



International Civil Aviation Organization
South American Regional Office - Regional Project RLA/03/901
REDDIG Management System and Satellite Segment Administration
Eighteenth Meeting of the Coordination Committee (RCC/18)
Lima, Peru, 2 to 4 March 2015

Agenda Item 4: Work plan for 2015

ACTIVITIES FORESEEN FOR THE PERIOD 2015

(Working paper by the Secretariat)

SUMMARY	
This working paper presents information about the activities to be carried out by Project RLA/03/901 - <i>REDDIG Management System and Satellite Segment Administration</i> , during 2015.	
References	
<ul style="list-style-type: none">• Report of the Seventeenth REDDIG Coordination Meeting (Lima, Peru, 24 to 26 March 2014).• Third technical-operational meeting for the implementation of REDDIG II (RTO/3) Bogota, Colombia 28 to 29 July 2014• Fourteenth Workshop Meeting of the SAM Implementation Group (Lima, Peru, 10 to 14 November 2014)	
ICAO strategic objectives:	<i>A – Safety Oversight; and B – Air navigation capacity and efficiency</i>

1. Background

1.1 The main activities scheduled for 2015 are the following:

- a) REDDIG II training programme;
- b) REDDIG II operation and analysis of the implementation of new services; and
- c) Installation and operation of MEVA III / REDDIG interconnection;

2. Description

REDDIG II training programme

2.1 As a result of the implementation activities of REDDIG II, it was considered that in order to complete the training of the personnel to be responsible for the operation and maintenance of the REDDIG II, the following training courses will be required for 2015:

- ✓ *Specialized course on management and operation of the WhatsUp Gold software*
- ✓ *Basic course on routers and switches IP CISCO*

2.2 At the end of the REDDIG II in-factory course carried out in Vélizy, France from 21 April to 9 May 2014, participants concurred that a specialized course on management and operation of WhatsUp Gold software should be considered by the Eighteenth Meeting of the Coordination Committee (RCC/18). The WhatsUp Gold is the software used in the REDDIG II for its Management System (NMS).

2.3 The participants of the in-factory course considered that the training received on WhatsUp Gold during the course was basic and that an advanced course for the management and operation of the REDDIG II would be essential for a deeper knowledge on the software necessary for the management of the local and central Management System (NMS) of the REDDIG II.

2.4 In this sense it is intended to the REDDIG II Implementation Committee the delivering of a course on WhatsUp Gold software in Lima, Peru. The approximate cost of this activity should be USD 35 000 that would cover a fellowship per State, simultaneous interpretation and the course fee.

2.5 The course has been scheduled for 21 to 24 April 2015. After completing the course, participants will have the opportunity to deepen the understanding of the software WhatsUp Gold for the suitable management of the REDDIG II nodes.

2.6 Prior to the course, from 20 to 21 April the Fourth technical-operational meeting of the REDDIG (RTO/4) will be held. This meeting is addressed to the personnel responsible for the maintenance and operation of the REDDIG and is aim to analyze the performance of the REDDIG II, the procedures for the response to network contingencies and the REDDIG II Operation and Maintenance Manual will be also presented. For this meeting one fellowship per State and simultaneous interpretation will be provided and its costs are included in the amount considered for WhatsUp Gold course.

Basic course on routers and switches IP CISCO

2.7 The Fourteenth Workshop Meeting of the SAM Implementation Group SAM/IG/14 hold in Lima, Peru, as follow-up to the implementation of the activities of Project D1 of GREPECAS *Architecture of the ATN in the SAM Region* and taking into account the results of the REDDIG II training activities, considered that the Eighteenth Meeting of the Coordination Committee (RCC/18) evaluate approving the execution of a Basic course on routers and switches IP CISCO formulating Conclusion SAM/IG/12 *Requirement for a basic course on CISCO routers and switches for personnel in charge of REDDIG II maintenance and operation*.

2.8 The reason for the completion of this course is to provide the necessary training to technical personnel in charge of maintenance of REDDIG II since does not have a solid base on IP networks and associated equipment (routers and CISCO switches).

2.9 In this sense, after the pursuit of possible courses that respond to needs identified, a basic course on routers and switches CISCO IP was found. A description of the course is presented as **Appendix A** to this working paper.

2.10 The course with a duration of 15 days has been scheduled initially to take place from 19 to 30 September 2015 and will have an estimated cost of USD 35 000, which includes the course fee and the simultaneous interpretation. No fellowships have been foreseen for this activity.

REDDIG II operation and analysis of the implementation of new services

2.11 The REDDIG II came into operation on 31 January 2015, the provisional acceptance (PSAT) of the REDDIG process was completed on 6 February 2015. The PSAT as it was considered in the 22501200 contract signed between ICAO and the Consortium INEO LEVEL 3 was carried out by the focal points of the REDDIG II altogether with INEO staff in charge of the installation of REDDIG II.

2.12 Focal points completed the PSAT test protocol and proceeded to the signing of the PSAT certificate with observations practically in all nodes of REDDIG II. These observations should be addressed by the INEO & Level 3 consortium in a period of 40 days called ORD (Operational Readiness Demonstration) between the PSAT and the FSAT (Final site acceptance test). Likewise any problem occurring during the period has to be solved before the FSAT. The ORD began on 6 February 2015. The list of PSAT reported observations in each site is presented as **Appendix B** to this working paper.

2.13 As new services to implement in the REDDIG II, it will be analyzed the possibility of install in 2015 the data services link of the CPDLC/ADSC in the REDDIG II members States from SAM Region who have implemented such services in its oceanic FIRs through the provider SITA. Further information in this regard is presented in working paper NE/07 of this meeting.

2.14 The operation of a new REDDIG II node in Brasilia is scheduled for the second half of 2015. The acquisition of the Brasilia node was done through ICAO amending the REDDIG II contract 22501200.

2.15 As part of the activities for the implementation of the new node of Brasilia, some services of REDDIG II nodes in Manaus, Recife and Curitiba will be relocated to the new node of Brasilia (interregional AFTN circuits Madrid, United States). There are also plans for a theoretical and practical course of REDDIG II for the technical staff of Brazil that will take care of the maintenance of the node.

2.16 In case a Member State REDDIG II wants to participate in this course is appreciated to inform the South American Regional Office of ICAO. Expenses for assistance to the course will be in charge of the State concerned.

2.17 **Appendix C** of this working paper presents the schedule of activities for the implementation of the Brasilia new node prepared by INEO.

Installation and operation of MEVA III / REDDIG interconnection

2.18 Whereas the entry into operation of the REDDIG II (January 31, 2015) and the new MEVA III (March 2015), ICAO on behalf of all States members of the II REDDIG and COMSOFT GmbH company (provider of the MEVA III) developed the Contract No. 2250128 for the implementation of the MEVA III REDDIG II interconnection. The contract was signed on November 14, 2014 and shall become effective once in operation MEVAIII /REDDIG II interconnection foreseen for March 2015.

2.19 The Thirteen Coordination Meeting discussed the proposal submitted by COMSOFT for the new interconnection MEVA III REDDIG II. The proposal presented two options to implement the interconnection, one consisting of the acquisition of the required equipment as REDDIG II property, plus the recurrent costs corresponding to services, and other option consisting in the acquisition of equipment by leasing plus the recurrent costs of services.

2.20 The RCC/13 pointed the leasing option as the most appropriate and beneficial in terms of

cost and considered it as a solution for the new interconnection MEVA III REDDIG II, establishing in this regard the *Conclusion RCC/17-1 New interconnection MEVA III / REDDIG II*. The Conclusion makes reference to Appendix E of Agenda Item 4 of RCC/17 where the option of leasing costs was presented as well as the costs that will be shared equitably among all States (non-recurring costs of the interconnection MEVA III / REDDIG II in Bogota and Caracas nodes) also specified in Appendix E.

