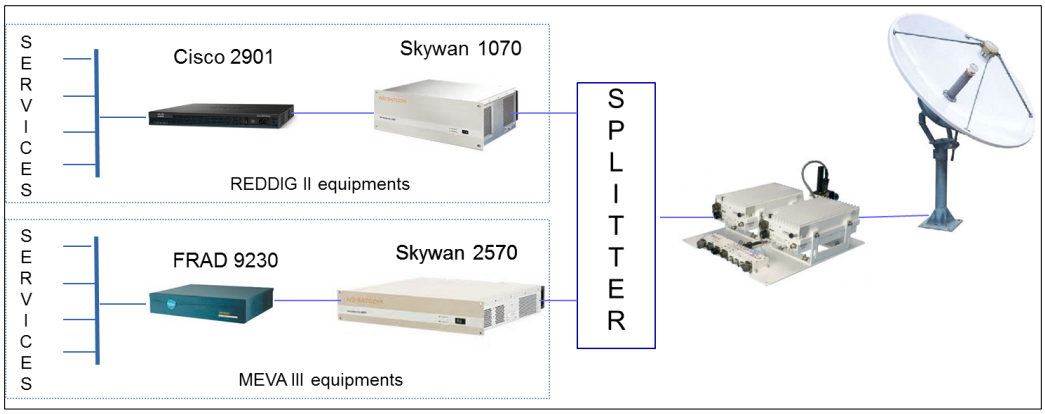

Figure 1 – REDDIG II nodes of Bogotá and Caracas

3. Technical proposal

3.1 In 2015, the SAM Region Digital Network was modernized, having a satellite network as main network, and a backup network, by means of a MPLS service provider (CenturyLink) for all REDDIG nodes. Figure 2 depicts the present configuration of REDDIG II.

