



Agenda Item 4: Report of activities and deliverables of the GT – INTEROP and Subgroups

IMPLEMENTATION OF VOIP IN BRAZIL
(Submitted by Brazil)

SUMMARY	
This information paper presents the situation of operational VoIP implementation in Brazil	
References	
<ul style="list-style-type: none"> • Final Report of the SAM/IG/30 Meeting (Lima, October 23 to 27, 2023). • First Workshop/Meeting of the CNS/VOIP Subgroup (SG CNS/VOIP/01) (Lima, February 26 to March 1, 2024). 	
<i>Goals They are strategies</i> ICAO:	<i>A - Security Operational</i> <i>B- Ability and Efficiency of the Navigation</i> <i>Air</i>

1. INTRODUCTION

1.1 In March 2024, the first Meeting was held at the ICAO, in Lima, to carry out the activities of the CNS/VOIP Subgroup, with the objective of studying the VoIP capabilities implemented by the SAM States and preparing the programmatic content of the training to be contracted on “ATM VOIP Component Interoperability Standards (EUROCAE ED-137)”, by mean of REDDIG.

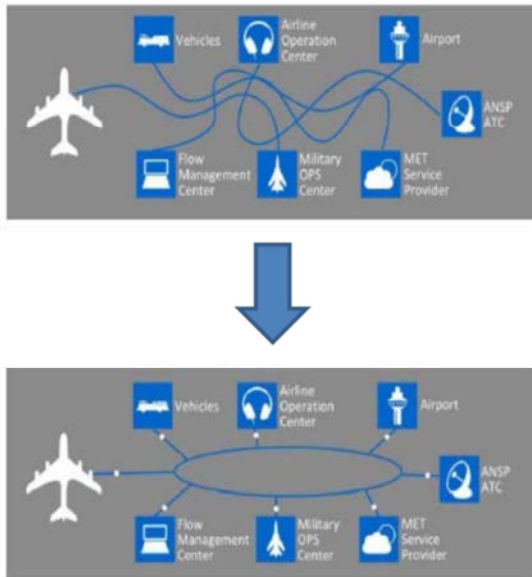
2. DISCUSSION

2.1 The First Meeting of the CNS/VOIP Subgroup surveyed the VoIP capabilities implemented by the SAM States for the establishment of the first oral communications based on the EUROCAE ED-137 Standards, via REDDIG.

2.2 The secretary highlighted the need for the SAM States to collaborate in the study of the implementation of VOIP, training to work on the interoperability of the implemented systems, using REDDIG as a communication platform.

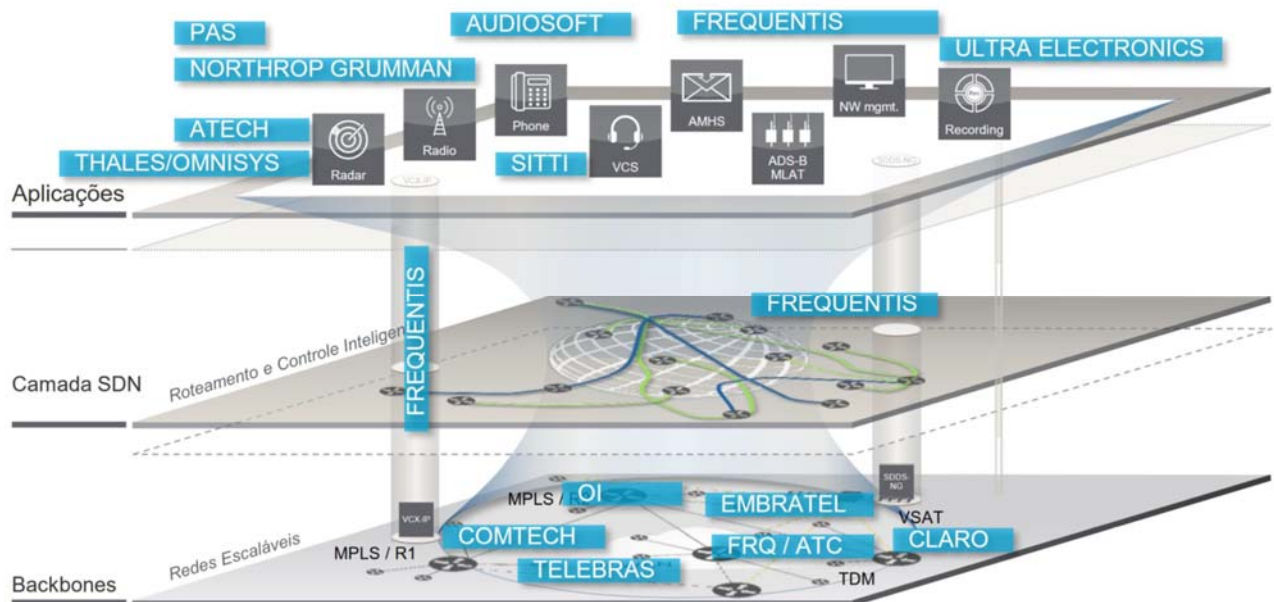
2.3 Brazil has been working to separate operational and administrative data into distinct networks, in which an operational network for air navigation called ATN-BR is being implemented.

