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Regional Collaboration: MEVA III & REDDIG II Aeronautical Communications Networks

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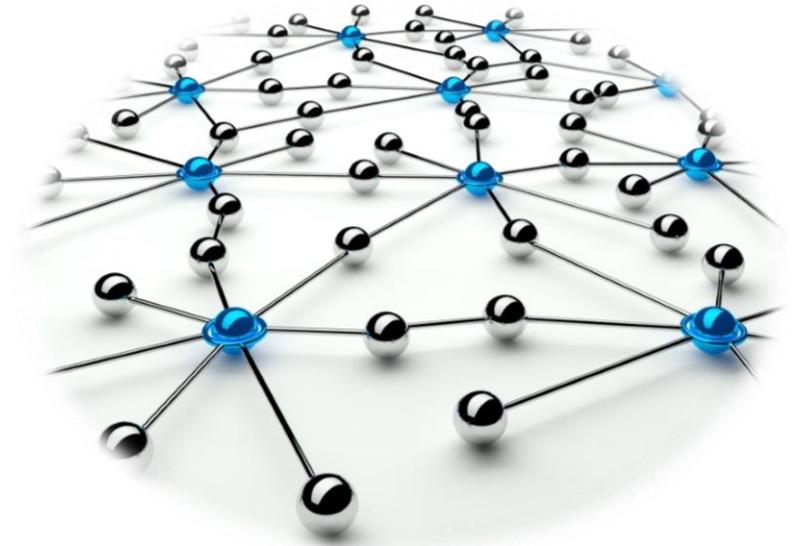
WHY REGIONAL NETWORKS?

Difficulties

- Coverage
- Quality

Regional solution

- Dedicate network
- ICAO SARPS compliant
- 1995 MEVA
- 2003 REDDIG





CONTINUOUS IMPROVEMENT

Based on:

- Cost/Benefit Analysis

Upgrades:

- MEVA – three
- REDDIG - two



Both networks are interconnected:

- Full Pan-American aviation telecommunication service

MEVA III and REDDIG II started operation first quarter of 2015



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REDDIG II NETWORK





REDDIG II: NETWORK OVERVIEW



Management

- ICAO Regional Technical Cooperation Project
- Headquarter:
 - ICAO SAM Regional Office
- Annual Regional Coordination Meeting
 - Activities and budget reviewed & approved.



Maintenance and operation

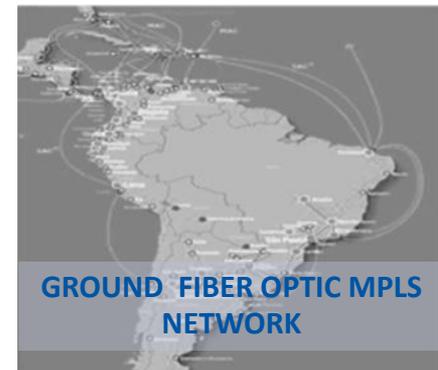
- States:
 - Nodes owners
 - Responsible for its maintenance.
- Network Administrator based at Manaus, Brazil
- Spare parts managed from SAM ICAO Office



REDDIG II: REGIONAL NETWORK

REDDIG Nodes:

- 17 nodes
- 14 States
- 1 MEVA interconnection node (Tegucigalpa-COCESNA)
- 2 Master stations (Manaus & Ezeiza)



REDDIG II IS A DUAL (SATELLITE VSAT & GROUND) IP NATIVE NETWORK



REDDIG II: SERVICES & BENEFITS



SERVICES

- ATS Voice
- Data Messages
- Surveillance data sharing
- Administrative maintenance



BENEFITS

- 99.99% Availability
- Support ATS and administrative services
- Fast and efficient
- Optimum bandwidth
- Lifetime maintenance assurance





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MEVA III NETWORK





MEVA III: NETWORK OVERVIEW



- To improve the regional reliability of the AFS telecommunications service
- To help increase the **efficiency, reliability and regularity of operations** for Caribbean States and territories
- Single Service Provider: equipment owner
- Collaborative Supervision by States members: MEVA Technical Management Group
- States: only pay for service received
- ICAO NACC Office: Network Coordinator



