

Technical Letter of Agreement between
Empresa Argentina de Navegación Aérea (EANA)
and
Air Traffic and Navigation Services SOC Limited (ATNS)

**PROCEDURES FOR COORDINATING IMPLEMENTATION OF A
REDDIG II NODE (MPLS) UNDER THE FRAMEWORK OF
THE REGIONAL TECHNICAL COOPERATION PROJECT RLA/03/901**

EFFECTIVE NOVEMBER 24th, 2021

The Air Navigation Service Providers of Argentina (EANA) and South Africa (ATNS) wish to cooperate with each other on technical and procedural arrangements associated with the implementation of a node of the terrestrial SAM Digital Network (REDDIG II) through a Multi-Protocol Label Switching (MPLS) provider, used for Air Traffic communication services. The objective is to establish communications to support the requirements for air navigation services and coordination between the Flight Information Regions under responsibilities of both ANSP, using a technically improved infrastructure, which provides superior service. The node will be implemented by Argentina, as a participant State to the Regional Technical Cooperation Project RLA/03/901, at no expense to the South Africa air navigation service provider (ATNS).

I - PURPOSE

This Technical Letter of Agreement (LoA) identifies and defines the procedures by which each party intends to provide and maintain the connection of the ATNS facilities in Johannesburg to the SAM Digital Network (REDDIG II) administered by the International Civil Aviation Organization (ICAO) South America (SAM) Regional Office. Argentina represented by EANA, as a participant of the ICAO's Regional Technical Cooperation Project RLA/03/901 has proposed and South Africa, represented by ATNS, has agreed to implement this connection to improve aeronautical communications between the Ezeiza and Johannesburg FIRs.

Both parties firmly believe that the implementation of this service will better support the air navigation services provided in the South Atlantic airspace under responsibility of ATNS and EANA, by improving the distribution of aeronautical messages and ATS coordination between the participating States.

II- SERVICE LOCATION

The following is designated as service location, for the purpose of this Technical LoA:

ATNS Air Traffic Control Centre
O. R. Tambo International Airport Gate 14
Bonaero Drive

Bonaero Park
Kempton Park
1622
Tel: +27 11 928 6477
E-mail: frc@atns.co.za

III – PROCESS AND PROCEDURAL RESPONSIBILITIES

A. SERVICES

1. Through the Regional Technical Cooperation Project RLA/03/901, EANA requested the ICAO SAM Regional Office and has provided the necessary resources for installation of a REDDIG II terrestrial network node (MPLS) in Johannesburg.
2. The SAM Regional Office with support of the Technical Cooperation Bureau (TCB) will take the necessary measures to amend the Contract 22502088 with Lumen (former CenturyLink), in order to install a REDDIG II MPLS node in Johannesburg, with the following characteristic:
 - a) 5 Mbps bandwidth link;
 - b) 99.7 % for monthly availability;
 - c) The RTT for communications between the two stations, for a 64-byte packet, may not exceed 150 ms in 95 % of the measurements made in a minimum time window of 10 seconds; and
 - d) The bit error rate (BER) shall be less than 10^{-7} , 99.5% of the time.
3. The telecommunication service provider (Lumen) will install the Point of Presence (PoP) in an ATNS facility, providing the necessary equipment, including a Customer Premises Equipment (CPE) with at least two standard Gigabit Ethernet interfaces.
4. With anticipation of at least 15 days, the telecom provider representative must contact the ATNS Technical Focal Point to schedule the node installation.
5. ATNS shall:
 - a) Provide the physical space for the installation of cabinets and equipment.
 - b) Deliver to the premises the electric power required and grounding system.
 - c) Maintain adequate environmental conditions (temperature, humidity, etc.) in the local where the PoP will be installed.
 - d) Obtain all necessary authorization and assist the telecom provider representatives in the installation process of the node.

B. IMPLEMENTATION OF THE CIRCUITS AND SCHEDULING

1. The following communications will be implemented:
 - a) Voice circuit for ATS purpose (Ezeiza ACC – Johannesburg ACC);
 - b) Voice circuit for Administrative/Maintenance service;
 - c) AMHS (P1) interconnection (Ezeiza – Johannesburg COM Centers);
 - d) Data circuit for surveillance purpose deemed necessary in the future; and;

- e) Other communications deemed necessary in the future, including communications with other States/Organizations participant of the network.
2. The REDDIG II Administrator will coordinate the configuration of the Johannesburg node (CPE) and the establishment of all communications agreed.
3. The router to be installed as CPE is the limit point dividing the Wide Area Network service, under responsibility of the REDDIG II Administrator, and the Local Area Network service, under responsibility of ATNS Technical Personnel.
4. ATNS must provide the cabling infrastructure to connect the local systems to the REDDIG II node in Johannesburg. The connection of the local systems of Johannesburg to the REDDIG II node will be through standard Gigabit Ethernet ports.
5. Following the successful implementation of the node, migration of services will be scheduled in coordination with the REDDIG II Administrator.
6. The previous communications via CAFSAT network between Argentina and South Africa will be discontinued.