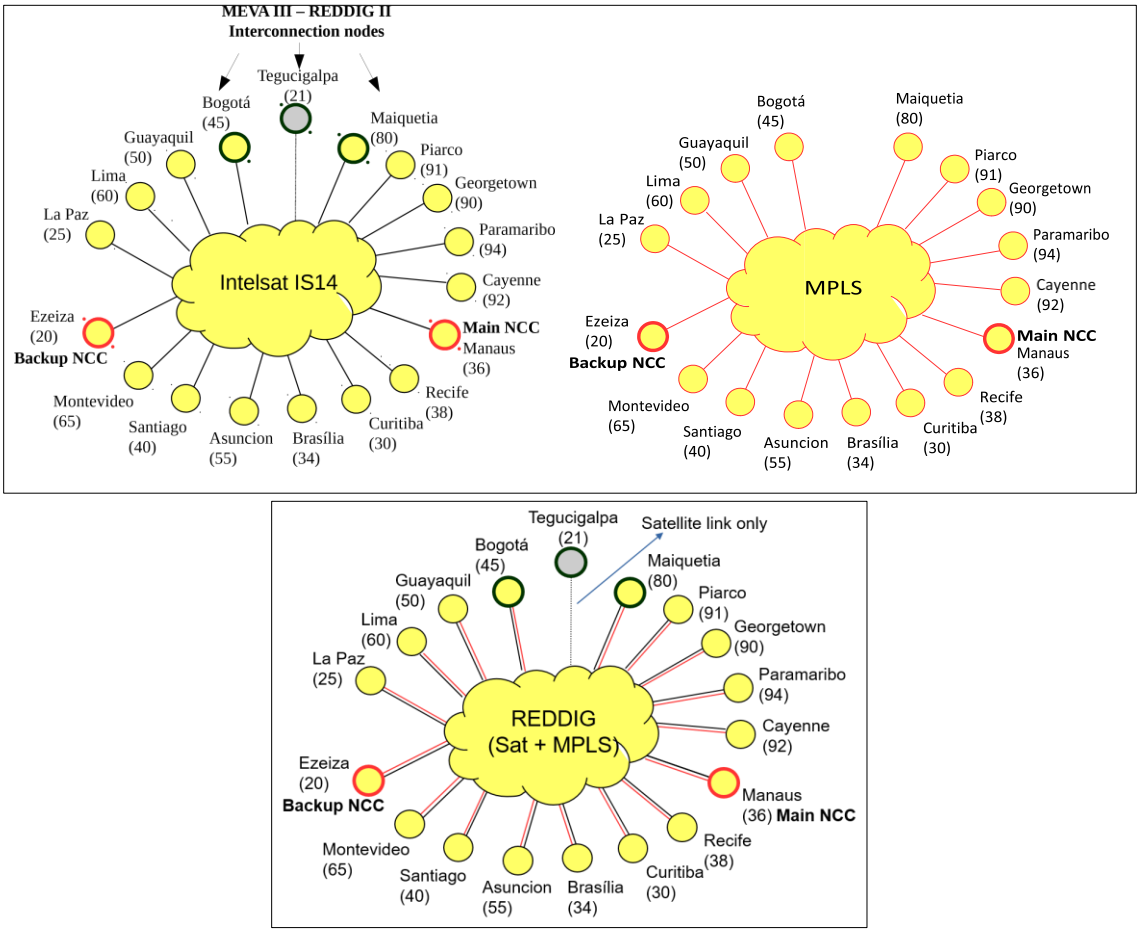

Figure 2 – Main and backup REDDIG II networks

3.2 A feasible technical proposal would be to deploy nodes of the REDDIG II backup network in some MEVA III States/Organizations, whose maintain critical communications with REDDIG II participants, for instance: United States (Atlanta), Panama (Panama City) and COCESNA (Tegucigalpa). Figure 3 depicts this proposal.

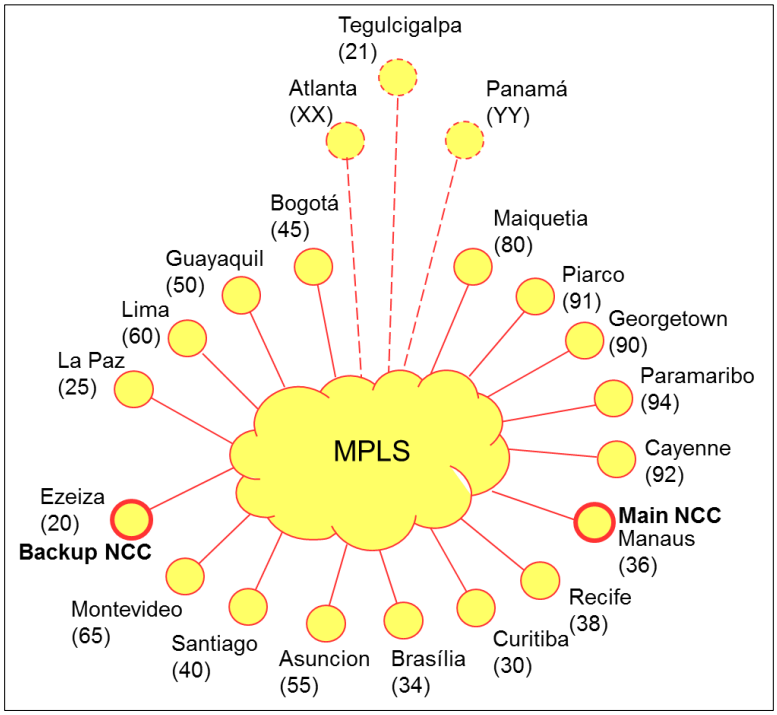

Figure 3 – REDDIG II backup network expanded to MEVA III States/Organizations

4. Suggested action

4.1 The Meeting is invited to**:**

a) take note of the information presented herein;

b) discuss the proposal presented on item 3; and

c) discuss the administrative and financial aspects to deploy the proposal, if approved.

d) consider any other issues it may deem appropriate.

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