INTERNATIONAL CIVIL AVIATION ORGANIZATION

ANNEX 1
to the letter of Agreement among the Sates of the South American Region and
the International Civil Aviation Organization
for the provision of technical cooperation financed by trust funds

PROJECT'S SUBSTANTIVE REVISION DOCUMENT

Project Number:	RLA/03/901/Q
Title:	REDDIG Management System and Satellite Segment Administration
Duration:	5 years adjustable
Sector and sub-sector:	Air Navigation - Communications
Government executing agencies:	Civil Aviation Authorities
Executing agency	ICAO
Starting date:	July 2003
Previous budget, revision P: Current budget, revision Q: Increase:	USD 7,632,038 USD 17,469,580 USD 9,837,542
Participant States:	Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, France, Guyana, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay and Venezuela.

Brief description: The objective of this project is to establish a multinational mechanism for the administration of the South American Digital Network (REDDIG), taking into consideration the regional developments in this matter. Also meanwhile this multinational mechanism is established, the project will manage the REDDIG, will implement CNS/ATM applications in accordance with the CAR/SAM FASID requirements and the Plan of Implementation of the Performance-based Air Navigation System for the SAM Region, will take charge of renting the satellite segment and take the actions necessary to modernize the infrastructure of the network according to operational requirements and technological advances available.

Purpose of the revision:

a) Update the project document with the statements that correspond to the results achieved and additional activities implemented under the plans and budgets approved annually by the Coordination Committee of the project, such as:

- References to the Plan of Implementation of the Performance-based Air Navigation System for the SAM Region.
- Previous or ongoing assistance addressed to the same sub-sector, to incorporate the information of other three additional regional projects related to the REDDIG project.
- Inclusion of additional problems to be addressed by the project.
- Inclusion of the ICAO strategic objectives which links with the project.
- Consequential adjustments and additions to the description of the project's immediate objectives, results, activities and parties responsible for implementation.

- Addition of missing items in the description of the inputs of participating Governments.
- Rearrangement and addition of missing items in the description of ICAO inputs.
- Update of the attachments to the project document, as appropriate.

b) Include under Immediate Objective # 3, the Output 3.4 related to the interconnection of the MEVA II and REDDIG networks for interoperability of applications in the CAR and SAM regions.

c) Include as Immediate Objective # 4, the procurement, installation, commissioning and maintenance of the new Digital Network REDDIG II in accordance with the technical specifications agreed by the Member States.

d) Show in the budget the final figures for 2011 with actual expenditures incurred.

e) Update the budget in subsequent years and extend the duration of the project until December 31, 2018, with the estimated costs for the procurement, installation, commissioning, operation, rental of the satellite segment and maintenance of the new REDDIG II.

Approved on behalf of:

	Name	**Signature**	**Position**	**Dates**
State/Agency				
ICAO				
Argentina				
Bolivia				
Brazil				
Chile				
Colombia				
Ecuador				
France				
Guyana				
Paraguay				
Peru				
Suriname				
Trinidad and Tobago				

Uruguay	
Venezuela	

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A. CONTEXT

1. Description of the sub-sector

1.1 The Convention on International Civil Aviation, signed at Chicago on 7 December 1944 (Chicago Convention), stipulates certain principles and arrangements so international civil aviation may be developed in a safe and orderly manner and that air transport services may be established on the basis of equality of opportunity and operated soundly and economically.

1.2 The Chicago Convention formed the International Civil Aviation Organization (ICAO), which aims and objectives are to develop the principles and techniques of international air navigation and to foster the planning and development of international air transport to ensure the safe and orderly growth of international civil aviation throughout the world.

1.3 The Convention provides the adequate reference frame to identify and define the responsibilities of States with regard to the administration of civil aviation and the organic way and methods to be followed in order to comply with their mandate.

1.4 All States participating in this regional project are parties of the Chicago Convention and members of ICAO.

2. Participating States strategy

2.1 As ICAO contracting States and signatories to the Convention on International Civil Aviation, participating States in this project have accepted specific obligations in respect of the implementation of internationally agreed Standards and Recommended Practices governing international civil aviation. The Director of Civil Aviation or similar administrative authority in each State is responsible for ensuring that the civil aviation administration observes and complies with these international obligations.

2.2 Among such obligations, civil aviation administrations are currently responsible for the development and implementation of facilities, services and procedures necessary for the safety, regularity and efficiency of air operations. The orderly and timely implementation of such facilities, services and procedures is agreed by contracting States and coordinated by ICAO by means of air navigation regional plans.

2.3 Air navigation plans determine in detail the facilities, services and procedures necessary for international air navigation within a specified area. These plans contain recommendations that may be followed by governments in their programmes for the provision of air navigation facilities and services, ensuring that, if provided in accordance with the plan, will form, together with those of other States, a general network that will be adequate for a long period of time.