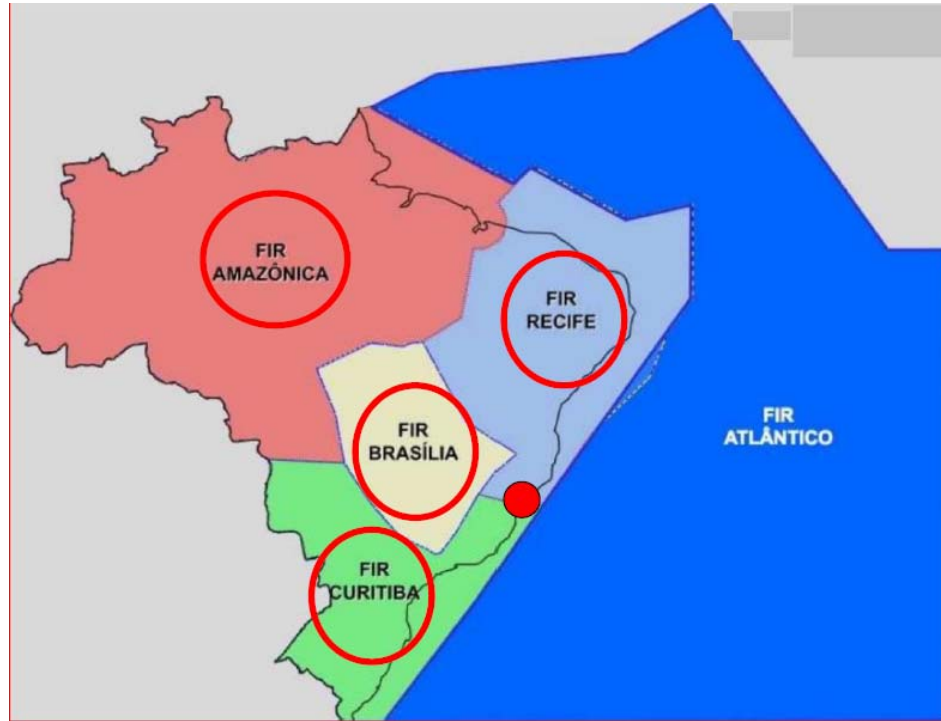
Programa ATN-Br: Objetivos



- ✓ **Aumento del rendimiento de la red**
 - Transición a IP (flexibilidad)
 - Redundancia WAN (disponibilidad)
- ✓ **Reducción de Costos de Operación**
 - Reducción del uso de canales TDM
 - Gestión Centralizada
- ✓ **Seguridad Operacional**
 - Políticas de seguridad de la información & controle de acceso
 - Adhesión a las normas EUROCAE

SDN (Software Defined Network)





REDDIG Interoperability

2.4 Thus, Brazil completed the implementation of the ATN-BR in the Recife and Curitiba FIR Regions and is in the implementation phase in the São Paulo - Rio de Janeiro Region.

2.5 To comply with the interoperability standards of VoIP ATM components (EUROCAE ED-137), Firewalls are being implemented between the REDDIG data arrival point and the firewall of the control center networks.

2.6 Brazil has worked on the modernization of telephone calls with the implementation of VoIP SIP messages exchanged, which are already in operation in the Centers of Brasilia, Curitiba and Manaus.

2.7 Regarding Voice Centers (VCS), Brazil uses the SITTI M600MP model, which is compatible for VoIP and, still in the voice service, uses VHF IP Park Air radios, all compliance with Ed 137.

2.8 Finally, VOIP tests via REDDIG between Brazil with systems from other states should begin with the Curitiba center.

3. ACTION SUGGESTED

3.1 The Meeting is invited to:

- a) take note about the activities carried out for Brazil; and
- b) analyze other considerations that Meeting considers important.