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# Regional Project RLA/03/901

## SAM DIGITAL NETWORK REDDIG II





## REDDIG II

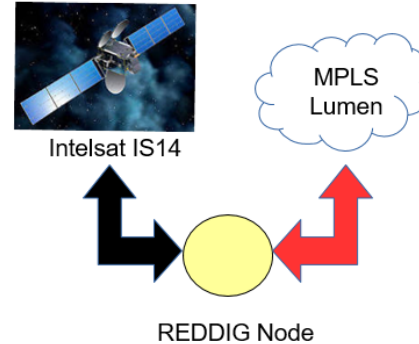
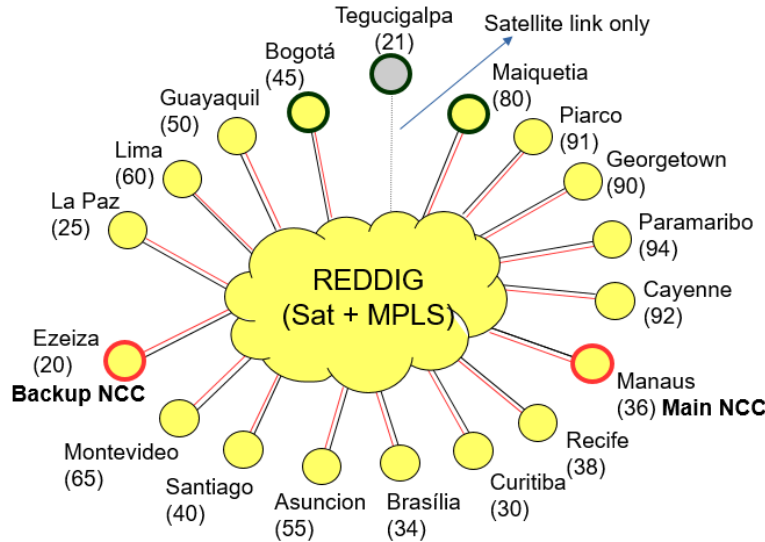
## SAM Region Digital Network

- The SAM Region Digital Network (REDDIG) was deployed by means of an ICAO Technical Cooperation Project RLA/03/901 (REDDIG I – 2003);
- 17 nodes in 14 States (Brazil has 4 nodes). The network was modernized in 2015 (REDDIG II);
- Each node has access to a full meshed TDMA/IP satellite network (primary network) and a terrestrial IP backbone (MPLS);
- Availability better than 99,98 %;
- The Member States are owners of the nodes and are in charge of their maintenance under coordination of a network Administrator. The States pay the costs annually (Administrator, bandwidth, training, spare parts, etc.);
- Annually there is a REDDIG Coordination Committee (RCC) meeting for project evaluation, performance analysis, financial situation report and other matters;
- The network Administrator is located in Manaus-Brazil (NCC). The backup NCC is in Ezeiza (Argentina).