2.21 The list of equipment to be installed in Bogota and Colombia for the implementation of interconnection as well as services that will provide are presented as **Appendix D** to this working paper. Copy of the agreement for the implementation of the REDDIG II is presented as **Appendix E** to this working paper.

2.22 In order to follow up the operation of services of the MEVAIII REDDIG II interconnection since its setup as well as to review the MoU established for the operation, maintenance, control, management and other aspects for the interconnection MEVA REDDIG and examine the implementation of new services, the first meeting of coordination for the interconnection MEVAIII/REDDIG II will be held in Oranjestad, Aruba from 25 to May 26, 2015.

3. **Action suggested**

3.1 The Coordination Committee is invited to:

- a) Take note of the information provided herein;
- b) Review the activities foreseen for the 2015 period described in Section 2 and in Appendices of this working paper; and
- c) Analyze any other matter related to the activities of project REDDIG RLA/03/901 for the period 2015 it may deem necessary.

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CCNA Routing and Switching



The Cisco Networking Academy® CCNA Routing and Switching curriculum is designed for students who are seeking entry-level ICT jobs or plan to pursue more specialized ICT skills.

CCNA Routing and Switching provides comprehensive coverage of networking topics, from fundamentals to advanced applications and services, with opportunities for hands-on practical experience and career skills development.

Cisco Certifications

Students will be prepared to take the Cisco CCENT® certification exam after completing a set of two courses and the CCNA® Routing and Switching certification exam after completing a set of four courses.

Features and Benefits

The CCNA Routing and Switching curriculum offers the following features and benefits:

- Students learn the basics of routing, switching, and advanced technologies to prepare for the CCENT and CCNA certification exams, networking related degree programs, and entry-level careers.
- The language used to describe networking concepts is designed to be easily understood by

learners at all levels and embedded interactive activities help reinforce comprehension.

- Courses emphasize critical thinking, problem solving, collaboration, and the practical application of skills.
- Multimedia learning tools, including videos, games, and quizzes, address a variety of learning styles and promote increased knowledge retention.
- Hands-on labs and Cisco® Packet Tracer simulation-based learning activities help students develop critical thinking and complex problem solving skills.
- Embedded assessments provide immediate feedback to support the evaluation of knowledge and acquired skills.

Course Description

CCNA Routing and Switching teaches comprehensive networking concepts, from network applications to the protocols and services provided to those applications by the lower layers of the network. Students will progress from basic networking to more complex enterprise and theoretical networking models later in the curriculum.

There are four courses in the recommended sequence:

- Introduction to Networks
- Routing and Switching Essentials
- Scaling Networks
- Connecting Networks

In each course, Networking Academy™ students will learn technology concepts with the support of interactive media and apply and practice this knowledge through a series of hands-on and simulated activities that reinforce their learning.

Course	Description
Introduction to Networks	Introduces the architecture, structure, functions, components, and models of the Internet and computer networks. The principles of IP addressing and fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of the course, students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes.
Routing and Switching Essentials	Describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPv2, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks.
Scaling Networks	Describes the architecture, components, and operations of routers and switches in a large and complex network. Students learn how to configure routers and switches for advanced functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, STP, and VTP in both IPv4 and IPv6 networks. Students will also develop the knowledge and skills needed to implement DHCP and DNS operations in a network.
Connecting Networks	Discusses the WAN technologies and network services required by converged applications in a complex network. The course enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. Students also develop the knowledge and skills needed to implement IPsec and virtual private network (VPN) operations in a complex network.



Skills and Competencies

Here are some examples of tasks students will be able to perform after completing each course.

Introduction to Networks	Routing and Switching Essentials
Describe the devices and services used to support communications in data networks and the Internet	Describe enhanced switching technologies such as VLANs, VLAN Trunking Protocol, Rapid Spanning Tree Protocol, and 802.1q
Describe the role of protocol layers in data networks	Describe basic switching concepts and the operation of Cisco switches
Describe the importance of addressing and naming schemes at various layers of data networks in IPv4 and IPv6 environments	Configure and troubleshoot basic operations of a small switched network
Design, calculate, and apply subnet masks and addresses to fulfill given requirements in IPv4 and IPv6 network	Configure and troubleshoot basic operations of routers in a small routed network
Build a simple Ethernet network using routers and switches	Configure and troubleshoot VLANs and inter-VLAN routing
Use Cisco command-line interface (CLI) commands to perform basic router and switch configurations	Describe the operations of Dynamic Host Configuration Protocol and Domain Name System for IPv4 and IPv6

Scaling Networks	Connecting Networks
Configure and troubleshoot DHCP and DNS operations for IPv4 and IPv6	Describe the operations and benefits of virtual private networks (VPNs) and tunneling
Describe the operations and benefits of the Spanning Tree Protocol (STP)	describe different WAN technologies and their benefits
Configure and troubleshoot STP operations	Configure and troubleshoot serial connections
Describe the operations and benefits of link aggregation and Cisco VLAN Trunk Protocol (VTP)	Configure and troubleshoot broadband connections
Configure and troubleshoot basic operations of routers in a complex routed network for IPv4 and IPv6	Configure and troubleshoot IPSec tunneling operations
Configure and troubleshoot advanced operations of routers and implement RIP, OSPF, and EIGRP routing protocols for IPv4 and IPv6	Monitor and troubleshoot network operations using syslog, SNMP, and NetFlow
Manage Cisco IOS® Software licensing and configuration files	Design network architectures for borderless networks, data centers, and collaboration

About Cisco Networking Academy

In partnership with schools and organizations around the world, Cisco Networking Academy delivers a comprehensive learning experience to help students develop ICT skills for career opportunities, continuing education, and globally recognized career certifications.

To learn more, visit: www.netacad.com.

APPENDIX B**SUMMARY OF THE OBSERVATIONS MADE BY THE FOCAL POINTS****DURING THE PSAT**

STATE	NODE	PSAT DATE	OBSERVATIONS
Argentina	Ezeiza	02/02/15	<ul style="list-style-type: none"> • Pending amend circuit diagrams. • Bad IP telephone quality satellite and terrestrial network • Pending BER test in AFTN circuits • False warning in serial ports CISCO IA • Low level of transmission in Skywan A and B • Dedicated emergency number GBB Reuter (Fig 46) communicates with Manaus with number 73601 but it does not with number indicated in table of figure 46 • Loss in terrestrial network packages Manaus, Recife, Guyana, Paraguay and Suriname • No access provided to LEVEL 3 WEB page for the management of the service • Two damaged connectors RJ45 from Patch Panel
Bolivia	La Paz	02/02/15	No observations
Brazil	Curitiba		No observations
	Manaus	05/02/15	<ul style="list-style-type: none"> • Circuit AFTN Manaus Lima not working • Pending updating of circuit diagrams • Loss of terrestrial network packages over specified in SLA of LEVEL 3 • Tests in administrative circuits, ATS commutators and AFTN carried out in one chain of terrestrial network only • IP Teleconference does not work in accordance to technical specifications limited to 10 users • Image quality not improved. Aspect pending since FAT • Administrative channel with Ecuador inoperative. Observation pending since FAT • In case of failure in the central server of the NMS in Manaus, Ezeiza backup server should assume all central server tasks with all