2.4 Each contracting State is responsible for the provision of facilities and services within its territory, in accordance with Article 28 of the Convention. The ICAO Council has recommended that such facilities and services include those specified in the air navigation plans. With regard to the Caribbean (CAR) and South American (SAM) regions, the planning of such facilities and services is presented in Doc 8733, Air Navigation Plan – Caribbean and South American Regions, Volume II-FASID, and in the *Plan of Implementation of the Performance-based Air Navigation System for the SAM Region*.

2.5 The air navigation plan for the CAR and SAM regions presents in a concise manner the ICAO plan for the provision of international air navigation facilities, services and procedures in the Caribbean and South American Regions. Certain facilities and services outside of the prescribed regional limits are also included, in order to maintain the integrity of the systems and ensure, insofar as possible, that all the facilities and services provided by any State figure in an air navigation plan document. Most of the plan is originated in the recommendations of the concerning air navigation regional conferences convened by ICAO, mainly and in the case of the CAR/SAM Regions, the recommendations formulated by the Third CAR/SAM Regional Air

Navigation Meeting (RAN CAR/SAM/3).

2.6 The *Plan of Implementation of the Performance-based Air Navigation System for the SAM Region* was published by the ICAO South American Regional Office, on behalf of the States accredited to the Office and international organizations involved. The Plan considers implementation in the short and medium terms, as per the orientation contained in the Global Air Navigation Plan and the initiatives of this plan necessary to the evolution towards the Global ATM system included in the Global ATM Operational Concept.

2.7 The *Plan of Implementation of the Performance-based Air Navigation System for the SAM Region* is directed to establish an implementation strategy aimed at achieving benefits for the ATM community taking as a basis the requirements of users and the ATM infrastructure, as well as the capabilities of aircraft available and foreseen. The document contains the vision of the SAM Region to the Air Navigation System (AGA / AOP, AIM, ATM, CNS, MET, SAR, Human Resources and Safety), giving high priority to the environmental protection, training and safety, aspects required to accompany their evolution.

2.8 It corresponds to each State the task of providing the facilities and services foreseen in the plan within its territory. Since financial and technical resources substantially vary from one State to another, an unequal execution of certain parts of the plan can be given. Therefore, ICAO makes all the possible effort to ensure the homogeneous execution of the plans and to assist the governments in the implementation of the facilities and services foreseen, including those systems that require of mechanisms of multinational type for its operation and maintenance, taking into consideration, the guidance material included in the CAR/SAM FASID and the pertinent recommendations on this matter of the RAN CAR/SAM/3 Meeting.

3. Prior or ongoing assistance addressed to the same sub-sector

3.1 The ICAO Regional Project RLA/90/900 (1991-1993) on *Implementation of the ATS Speech Circuits Network in South America*, provided assistance to Argentina, Brazil, Chile, Colombia and Peru to start up the trunk network of the air traffic services speech circuits plan assisting in overcoming the problems confronted by participating States for the interconnection of the main automatic switching centers of the network.

3.2 In order that the region can attend the requirements formulated in the CAR/SAM FASID for the AFS, the UNDP/ICAO Regional Project RLA/98/019 on *Implementation of the SAM Digital Network (REDDIG)*, executed between 1998 and 2003, provided assistance to the States of the Region in the acquisition, installation, setting in operation and management during six months the South American Digital Network (REDDIG), which was dedicated to modernize the communications of the aeronautical fixed service and to establish a digital platform for the installation of CNS/ATM applications.

3.3 The UNDP/ICAO Regional Project RLA/98/003 on *Transition to the CNS / ATM systems in the CAR and SAM regions*, financed by 15 countries of both regions, had the aim of assisting States in implementing the new communications, navigation and surveillance / air traffic management (CNS / ATM) systems, in accordance with the regional CAR / SAM implementation plan and the ICAO Standards and Recommended Practices. The project began in 1998 with a planned duration of 3 years and lasted until 2006. Project operations constituted an important tool in the restructuring of the ATS routes network, with the establishment of area navigation routes (RNAV), involving 64 RNAV routes implemented, the realignment/extension of 44 ATS routes, the elimination of 19 ATS routes and implantation of 12 ATS route segments, as well as the plan of implementation of reduced vertical separation minima (RVSM), and the introduction of the required navigation performance (RNP 10) in the segment Santiago de Chile-Lima. This resulted in improved levels of safety and efficiency. The theoretical and practical seminars and meetings organized and promoted by the project for such purposes have contributed significantly to improve regional coordination.