REDDIG II

# SAM Region Digital Network

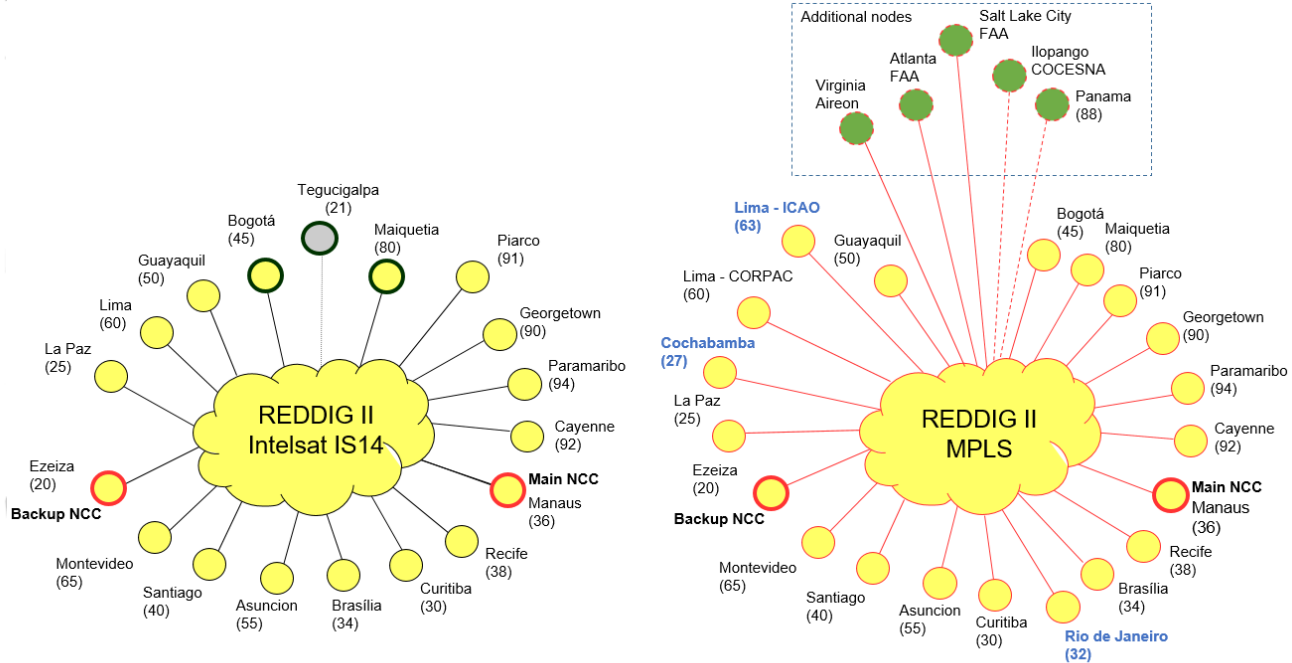


- In each node, the satellite station has two chains (A & B) using a 3.7 m antenna, C band, Intelsat IS 14 satellite transponder (3C/4C), with a 4.4 MHz leased bandwidth, employing a modulation scheme of 8PSK and FEC 2/3. There are three carriers: one modulated at 955 kBauds, another at 679 kBauds, and the last one at 847 kBauds.
- A 1 MPLS link is used as terrestrial network.