STATE	NODE	PSAT DATE	OBSERVATIONS
			attributions of monitoring and control over all stations <ul style="list-style-type: none"> • Missing BER Tests in AFTN channels • Missing SAT LOOP BER TEST • Pending tests in ATS oral circuits, administrative AFTN in one of the satellite network chains
	Recife	30/01/15	<ul style="list-style-type: none"> • Loss of packages in LEVEL 3 terrestrial network with all nodes • Pending BER AFTN tests • False warning NMS (IBUC) and RX 1 + 1
Chile	Santiago	01/02/15	<ul style="list-style-type: none"> • GPS clock screen damaged • NMS: Very slow refreshing in changes of status • Image quality not improved. Aspect pending since FAT. • WEB IBUC: Voltage indicated does not match with real value • Pending diagram updating • AFTN circuit with Lima inoperative • Pending BER AFTN test
Colombia	Bogota	01/02/15	<ul style="list-style-type: none"> • Oral ATS Bogota Panama circuit inoperative • AMHS Circuit with Peru inoperative
Ecuador	Quito	01/02/15	<ul style="list-style-type: none"> • Administrative voice circuits unoperative • Loss of Level 3 terrestrial network packages with Manaus, Recife, Guyana and Uruguay • Pending BER AFTN tests • Tx switch Test (7.1.1) failure • Bad quality of IP voice teleconference • False warning of operation in serial interfaces and E1
French Guyana	Cayenne	02/02/15 INEO sign is pending	<ul style="list-style-type: none"> • IP telephone connector inoperative • Incorrect circuit diagrams (WVG) • Difficulty in reading the IP Address of WVG • Error in LAN interface, inoperative • Modem B not in green when turning on • Subsequent problem with the circuit AFTN with Manaus

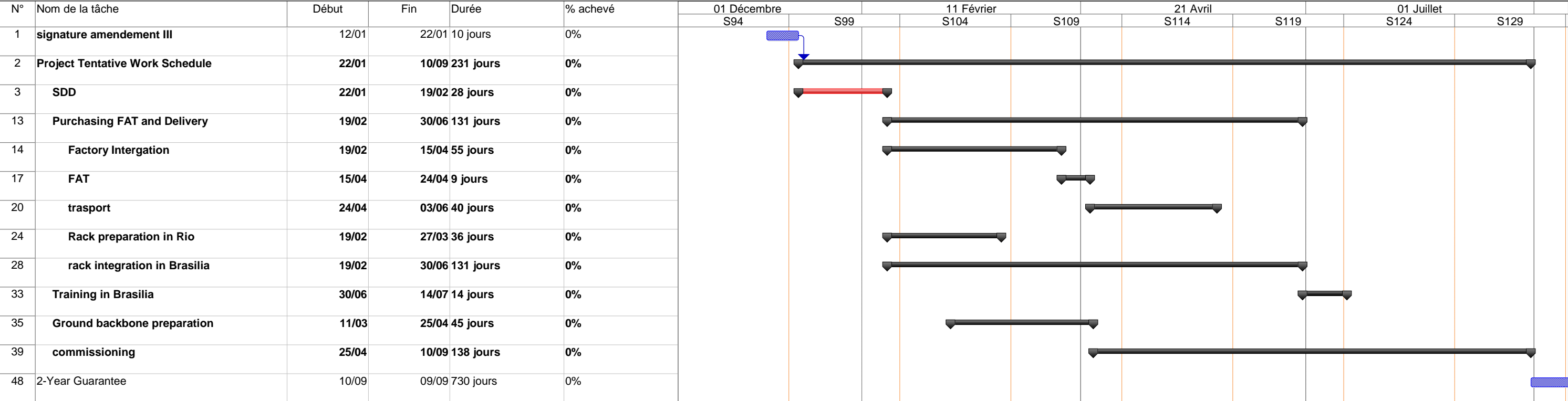
STATE	NODE	PSAT DATE	OBSERVATIONS
Guyana	Georgetown	05/02/15 INEO sign is pending	<ul style="list-style-type: none"> • Lack indication of status in one of the MAP VIEW switches • Setting cannot be performed in Voice interfaces
Paraguay	Asuncion	02/02/15	<ul style="list-style-type: none"> • Sound alarm of UPS in battery mode virtually inaudible • Absence of antivirus contrary to specified in Doc REDDIG II SDD Scope of Supply Rev. F • The Q5 breaker presents a false contact and must be replaced • IP administrative line was not configured • Graphic representing equipment in the nodes in the NMS has not been improved, as noticed in FAT • When making redundancy test of PSAT Chapter 7 page 70/125 the IBUCs do not indicate failures and do not commute automatically. • The serial port 0/0/0 of GBB Reuter presents a failure where loses packages in reception, in consequence card 2-Port Async/Sync Serial WAN Interface Card must be replaced • Pending updating of circuit diagrams • Loss of Level 3 packages in the terrestrial network with Bolivia, Recife (very high), Colombia, French Guyana, Guyana and Uruguay
Peru	Lima	03/02/15	<ul style="list-style-type: none"> • AFTN circuit with Manaus and Santiago inoperative • Chain A of MODEM 1070 inoperative • Graphic representing equipment in nodes in the NMS has not been improved, as noticed in FAT. • Lack of updating of circuit diagrams • Loss of Level 3 packages in the terrestrial network with Argentina, Manaus, Colombia, Guyana and Venezuela • ATS number does not match • Tests satellite chain A not

STATE	NODE	PSAT DATE	OBSERVATIONS
			<p>performed due to MODEM chain A failure</p> <ul style="list-style-type: none"> • Tests BER not performed • Pending equipment failure test (Seccion 7.3) • Errors in dial-up circuits administrative plan • IP teleconference voice quality not satisfactory • AMHS channels with Ecuador and Colombia without service, manages to perform link but the application is inoperative • The Communications Center reports data loss in Argentina, Chile, Atlanta AFTN circuits, which forces the system to retry repeatedly sending and/or receiving messages • The NMS displays false warning of equipment. Additionally access and/or refreshing of NMS data is very slow • No antivirus installed in the NMS server • VPN not working. For VPN operation a public IP is sited in the technical room
Suriname	Paramaribo		<ul style="list-style-type: none"> • Presents loss in Level 3 terrestrial network packages with Argentina, Manaus, Recife (very high). Chile, Colombia, Ecuador, Guyana and Uruguay • Pending BER tests • IP Teleconference with ten users only
Trinidad & Tobago	Piarco	04/02/15 INEO sign is pending	<ul style="list-style-type: none"> • NMS: refresh changes in status very slow • Image quality not improved. Aspect pending from FAT • IP Teleconference only operates with 11 users. Do not correspond to REDDIG technical specifications • Lack of automatic communication in the IBUC. In the event of a failure, only commutes when energy has been turned off • Loss of packages in Level 3

STATE	NODE	PSAT DATE	OBSERVATIONS
			terrestrial network with Curitiba and Ecuador
Uruguay	Montevideo	02/02/15	<ul style="list-style-type: none"> • Pending updating of blueprint with circuit diagrams. • Unit 1070 chain B does not turn-on its green light even when operating properly • Feed Horn pending replacement • NMS: Very slow refreshing in changes of status • Quality of image not improved. Problem identified in FAT • Pending installation of antivirus in the NMS • The NMS displays incorrect information • Pending BER tests • Version of software delivered for the remote VPN does not correspond with the manual send for its installation. Cannot be installed according to INEO suggestion. • Loss of Level 3 terrestrial network packages with Bolivia, French Guyana, Suriname, Trinidad & Tobago and Venezuela
Venezuela	Maiquetia	31/01/2015	<ul style="list-style-type: none"> • RSS automatics switching not observed

Tentative time schedule / PHASES - 26th June 2013

INEO Engineering & Systems



Appendix D

SERVICES COMMISSIONED WITH LA MEVA III THROUGH THE INTERCONNECTION MEVAIII REDDIG II

Node Bogota Colombia

- 2 asynchronous AFTN links (From / To Atlanta)
- 1 asynchronous AFTN link (From / To Panama)
- 3 hot lines
 - From / To Jamaica
 - From / To Curacao
 - From / To Panamá
- 8 switched voice links (one for maintenance purposes)

Node Maiquetía Venezuela

The circuits in the node Maiquetia in the MEVA III REDDIG II interconnection are:

- asynchronous AFTN link (To Atlanta)
- asynchronous AFTN link (From / To Curacao)
- 3 hot lines
 - From / To Curacao
 - From / To Aruba
 - From / To Puerto Rico
- 4 switched voice links (one for maintenance purposes)