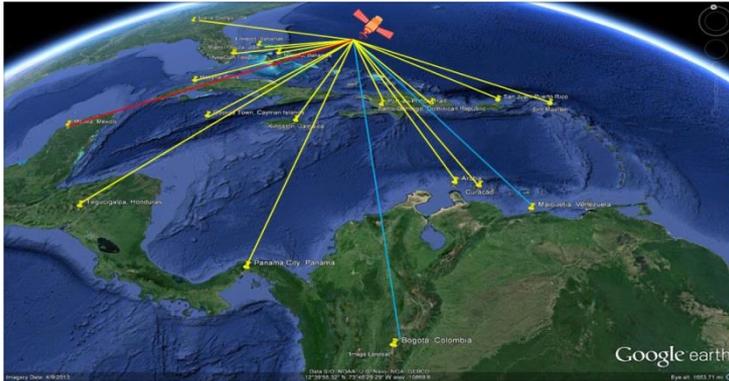
Maintenance and operation

- Satellite-based voice and data communication services: Service Level of Agreement
- Leased service where Members share the cost.





MEVA III: REGIONAL NETWORK



Aruba



Bahamas

Cayman
Islands

Cuba



Curaçao

Dominican
Republic

Haiti



Jamaica



México

Sint
MaartenUnited
States

COCESNA (6 Central American States)

- 17 nodes
- 19 States/Territories
- 2 REDDIG interconnection nodes (Colombia and Venezuela)
- 2 Master stations (Atlanta & Miami)