REDDIG II

# SAM Region Digital Network





## REDDIG II

# Interconnection with MEVA III

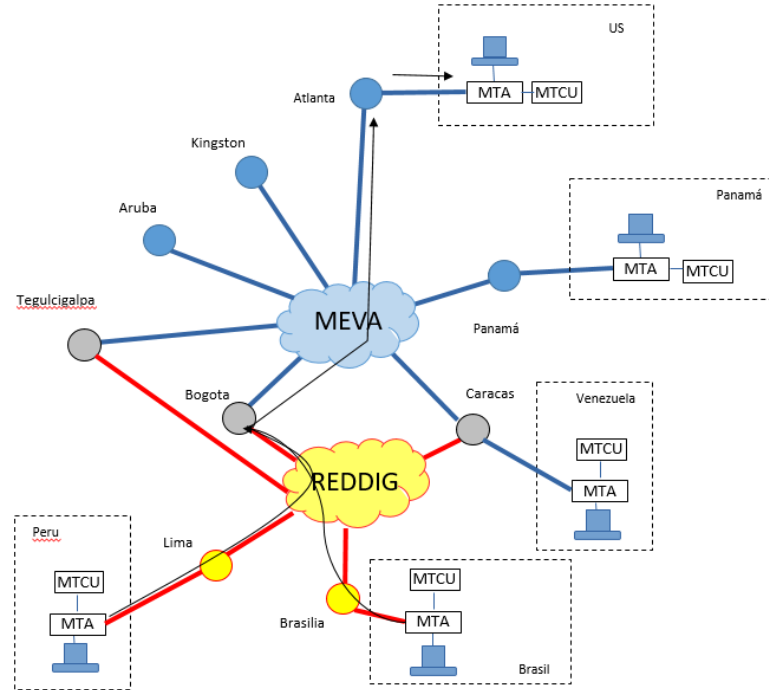


- Interconnection with the MEVA III network is achieved through two REDDIG nodes (Bogota and Maiquetia) and a MEVA III node (Tegucigalpa – COCESNA). As both networks use the IS 14 satellite, some equipments were added to the REDDIG nodes (Bogotá and Maiquetia), i.e. a Frame Relay Device (FRAD) and a MODEM (IDU Skywan 2570), to provide connection to the MEVA III network. Also, in the COCESNA MEVA III node were added REDDIG II equipments (CISCO 2901 router and IDU Skywan1070), in order to connect to the REDDIG network.



REDDIG II

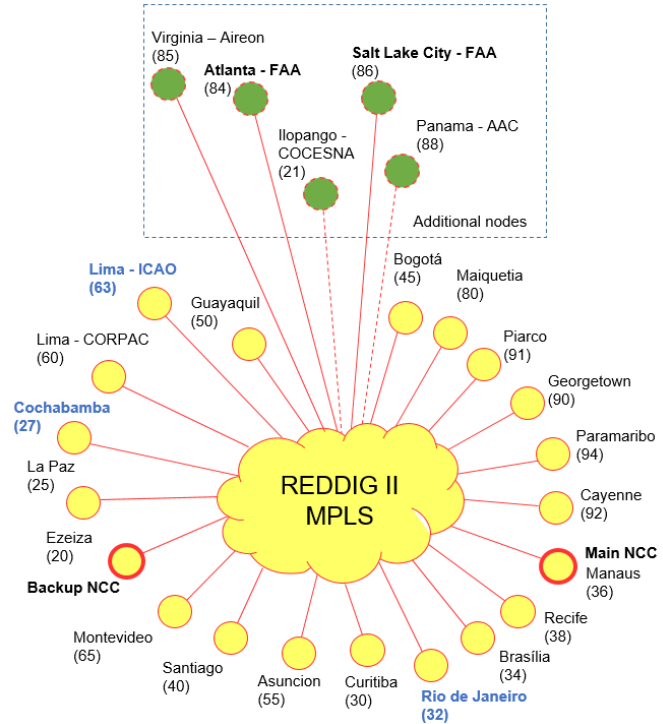
# Interconnection with MEVA III





REDDIG II

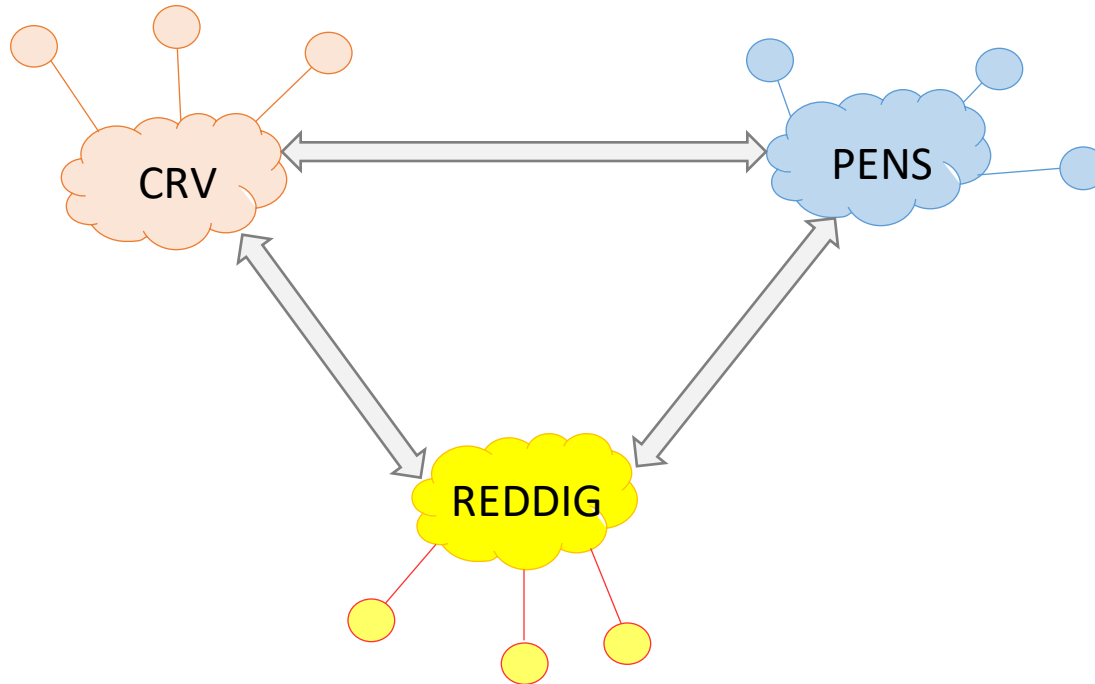
# New contract (Feb 2021)