EQUIPMENT TO BE INSTALLED ON NODES OF BOGOTA AND MAIQUETIA FOR THE MEVA III REDDIG II INTERCONNECTION

NODE BOGOTA

MODEM EQUIPMENT1- IDU 2570

SKYWAN LICENSE FRAME RELAY PORT
 SKYWAN LICENSE 8PSK
 SKYWAN LICENSE MESH TOPOLOGY
 CABLE INT. RS232 TERMINAL SKYWAN IDU
 CABLE INT. X21 DCE IDU-FAD
 USER MANUALS SKYWAN IDU7000
 DIAL IN MODEM SET SKYWAN IDU 7000/7000C

MULTIPLEXER EQUIPMENT

FAD 9230 BASE UNIT UAC
 FAD 8400 BASE UNIT 4 SERIAL PORTS UAC
 FAD 92X0 QUAD FXS MODULE

RF EQUIPMENT-

COMBINER / SPLITTER

NODE MAIQUETIA

MODEM EQUIPMENT1- IDU 2570

SKYWAN LICENSE FRAME RELAY PORT
 SKYWAN LICENSE 8PSK
 SKYWAN LICENSE MESH TOPOLOGY
 CABLE INT. RS232 TERMINAL SKYWAN IDU
 CABLE INT. X21 DCE IDU-FAD92XX/93XX/8400
 USER MANUALS SKYWAN IDU7000 SERIES
 DIAL IN MODEM SET SKYWAN IDU 7000/7000C

MULTIPLEXER EQUIPMENT-

FAD 9230 BASE UNIT UAC
 FAD 92X0 DUAL SERIAL INTERFACE MODULE
 FAD 92X0 QUAD FXS MODULE

RF EQUIPMENT-

COMBINER / SPLITTER 2-fold162,500,000,0004

RACK4.322,504.322,501- PATCH PANEL IDU RFT5X / SMA -N-FEM 1.5m220,00220,001-
 VARIOUS ITEMS650,00650,005.192,5005.Equipment Sub Total1- Purchase32.502,5006.Equipment
 Cost (indirect)1- Shipping to Site2.795,002.795,001- Insurance148,66148,661- Import Duties and
 processing Charges2.943,662.943,6607.Installations1- Site Survey1.560,001.560,001-
 Installation1.986,401.986,403.546,4008.Training1- On the Job Training1.500,001.500,001- High-level
 Equipment Training1.250,001.250,001- Restauration Training833,33833,333.583,33NRC Total
 (Purchase)42.575,89



Contract No.22501528

between the

International Civil Aviation Organization

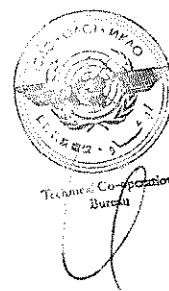
and COMSOFT GmbH

for the Provision of

***the Interconnection of the MEVA III and REDDIG II
Satellite Telecommunications Networks***

for

MEVA III and REDDIG II Member States/Territories/International Organization





International Civil Aviation

Contract No. 22501528 for the Provision of the Interconnection of the MEVA III and REDDIG II Satellite Telecommunications Network.

1.0 Introduction, Definitions and Abbreviations

1.1 Introduction

- 1.1.1 This Contract is entered into between the International Civil Aviation Organization (ICAO) acting on behalf of and as mandatary for the Government of Argentina, Aruba, Bahamas, Bolivia, Brazil, Cayman Islands, Chile, Colombia, Cuba, Dominican Republic, Ecuador, French Guiana, Guyana, Haiti, Honduras, Jamaica, Netherlands Antilles, Panama, Paraguay, Peru, Puerto Rico, Suriname, Trinidad and Tobago, United States, Uruguay and Venezuela, specifically their respective Civil Aeronautical Administration & for the International Organization COCESNA (herein after "MEVA III and REDDIG II Member States/Territories/International Organization"), and COMSOFT GmbH.

1.2 Definitions and Abbreviations

Contract Term	Definition
"ICAO", means	The International Civil Aviation Organization, with Headquarters at 999 University Street, Montreal, Quebec, Canada, H3C 5H7.
"REDDIG II Member States", means	The Government of Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, French Guiana, Guyana, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay and Venezuela, specifically their respective Civil Aeronautical Administration.
"MEVA III and REDDIG II Member States/Territories/ /International Organization", means	The Government of Argentina, Aruba, Bolivia, Bahamas, Brazil, Cayman Islands, Chile, Colombia, Cuba, Curacao, Dominican Republic, Ecuador, French Guiana, Guyana, Haiti, Jamaica, Mexico, Panama, Paraguay, Peru, Puerto Rico, Sint Maarten, Suriname, Trinidad and Tobago, United States, Uruguay and Venezuela, specifically their respective Civil Aeronautical Administration and the International Organization COCESNA.
"Contractor", means	COMSOFT GmbH, with Headquarters at Wachhausstr. 5a, 76227 Karlsruhe, Germany.
"Contractor's Appointed Representative", means	An officer notified to ICAO as being authorized to act on behalf of the Contractor.
"ICAO's Appointed Representative", means	An officer notified to the Contractor by the ICAO Director, Technical Co-operation Bureau, as being authorized to act on behalf of ICAO.
"MEVA III and REDDIG II Member States/Territories/ /International Organization's Appointed Representative", means	An officer notified to ICAO and the Contractor as being authorized to act on behalf of MEVA III and REDDIG II Member States/Territories/International Organization.
"REDDIG II & MEVA III TMG", means	REDDIG II and MEVA III Technical Management Group.

Handwritten signature and the number 5.



International Civil Aviation

Contract No. 22501528 for the Provision of the Interconnection of the MEVA III and REDDIG II Satellite Telecommunications Network.

"Day", means	Unless otherwise specified, a calendar day.
"Common Start Date", means	The date indicating the beginning of the MEVA III Project Implementation activities, which is the 6 August 2014.

NB: Words in the singular shall also include the plural and vice versa where the context requires or admits.

2.0 Scope of Contract

- 2.1 This Contract covers the turnkey implementation of the interconnection of the MEVA III and REDDIG II satellite telecommunications networks and subsequent leasing of related voice and data communication services (hereinafter the "Services") to be provided to MEVA III and REDDIG II Member States/Territories/International Organization as outlined in Attachments I through III, V and VII with COMSOFT GmbH as prime Contractor.

3.0 Status of ICAO

- 3.1 The Contractor recognizes that ICAO has the status of a mandatar of MEVA III and REDDIG II Member States/Territories/International Organization.
- 3.2 Neither the Contractor nor its personnel shall be considered as an employee or an agent of ICAO.
- 3.3 Unless otherwise provided for in this Contract, ICAO shall not be liable for claims of any kind arising in connection with the performance of this Contract.

4.0 Responsibilities

4.1 Contractor Responsibilities

- 4.1.1 The Contractor shall be responsible for the turnkey installation of the MEVA III compatible modems in Caracas, Venezuela and Bogota, Colombia to allow the interconnection of the MEVA III and REDDIG II satellite telecommunications networks and shall provide and be responsible for the personnel, insurance coverage and other resources necessary for the performance of the Services under this Contract.
- 4.1.2 During the implementation of the Contract and as a result there from, the Contractor shall act as to limit to a minimum any potential impact and/or disruption on all current civil aviation and aeronautical operations in the countries of the MEVA III and REDDIG II Member States/Territories/International Organization. Should there be any foreseeable adverse impact and/or disruption of the existing related operations, an appropriate transition plan shall be submitted to MEVA III and REDDIG II Member States/Territories/International Organization and to REDDIG II & MEVA III TMG by the Contractor and be planned in full coordination with MEVA II and REDDIG Member States/Territories/International Organization and REDDIG II & MEVA III TMG.



International Civil Aviation

Contract No. 22501528 for the Provision of the Interconnection of the MEVA III and REDDIG II Satellite Telecommunications Network.