REDDIG Administration



Colombia



Venezuela



MEVA III: SERVICES & BENEFITS



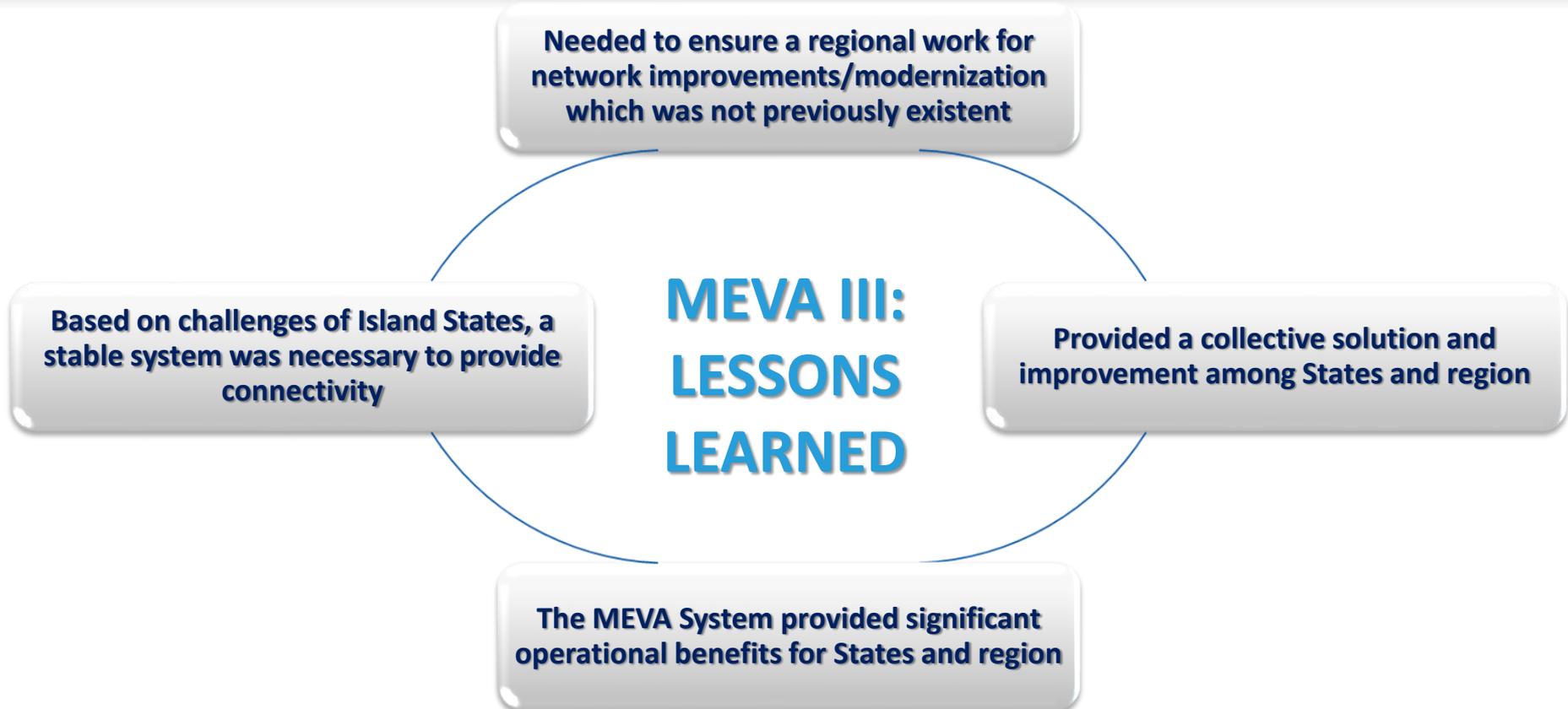
SERVICES

- 24/7/365 Service
- ATC voice
- Messaging services (flight plans, NOTAMs, etc.) - AFTN and AMHS connections
- Radar data sharing
- Remote radio connectivity services



BENEFITS

- 99.9% availability since its implementation
- 99.9% reliability since its implementation
- Easily responsive and scalability to future ATC communication needs
- Seamless, optimized & flexible network
- Long-term hardware support with continuous performance upgrades
- Low costs to States in needed upgrades



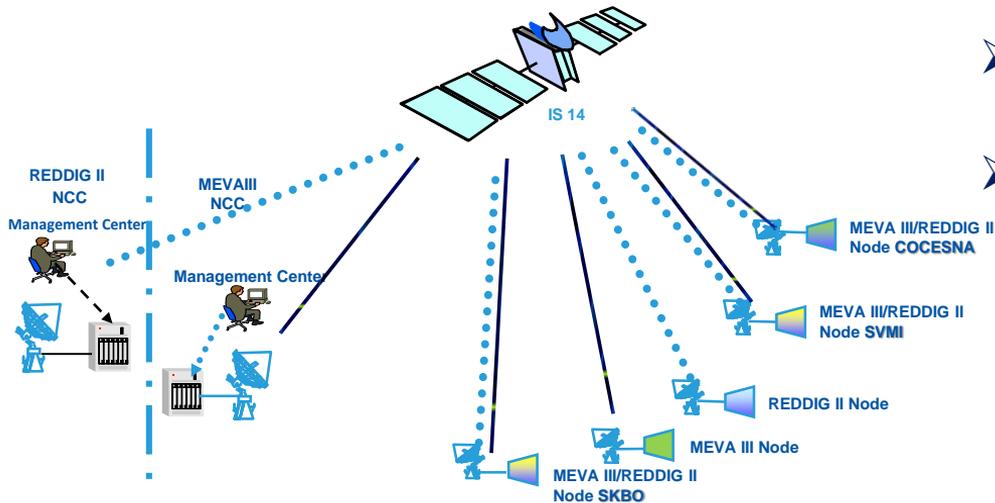


MEVA III/REDDIG II NETWORK INTERCONNECTION





MEVA III-REDDIG II NETWORK INTERCONNECTION OVERVIEW



- MEVA-REDDIG interconnection started its operation in 2010.
- Fully compliant with ICAO technical considerations to support air navigation services.

Achieved a full CAR/SAM aviation telecommunication service.



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North Atlantic
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