REDDIG II

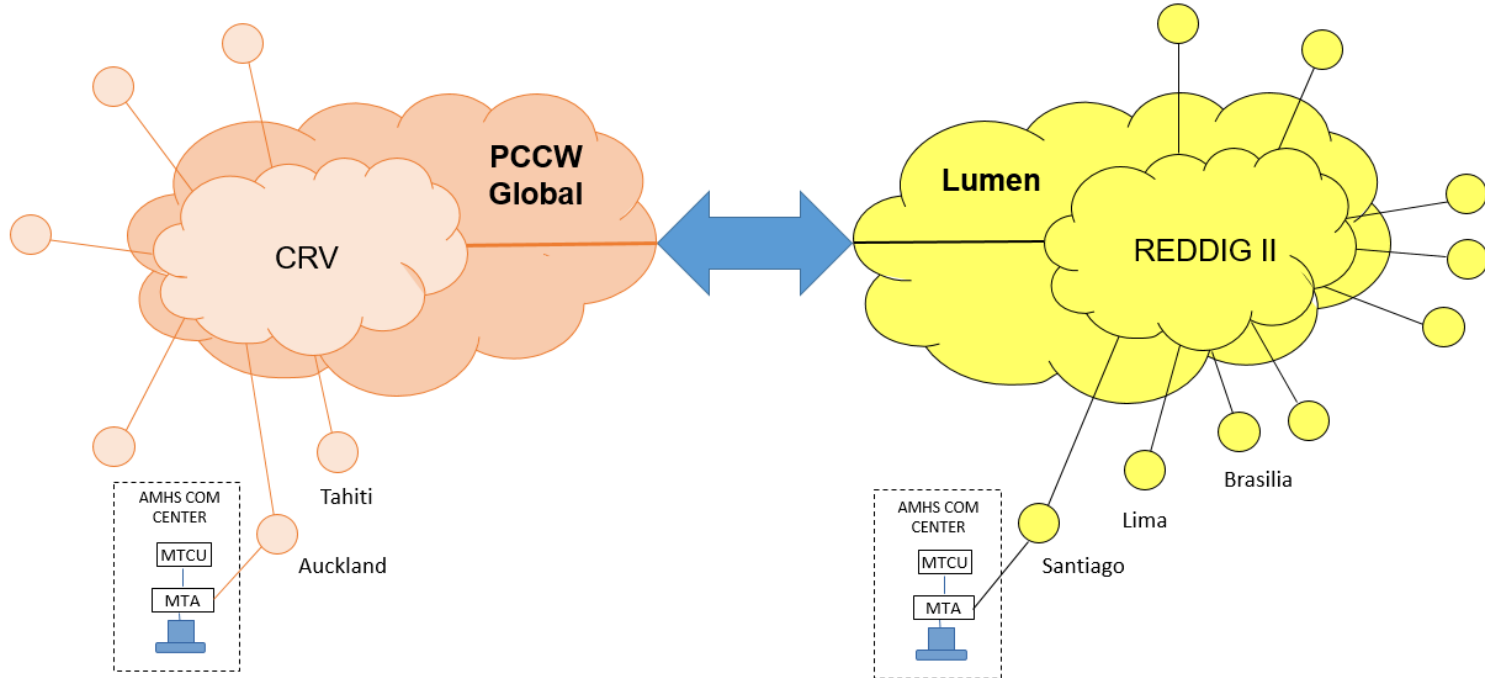
# Regional IP networks interconnection





REDDIG II

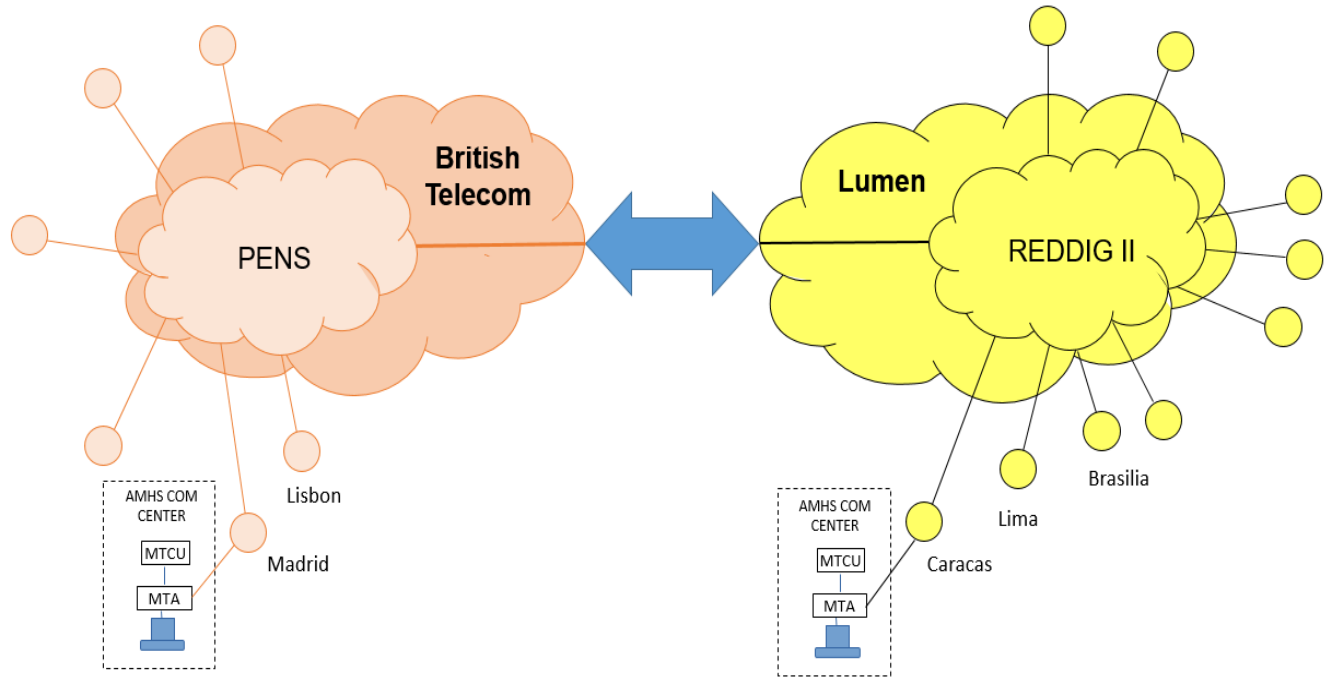
# Regional IP networks' interconnection





REDDIG II

# Regional IP networks' interconnection





North American  
Central American  
and Caribbean  
(NACC) Office  
Mexico City

South American  
(SAM) Office  
Lima

ICAO  
Headquarters  
Montréal

Western and  
Central African  
(WACAF) Office  
Dakar

European and  
North Atlantic  
(EUR/NAT) Office  
Paris

Middle East  
(MID) Office  
Cairo

Eastern and  
Southern African  
(ESAF) Office  
Nairobi

Asia and Pacific  
(APAC) Sub-office  
Beijing

Asia and Pacific  
(APAC) Office  
Bangkok



**THANKS**

[falmeida@icao.int](mailto:falmeida@icao.int)