- 4.1.3 The Contractor shall provide the MEVA III and REDDIG II Member States/Territories/International Organization with a written monthly report showing all network end-user's individual characteristics and shall maintain an online database accessible by the users which will include at the minimum the current network status, call record list, call statistics and trouble report list.
- 4.2 **ICAO Responsibilities**
- 4.2.1 ICAO, using its best efforts, shall be responsible for facilitating the completion of this Contract and shall undertake in this respect the following:
- i. Payment of invoices submitted as per Article 5.2;
 - ii. Review of reports and approving of works in collaboration with REDDIG II & MEVA III TMG;
 - iii. Co-ordination of Project Review Meetings with REDDIG II & MEVA III TMG;
 - iv. Assistance to Contractor in any governmental requirement, such as visa, travel of personnel and/or Equipment shipping;
 - v. Co-ordination of training with MEVA III and REDDIG II Members States/Territories/International Organization, REDDIG II & MEVA III TMG and the Contractor;
 - vi. Other administrative matters which could reasonably be expected of ICAO to enable the execution of the Contract.
- 4.3 **MEVA III and REDDIG II Member States/Territories/International Organization Responsibilities**
- 4.3.1. REDDIG II Member States/Territories/International Organization shall provide the funds necessary to cover the price of this Contract.
- 4.3.2. MEVA III and REDDIG II Member States/Territories/International Organization will provide access to the sites for the Contractor's personnel together with authorizations to perform all relevant activities.
- 4.3.3. MEVA III and REDDIG II Member States/Territories/International Organization personnel may be assigned to monitor the implementation of the Services and act as liaison between the Contractor and MEVA III and REDDIG II Member States/Territories/International Organization who shall advise ICAO of any adverse observations.
- 5.0 **Prices And Payment Terms**
- 5.1 **Prices**
- 5.1.1 The total price of this Contract is US \$79,332.36 (seventy-nine thousand, three hundred and thirty-three United States dollars and thirty-six cents).



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- 5.1.2 This price is based on a one (1) year leasing Contract, followed by up to four (4) subsequent automatic annual renewals from year 2 to year 5, subject to availability of funds of the REDDIG II Member States/Territories/International Organization, with monthly recurring charges as follows:

Description:	US \$ per month	US \$ per year
Network access	2,818.11	33,817.32
- for Brazil	284.30	
- for Caracas (Venezuela)	1,409.06	
- for Bogota (Colombia)	840.45	
- for Peru	284.30	
Total circuit (AFTN/PAMA/DAMA circuits)	2,331.67	27,980.04
- for Brazil	263.37	
- for Caracas (Venezuela)	907.31	
- for Bogota (Colombia)	897.62	
- for Peru	263.37	
Total Monthly Recurring Price:	5,149.78	
Summary of Monthly Recurring Price, per year		61,797.36

The above prices are valid for five (5) years from the date of Contract coming into force.

Price validity for optional years after year 5 (subject to Contract Amendment as per Articles 5.1.7 and 24):

- i- Site Bogota (Colombia)

Pos.	Description	MRC (in US\$)	Duration (Month)	MRC Total (in US\$)
01.	Option 1 Year (Contract Prolongation)	2.177,14	12	26.125,63
02.	Option 2 Year (Contract Prolongation)	2.086,42	24	50.074,13
03.	Option 3 Year (Contract Prolongation)	1.995,71	36	71.845,49
04.	Option 4 Year (Contract Prolongation)	1.904,99	48	91.439,71
05.	Option 5 Year (Contract Prolongation)	1.814,28	60	108.856,80

- ii- Site Caracas (Venezuela)

Pos.	Description	MRC (in US\$)	Duration (Month)	MRC Total (in US\$)
01.	Option 1 Year (Contract Prolongation)	2.120,86	12	25.450,27
02.	Option 2 Year (Contract Prolongation)	2.032,49	24	48.779,69
03.	Option 3 Year (Contract Prolongation)	1.944,12	36	69.988,25
04.	Option 4 Year (Contract Prolongation)	1.855,75	48	89.075,95
05.	Option 5 Year (Contract Prolongation)	1.767,38	60	106.042,80

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- 5.1.3 The following Non-Recurring One Time Fee is included in the initial one (1) year leasing period:

Description	(US \$)
Site Survey	14,535.00
Network Integration/Installation	
Activation and Operation	
Training Package	3,000.00
Total One Time Fees:	\$17,535.00

- 5.1.4 The summary of prices above includes all Services related to this Contract. These prices shall remain firm for one hundred and twenty (120) months from the activation date of the leasing services as defined under this Contract. Such prices are exclusive of taxes and import duties on all goods and/or services imported under this Contract into the countries of the MEVA III and REDDIG II Member States/Territories/International Organization. In the event that any taxes or import duties are levied on the Contractor by the Authorities in such countries on the imported goods and/or services, arrangements will be made by the Authorities in the country to withdraw the levy or such taxes or import duties will be paid by the concerned MEVA III and REDDIG II Member States/Territories/International Organization directly.
- 5.1.5 The prices for the local services and supplies purchased by the Contractor or subcontracted and carried out in the countries of the MEVA III and REDDIG II Member States/Territories/International Organization in the performance of this contract, if any, include all applicable taxes.
- 5.1.6 The activation date for the leasing services procured under this Contract shall be the day following the successful acceptance of the interconnection as defined under Article 10.0 (signed Site Acceptance Certificate).
- 5.1.7 Three months before the end of each annual leasing period, the Contractor shall inform ICAO, the countries of the MEVA III and REDDIG II Member States/Territories/International Organization and the REDDIG II & MEVA III TMG of the scheduled end date of the Services. Following the initial one (1) + four (4) year leasing period as per Article 5.1.2, the Contractor undertakes to accept an amendment to the duration of this Contract should ICAO/ the countries of the MEVA III and REDDIG II Member States/Territories/International Organization's decide to extend the Services for one or more additional years (not exceeding five (5) cumulative years after the initial one (1) + four (4) year leasing period as per Article 5.1.2).

5.2 Payment Schedule and Invoicing

- 5.2.1 All invoices shall be issued to ICAO Finance Branch for payment in accordance with the payment schedule as indicated below:

Ref.	Milestone	Payment Amount
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1	Non-Recurring Charges due upon successful network integration (signed Site Acceptance Certificate)	\$17,535.00
2	Monthly Recurring Fees (to be paid one month in advance, on a quarterly basis following the successful network integration (signed Site Acceptance Certificate))	\$5,149.78

5.2.2 The Contractor shall submit one (1) original invoice plus two (2) copies for the amount due as indicated in Article 5.2.1. All payments shall be effected by bank transfer to the Contractor account indicated below within thirty (30) days after receipt of correct invoice. The bank charges for such transfers shall be borne by the Contractor.

5.2.3 Banking references of the Contractor:

Name of Bank: Deutsche Bank AG
 Address: Kaiserstr. 90, 76133 Karlsruhe, Germany
 Recipient: COMSOFT GmbH
 Account No.: 1005 255
 Area Code: 660 700 04
 BIC / SWIFT: DEUT DE SM 660
 IBAN No.: DE77 6607 0004 0100 5255 00

6.0 Export Licences

6.1 In all cases where export licenses are required for the export of the Services, obtaining any such licenses shall be the responsibility solely of the Contractor.

7.0 Documentation

7.1 Language & Standards

7.1.1 Unless otherwise specified, all reports, correspondence and other technical information concerning this Contract shall be in English (and in Spanish if available) and in the metric system of weights and measures and in other internationally accepted units.

7.2 Manuals, Reports

7.2.1 The Contractor shall provide ICAO/each affected MEVA III and REDDIG II Member States/Territories/International Organization with the following Documentation:

- i. Drawings and Diagrams: Two (2) sets (in Spanish if available and in English) of mechanical and electrical schematic diagrams essential for installation, routine maintenance and operation of the equipment, including such drawings as are needed to identify the equipment and its sub-units interconnections (as-built drawings).