C. MAINTENANCE AND RESTORATION OF SERVICE

1. ATNS and EANA are obligated to notify each other at least thirty (30) days prior to making any changes to their portion of the service that will affect the operations and service between the two parties.
2. ATNS and EANA will coordinate with each other to minimize anticipated interruptions of service and unnecessary engineering modifications to the service.
3. ICAO is responsible for maintaining the contract with the vendor associated with the service. The ATNS and EANA intend to coordinate with ICAO and each other, for their respective maintenance and operational activities affecting the network and associated system service in advance.
4. When the REDDIG II administration determines a networking problem is associated with a disruption, the network administrator shall notify the parties Technical Focal Point as soon as possible.
5. Outages affecting the network will be reported to both parties as soon as practical to do so. The restoration time for service shall be in accordance with the service provider maintenance manual and contract obligation.
6. The 24-hour single point of contact for all coordination regarding the service is:

ATNS: ATNS Fault Reporting Centre
 O. R. Tambo International Airport Gate 14, Bonaero Drive, Bonaero Park, Kempton
 Park, 1622
 Tel: +27 11 928 6477
 E-mail: frc@atns.co.za

EANA: Centro de Comunicaciones Digitales (CECODI)
Ministro Pistarini International Airport - Ezeiza
AU Tte. Gral. Pablo Riccheri Km 33,5, Puerta 50, 4to piso
Tel: + 54 11 4480 2362
Cel: +54 9 11 3156 3055
E-mail: cecodi@eana.com.ar

REDDIG Network Control Center (NCC) REDDIG in Manaus-Brazil
Administrator: CINDACTA IV Av. do Turismo 1350,
Tarumã - CEP 69045-630
Manaus, AM - Brazil
Tel: +55 92 3652 5713 / +55 92 3652 5712
E-mail: jvittor@icao.int

IV – FINANCIAL PROVISIONING

A. Expenditures

1. EANA shall bear the cost of providing MPLS services at a bandwidth rate of 5 Mbps, by means of the Regional Technical Cooperation Project RLA/03/901. The Technical Cooperation Bureau (TCB) will make the necessary arrangements to amend the current contract with the REDDIG II telecommunication provider (Lumen), in order to install and provide service for the Johannesburg node.
2. ATNS shall not incur any additional expenses associated with the establishment of the service for the duration of the agreement.
3. Nothing contained in this Technical LoA shall constitute a waiver of ICAO's privileges and immunities, and, as between ICAO and all REDDIG Participating States, ICAO shall be held harmless from all claims or liability of any kind.

V - AMENDMENTS

This Technical Letter of Agreement will be in effect until December 31, 2024.

This Technical LoA may be amended by mutual written agreement.

The coordination points between ATNS and EANA for any required amendments to this Technical LoA are designated as follows:

ATNS: Carel Gersbach
Senior Manager - Technical Planning and Quality
Address: Eastgate Office Park Private Bag X15
Block C, Kempton Park, South Boulevard Road 1620,
Gauteng, Republic of South Africa

Tel: +27 11 607 1000
Email: carelg@atns.co.za

EANA:

Malena Reinoso
CNS Engineering Manager
Address: Florida 361, piso 2º, C1005AAG Buenos Aires Argentina
Tel: +54 9 11 3205 9071
Email: mreinoso@eana.com.ar


VI – CONFIDENTIALITY & PROPRIETARY INFORMATION

Both parties undertake not to use or reveal to any third party any proprietary or confidential information about the other party unless required to by law or unless it is necessary to do so to provide the services.

The ATNS and EANA agree to the provisions of this agreement as indicated by the signatures of the duly authorized representatives below.



Mr. Facundo Gatti
Chief Technology Officer
Empresa Argentina de Navegación Aérea S.E.



Mr. Richard Madlala
Chief Technology Officer
Air Traffic and Navigation Services SOC Ltd

Date 24-NOV-2021

Date 24 November 2021