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8.0 Delivery and Completion

- 8.1 Delivery, installation and commissioning of the interconnection shall take place by 31 March 2015, except otherwise agreed by the parties in accordance with the approval by REDDIG II & MEVA III TMG of the Contract Implementation Schedule, submitted by the Contractor.
- 8.2 The Contractor shall submit to ICAO within forty-five (45) days after the Common Start Date (06 August 2014) a detailed Contract Implementation Schedule, presented in weekly segments from the Common Start Date to final acceptance of the Services, based on the Contract Implementation Schedule in Attachment III.
- 8.3 If delivery of the Services is delayed by a cause constituting a *force majeure* as per Article 30, the delivery schedule shall be extended for such period as is reasonable having regard to all the circumstances of the case. However, if delivery is delayed by any such circumstances for more than 90 Days, ICAO shall be entitled, without granting additional extension, to terminate the contract pursuant to Article 31.
- 8.4 If the Contractor fails to deliver the Services in accordance with the Contract Implementation Schedule at Attachment III, except for reasons not attributable to him, and adjusted for any extension to which the Contractor may be entitled under Article 30, ICAO shall be entitled, without granting any additional extension, at ICAO's option, to terminate the Contract for default pursuant to Article 31, or to maintain the Contract, accept late delivery and recover damages under Article 29 or any other right or remedy which ICAO has under the terms of this Contract, or by law.

9.0 Site Installation

- 9.1 The Contractor shall be responsible for the installation of the equipment necessary for the interconnection in Bogotá (Colombia) and Caracas (Venezuela).
- 9.2 All installation materials, services, personnel, test equipment and tools required for installation of the equipment in Bogotá and Caracas and implementation of the interconnection of the MEVA III and REDDIG II satellite telecommunications networks shall be provided by the Contractor.
- 9.3 The cost of fares, accommodation and subsistence for Contractor's personnel during the installation and commissioning phase shall be borne by the Contractor.
- 9.4 Any spare parts or tools and test equipment belonging to the end-user, used to replace faulty items during the installation and check out phases and until acceptance of the Equipment shall be returned in the same condition as received by the Contractor upon Site Acceptance of the Equipment under this Contract.
- 9.5 During the period of installation, commissioning and acceptance of the system, the Contractor shall accept the participation (for observation purposes) of up to ten (10) local technical Personnel at site. MEVA III and REDDIG II Member States/Territories/International Organization's and the Contractor's representative(s) at the installation sites shall coordinate such participation.

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10.0 Site Acceptance Tests (SAT)

- 10.1 The SAT Procedures shall verify that the links pertaining to the Caracas and Bogotá nodes are properly connected and that the interconnection between both REDDIG II and MEVA III networks is successfully functioning in a true operational environment. The SAT must also verify that all the equipment for the interconnection in Caracas and Bogotá has been installed and that all documentation, drawings, as-built plans, etc., have been completed and delivered.
- 10.2 The Contractor shall submit to ICAO at least twenty (20) days before the SAT, the proposed SAT Procedures which shall be subject to mutual agreement between the parties.
- 10.3 If the system or sub-system fails to pass one or more of the tests, i.e. the test(s) shows that the system is non-compliant with the requirements of the specifications, then the Contractor shall correct the cause of the failure(s). ICAO/ REDDIG II & MEVA III TMG shall reserve the right to have all the tests or any single test performed again on the equipment under this Contract. All such costs shall be borne by the Contractor, including travel, accommodation and subsistence costs for ICAO/ REDDIG II & MEVA III TMG's representative(s) re-participation.
- 10.4 Minor defects that do not affect the operation and service of the Equipment, may not permit ICAO/ REDDIG II & MEVA III TMG to refuse to sign the on-Site Acceptance Certificate and the Contractor shall undertake to resolve those defects at its own expense and in an agreed time frame.
- 10.5 The Site Acceptance Certificate (Attachment IV) will be signed immediately upon meeting satisfactory completion of the following conditions:
- Successful testing of the equipment and services in Bogotá and Caracas sites, between the sites linked with these sites and on the interconnection between both networks;
 - All Training Programs have been satisfactorily completed.

11.0 Training

- 11.1 The Contractor shall provide basic on-the-job (OJT) training to six (6) technicians for each of two (2) MEVA III Network sites Caracas, Venezuela and Bogota, Colombia at a price of US \$1,500.00 per site. That price includes instructors' fees, teaching and course material, air fare, medical travel insurance, hotel and meals for the instructor. The training material will be sent to the Member State electronically for distribution prior to the course. The Contractor shall also provide one (1) hard copy of the training material upon installation.
- 11.2 The OJT training shall be provided as outlined in Attachment V.
- 11.3 The OJT training shall include hands-on experience involving the actual installation of the terminal equipment, operation, trouble-shooting and maintenance. It shall ensure that the technical personnel are competent and comfortable with the functioning of the MEVA III network characteristics..

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- 11.3 The OJT training shall be provided at the respective MEVA III Network Site during the installation in one (1) session for at least one (1) working day per each site.
- 11.4 All training shall be conducted in Spanish if available, otherwise in English.
- 11.5 Upon completion of each training course, a certificate shall be issued as per the model at Attachment VI.

12.0 Contractor's Responsibility for Employees

- 12.1 The Contractor shall be responsible for the professional and technical competence of its employees and will select for work under this Contract reliable individuals who will perform effectively in the implementation of the Contract, respect the local customs and conform to a high standard of moral and ethical conduct.
- 12.2 The Contractor, its director(s), officer(s), employees and servants shall conform to all applicable laws, regulations and ordinances promulgated by legally constituted authorities of MEVA III and REDDIG II Member States/Territories/International Organization.
- 12.3 The Contractor expressly acknowledges that the minimum supplier eligibility criteria contained in the supplier eligibility declaration is maintained and is applicable throughout the duration of the Contract.
- 12.4 Not less than one (1) working day after learning that any of the Contractor's personnel who have access to any MEVA III and REDDIG II Member States/Territories/International Organization premises have been charged by law enforcement authorities with an offense other than a minor traffic offense, the Contractor shall provide written notice to inform ICAO about the particulars of the charges then known and shall continue to inform ICAO concerning all substantial developments regarding the disposition of such charges.

13.0 Assignment of Personnel

- 13.1 The Contractor shall not assign any personnel other than those referred to in this Contract for the performance of work in the field without the prior written approval of ICAO. Prior to assigning any other personnel for the performance of work in the field, the Contractor shall submit to ICAO for its consideration the curriculum vitae of any person the Contractor proposes to assign for such service.

14.0 Removal of Personnel.

- 14.1 Upon written request from ICAO and based on a good reason, the Contractor shall withdraw from the field any personnel provided under this Contract and shall replace such personnel by others acceptable to ICAO, if ICAO so requests.
- 14.2 Such request for withdrawal or replacement shall not be considered as termination in part or in whole of this Contract under the provisions of Article 31 (Termination).



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- 14.3 All costs and additional expenses resulting from any withdrawal or replacement for whatever reason of any of the Contractor's personnel shall be at the Contractor's expense.

15.0 Workmen's Compensation and Other Insurance

- 15.1 The Contractor shall provide and thereafter maintain appropriate workmen's compensation and liability insurance, with respect to and, prior to the departure for, overseas employment under this Contract of all employees who are hired outside MEVA III and REDDIG II Member States/Territories/International Organization, and who are not citizens of the countries of the MEVA III and REDDIG II Member States/Territories/International Organization. The Contractor shall, upon request, provide ICAO with satisfactory evidence of the insurance required under this Article.
- 15.2 The Contractor shall comply with the labour laws of the MEVA III and REDDIG II Member States/Territories/International Organization providing for benefits covering injury or death in the course of employment.

16.0 Indemnification

- 16.1 The Contractor shall indemnify, save and hold harmless, and defend, at its own expense, ICAO, its officials, agents, servants and employees, from and against all suits, claims, demands and liability of any nature or kind, including their costs and expenses, arising out of the acts or omissions of the Contractor or the Contractor's employees, officers, agents or sub-Contractors, in the performance of this Contract. This provision shall extend, *inter alia*, to claims and liability in the nature of workmen's compensation claims, product liability and liability arising out of the use of patented inventions or devices, copyrighted material or other intellectual property by the Contractor, its employees, officers, agents, servants, or sub-Contractors. The obligations under this clause do not lapse upon termination of this Contract.

17.0 Encumbrances/Liens

- 17.1 The Contractor shall not cause or permit any lien, attachment or other encumbrance by any person to be placed on file in any public office or on file with ICAO against any monies due or to become due for any work done or material furnished under the Contract, or by reason of any other claim or demand against the Contractor.

18.0 Confidential Nature of Documents and Information/Public Disclosure

- 18.1 All technical, financial or other documentation and data compiled by or received by a Party under this Contract shall be the property of disclosing Party, and as such, shall be treated as confidential, and shall be delivered only to the disclosing Party's authorized officials upon completion of work under this Contract.
- 18.2 The Contractor shall not communicate at any time to any other person, Government or authority

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external to ICAO ICAO/ MEVA III and REDDIG II Member States/Territories/International Organization, any information known by reason of its association with ICAO, which has not been made public except with the authorization of ICAO; nor shall the Contractor at any time use such information for private advantage. These obligations do not lapse upon termination of the Contract.

- 18.3 Unless authorized in writing, neither Party shall disclose the particulars of the Contract, issue a press-release, advertise or make otherwise public the fact that it is performing, or has performed, this Contract or otherwise provided services for ICAO.

19.0 Copyright, Patents and Other Proprietary Rights

- 19.1 Unless otherwise specified, MEVA III and REDDIG II Member States/Territories/International Organization shall be entitled to all intellectual property and other proprietary rights including but not limited to copyrights, patents and trademarks, with regard to documents, software, and other materials which are produced or prepared or collected in consequence of or in the course of the execution of the Contract. At ICAO's request, the Contractor shall take all necessary steps, execute all necessary documents and generally assist in securing such proprietary rights for the benefit of MEVA III and REDDIG II Member States/Territories/International Organization in compliance with the requirements of the applicable law.

- 19.2 It is the Contractor's responsibility to ensure that no intellectual property nor other proprietary rights, including but not limited to, copyrights, patents and trademarks are violated and to defend at its own expense any suit or proceedings based on any claim of an infringement, provided that the Contractor is notified promptly in writing and is given full and complete authority, information and assistance for the defence of same.

20.0 Officials Not to Benefit

- 20.1 The Contractor warrants that no official of ICAO / MEVA III and REDDIG II Member States/Territories/International Organization has been or shall be admitted by the Contractor to any direct or indirect benefit arising from this Contract or the award thereof.

21.0 Source of Instructions

- 21.1 The Contractor shall neither seek nor accept instructions from any authority external to ICAO in connection with the performance of the work under this Contract. The Contractor shall refrain from any action, which may adversely affect ICAO / MEVA III and REDDIG II Member States/Territories/International Organization and shall fulfill its commitments with fullest regard for the interest of ICAO / MEVA III and REDDIG II Member States/Territories/International Organization.

22.0 Assignment

- 22.1 The Contractor shall not assign, transfer, pledge or make other disposition of this Contract or any

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part thereof or of any of the Contractor's rights, claims or obligations under this Contract except with the prior written consent of ICAO.

23.0 SubContracting

- 23.1 In the event the Contractor requires the services of sub-Contractors, the Contractor shall obtain the prior written approval and clearance of ICAO for all sub-Contractors. The approval by ICAO of a sub-Contractor shall not relieve the Contractor of any of its obligations under this Contract, and the terms of any sub-Contract shall be subject to and be in conformity with the provisions of this Contract.

24.0 Contract Amendments

- 24.1 This Contract including the Attachments may, by agreement between the parties, be amended at any time during the execution of the project.
- 24.2 Contract amendments shall be effective only when executed and delivered on behalf of ICAO and the Contractor by persons duly authorized in writing to do so.

25.0 Direction of Contract and Interpretation of Specifications

- 25.1 The Contractor shall perform the work in accordance with the decisions and directions of ICAO given under this Article and any further consequential decisions and directions given by ICAO in the performance of this Contract. Upon notification by ICAO of the details of any failure by the Contractor to meet its obligations, the Contractor shall take corrective action as soon as possible but in any event within two (2) weeks, failing which ICAO reserves the right to terminate the Contract in accordance with Article 31.1. Such directions shall be given in writing. If verbal instructions must be given, such shall be confirmed in writing within seven (7) days. In case of any decisions and/or directions of ICAO in the performance of the Contract constituting a deviation, change or amendment to the original specifications and which may give rise to additional expenses, the Contractor may submit to ICAO for its consideration a statement detailing the cost consequences of such deviation, change or amendment. Any such deviation, change or amendment, in order to be effective, shall be executed by way of a Contract amendment in accordance with Article 24.2 prior to its implementation.
- 25.2 ICAO reserves the right of adjudication should any question arise at any time prior to approval of the Services regarding the interpretation of any provision of the specifications and any other technical documentation incorporated in this Contract.
- 25.3 ICAO may order the Contractor in writing to suspend all or any part of the work for a period of time deemed appropriate by ICAO/MEVA III and REDDIG II Member States/Territories/International Organization. In this case, the Contract shall be amended in accordance with Article 24.2 and the Contractor may submit to ICAO for its consideration a statement detailing the reasonable costs of such amendment.



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26.0 Regulatory Requirements

- 26.1 It shall be the Contractor's responsibility to ensure that it is fully in compliance with all applicable laws, enactments, rules, regulations, patents and procedures of the civil aviation industry which have been established by the MEVA III and REDDIG II Member States/Territories/International Organization, their relevant regulatory bodies or by any regulatory body with jurisdiction over any aspect of the scope of works of the Contract.

27.0 Licences

- 27.1 If any licence or permit is required for the performance of the Contract, the Contractor shall obtain any such licence or permit.

28.0 Packing

- 28.1 The Contractor warrants that the goods, including packaging, conform to the specifications for the goods ordered under this Contract and are fit for the purposes for which such goods are ordinarily used and for purposes expressly made known to the Contractor by ICAO, and are free from defects in design, workmanship and materials.
- 28.2 The Contractor also warrants that the goods are packaged and marked for the purpose of transportation in a proper manner in order to protect the goods in accordance with any statutory requirement, any requirements of the carriers, and any shipping instructions from ICAO.

29.0 Damages / Penalties

- 29.1 Subject to the provisions of Article 30 (*Force Majeure*) hereof and without prejudice to any action which ICAO is empowered to take pursuant to the provision of any Article of this Contract or by law, if the Contractor fails to effect delivery of the Services in accordance with the Contract, then the Contractor shall become liable to pay to ICAO / MEVA III and REDDIG II Member States/Territories/International Organization penalties in this Contract's currency according to the scheme stipulated in Attachment VII (SLA).
- 29.2 Notwithstanding Article 29, paragraph 1, in case of the Contractor's significant delay in the implementation of the project or its negligent failure to fulfill any of its obligations under the terms of the Contract, ICAO/MEVA III and REDDIG II Member States/Territories/International Organization shall have the right to claim and recover from the Contractor all proven damages incurred by ICAO, or MEVA III and REDDIG II Member States/Territories/International Organization, or both. Save in the case of gross negligence, the total liability of the Contractor for such proven damages shall not exceed the total value of the Contract and shall exclude indirect or punitive damages. The recovery of proven damages shall not be excluded for the period of delay referred to in paragraph 29.1, but shall not be claimed in addition to the liquidated damages.
- 29.3 Without prejudice to any right to recover any sum under this Article, ICAO/ MEVA III and REDDIG II Member States/Territories/International Organization is entitled to require the

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Contractor to fulfil all obligations under the Contract.

- 29.4 ICAO/ MEVA III and REDDIG II Member States/Territories/International Organization reserves the right to recover its damages/penalties by means of set-off, withholding of payments and/or recourse to the Bank Guarantee.

30.0 Force Majeure

- 30.1 *Force Majeure* as used herein shall mean acts of God, laws or regulations, industrial disturbances, acts of the public enemy, civil disturbances, explosions and any other similar cause of equivalent force not caused by nor within the control of either party and which neither party is able to overcome. As soon as possible after the occurrence of any cause constituting *force majeure*, the Contractor shall give notice and full particulars in writing to ICAO of such *force majeure* if the Contractor is thereby rendered unable, wholly or in part, to perform its obligations and meet its responsibilities under this Contract. In this event, the following provisions shall apply:

- a) The obligations and responsibilities of the Contractor under this Contract shall be suspended to the extent of its inability to perform them and for as long as such inability continues;
- b) The term of this Contract shall be extended for a period equal to the period of suspension taking, however, into account any special conditions which may cause the time for completion of the work to be different from the period of suspension;
- c) If the Contractor is rendered permanently unable, wholly or in part, by reason of *force majeure* to perform its obligations and meet its responsibilities under this Contract, ICAO shall have the right to terminate this Contract on the same terms and conditions as are provided for in Article 31 (Termination);
- d) For the purpose of the preceding subsection, ICAO may consider the Contractor permanently unable to perform in case of any period of suspension in excess of ninety (90) days. Any such period of ninety (90) days or less shall be deemed temporary inability to perform.

31.0 Termination

- 31.1 ICAO may terminate this Contract for cause or default in whole or in part at any time, upon giving written notice to the Contractor. The termination notice shall be sent by certified mail, return receipt requested. Upon receipt of notice of termination, the Contractor shall take immediate steps to bring the work and services to a close in a prompt and orderly manner, shall reduce expenses to a minimum and shall not undertake any forward commitment from the date of receipt of notice of termination.
- 31.2 ICAO shall pay the Contractor for work and service satisfactorily performed and accepted by ICAO, for expenses necessary for the prompt and orderly termination of the work, and for such urgent and essential work as the Contractor is asked by ICAO to complete. In the event such termination is caused by the Contractor's negligence or fault, no payment shall be due from ICAO to the Contractor except for work and services completed to ICAO's satisfaction and

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accepted by ICAO.

31.3 ICAO may terminate this Contract at any time should ICAO's mandate be curtailed or terminated. In such case the Contractor shall be reimbursed by ICAO/MEVA III and REDDIG II Member States/Territories/International Organization for all reasonable costs incurred by the Contractor prior to receipt of the notice of termination.

31.4 ICAO may also terminate the Contract for convenience at any time in full agreement with MEVA III and REDDIG II Member States/Territories/International Organization. In such case, the Contractor shall be reimbursed by ICAO/MEVA III and REDDIG II Member States/Territories/International Organization for all reasonable costs incurred by the Contractor prior to receipt of the notice of termination.

32.0 Bankruptcy

32.1 Should bankruptcy or winding-up procedures be initiated against the Contractor, or should the Contractor be adjudged bankrupt, or should the Contractor make a general assignment for the benefit of its creditors, or should a receiver be appointed on account of the Contractor's insolvency, ICAO may, without prejudice to any other right or remedy it may have under the terms of this Contract, terminate this Contract forthwith by giving the Contractor written notice of such termination in accordance with the provisions of Article 31.

32.2 The Contractor must advise ICAO within twenty-four (24) hours of the occurrence of any event described in this Article.

33.0 Change in Ownership

33.1 The Contractor shall inform ICAO as early as possible of any change or anticipated change in the status of the Contractor or its ownership that may affect its ability to render the Services mentioned herein, as soon as such information is known to the Contractor.

34.0 Settlement of Disputes**34.1 Amicable Settlement: Negotiations**

The parties shall use their best efforts to settle amicably through negotiation any dispute, controversy or claim arising out of, or relating to, this Contract or the breach, termination or invalidity thereof, within a time period of ninety (90) days.

34.2 Arbitration

Any dispute, controversy or claim arising out of or relating to this Contract, or the breach, termination or invalidity thereof, unless settled amicably under the preceding paragraph of this Article within ninety (90) days, shall be referred by either party to arbitration in accordance with the UNCITRAL Arbitration Rules then prevailing. The parties agree that the arbitration be conducted by an arbitral tribunal consisting of a sole arbitrator. If the parties cannot agree on a



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sole arbitrator within sixty (60) days, the appointment of the arbitrator shall be made in accordance with Article 8 of the UNCITRAL Arbitration Rules. The place of arbitration shall be Montreal, Quebec, Canada, and it shall be conducted in the English language.

35.0 Applicable Law

35.1 This Contract shall be governed by the laws of the Province of Quebec, Canada, without regard to its conflict of laws principles.

36.0 Notices

36.1 Any notices given by the parties to the Contract shall be sent in writing addressed as follows:

ICAO To: Director, Technical Co-operation Bureau
Attn.: Chief, Procurement Section
Technical Co-operation Bureau
International Civil Aviation Organization
999 University Street
Montreal, Quebec, Canada H3C 5H7

Contractor To: COMSOFT GmbH
Attn. Mr. Manfred Schmid (CEO)
Wachhausstr. 5a
76227 Karlsruhe, Germany
Tel. +49-721-9497-0
Fax +49-721-9497-129

36.2 Notices hereunder shall be effective when received.

37.0 ICAO Privileges and Immunities

37.1 Nothing in or relating to this Contract shall be deemed a waiver, express or implied, of any immunity from suit or legal process or any privilege, exemption or other immunity enjoyed or which may be enjoyed by ICAO, its officers and staff, either pursuant to the *Convention on the Privileges and Immunities of the Specialized Agencies* or other conventions, agreements, laws or decrees of an international character.

38.0 Use of Name, Emblem or Official Seal of ICAO

38.1 Unless authorized in writing by ICAO, the Contractor shall not advertise or otherwise make public the fact that it is performing, or has performed services for ICAO, or use the name, emblem or official seal of ICAO or any abbreviation of the name of ICAO for advertising purposes or for any other purpose.

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39.0 Complete Nature of Agreement

- 39.1 This Contract constitutes the complete and exclusive statement of the Contract between the parties and supersedes all proposals or all other communications, verbal and/or written arrangements or agreements, between the parties relating to the subject matter of this Contract, unless the Contract is changed, amended or modified in accordance with Article 24 of this Contract.

40.0 Partial Invalidity

- 40.1 If any provision of this Contract is or becomes invalid, illegal or unenforceable by force of law, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

41.0 List of Attachments

Attachment	Description
I	Technical Specifications
II	Scope of Supply and Pricing
III	Contract Implementation Schedule
IV	Model Site Acceptance Certificate
V	Training Description
VI	Model of Training Course Completion Certificate
VII	Service Level Agreement (SLA)

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42.0 Coming into Force of the Contract and Activation Date of Leasing Services

42.1 The Contract shall come into force at the time of signature of the Contract by ICAO and COMSOFT GmbH.



42.2 Subject to the conditions of Article 42.1, the Contract Implementation shall start on the Common Start Date agreed between REDDIG II & MEVA III TMG and COMSOFT GmbH, which is the 6 August 2014.


42.3 The activation date for the leasing services procured under this Contract shall be the day following the successful acceptance of the interconnection as defined under Article 10 (signed Site Acceptance Certificate).

43.0 Signatures

The Signatures hereunder are those of authorized officers empowered to enter into Contractual obligations.

Signed on 14 NOVEMBER 2014., on behalf of:
Date


ICAO
Technical Co-operation Bureau

Technical Co-operation
Bureau


COMSOFT GmbH


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