3.4 The ICAO Regional Project RLA/06/901 on Assistance for the implantation of a regional ATM system, considering the ATM operational concept and the correspondent support of technology in communications, navigation and surveillance (CNS), financed by 10 States of the South American region, aims to develop and implement initiatives of the global Air Navigation Plan, which will lead to the transition of an air traffic

management system based on land systems to a system based on aircraft performance. This includes the implementation of quality assurance services and management of safety of the aeronautical information services (AIS) and meteorological services for air navigation (MET) in accordance with international standards. Also the development of a strategy for the implementation and integration of automated air traffic management systems in the SAM Region in order to facilitate the exchange of information and decision making in collaboration with respect to all components of the ATM system. This project began in 2007 with an expected duration of five years and has been extended until 31 December 2017.

3.5 The ICAO Regional Project RLA/09/901 on Interconnection of the MEVA II node of COCESNA to the REDDIG, funded by COCESNA, is aimed at establishing the terms and conditions for the interconnection of MEVA II node of COCESNA to the REDDIG taking into account the coordination aspects referred to in the Memorandum of Understanding for the MEVA II-REDDIG interconnection approved by all members of the REDDIG and MEVA II.

4. Regional institutional framework for the sub-sector

4.1 ICAO maintains a Regional Office in Lima, accredited to the States participating in this project, in charge of promoting and fostering the application of the international standards, recommended practices and procedures established in the Annexes to the Convention on International Civil Aviation and implementation of the regional air navigation plan.

4.2 The Caribbean and South American Regional Planning and Implementation Group (GREPECAS), is the regional mechanism in charge of ensuring the continuing implementation of the regional air navigation plan and determine the specific problems affecting air navigation, suggesting the appropriate solutions. Participant States in this project are members of the GREPECAS.

4.3 GREPECAS has recommended States and the ICAO South American Regional Office to carry out, based on specifications provided by that mechanism the implementation of a Digital Network in the SAM Region (REDDIG). The recommendation is contained in Conclusion 6/27 of the GREPECAS/6 Meeting. In consideration to this Conclusion, ICAO organized and coordinated with interested States the implementation of the South American Digital Network (REDDIG) through the Technical Cooperation Project RLA/98/019.

4.4 The ICAO Technical Cooperation Bureau (TCB) at ICAO headquarters in Montreal, through the South American Regional Office, maintains contacts with SAM contracting States that require or receive technical cooperation in the field of civil aviation and coordinates the administration and execution of the assistance agreed.

B. PROJECT JUSTIFICATION

1. Problems to be faced: current situation

1.1 Problem identification

REDDIG Operation

1.1.1 The Technical Cooperation Project RLA/98/019 provided participating States a modern, effective, reliable and efficient network, implemented homogeneously in the SAM Region to satisfy in the medium-term the requirements of the aeronautical fixed service and to support those of the aeronautical mobile service. The REDDIG, as all modern VSAT digital networks designed to support automated systems using distributed data processing, is based in the sharing by its users of satellite segment and network resources in order to establish a management and control system for the network. This system should be operated according to established procedures and in accordance with the interests of the States users of the network. Likewise and with the purpose of being able to maintain the efficiency of operating costs, it is necessary to count with an administration that can control the satellite resources and the use of the bandwidth in benefit of all concerned parties.

1.1.2 On the other hand the REDDIG, which has been conceived as an installation capable of satisfying the global concepts of the ICAO CNS/ATM systems, would require an entity that can harmonize and conduct the implementation of CNS/ATM applications that would permit inter-operability of data processing systems despite dissimilarity of user data existing in the region.

REDDIG Administration

1.1.3 The above mentioned matters permit to clearly determine that the REDDIG operational characteristics and the provision of communications services to the users are such that perfectly fit within the concept of the need to count for this installation with a management system that would allow, on behalf of participating States and network owners, to manage it in benefit of the air navigation services to be provided by States in agreement with the requirements of the Regional Air Navigation Plan, and to progressively conduct the transition to the ICAO CNS/ATM systems within the Region, with the corresponding inter-regional interfaces.

1.1.4 In consideration of the above, the Third Meeting of the REDDIG Coordination Committee held in Lima, Peru, from 6 to 7 November 2002, while examining the existing background information on the options for the REDDIG management decided to carry it out through a multinational mechanism, and that ICAO (Conclusion RCC 3/1) provides the support to assist States in the creation and establishment of this mechanism within a timeframe of no more than (2) two years. Likewise, the mentioned meeting established the basis for the technical management system of the REDDIG, as well as the scheme of cost sharing distribution, payment of satellite segment and implementation of CNS/ATM applications.

1.1.5 In this sense and within the framework of this project, ICAO assistance will be provided to the States as required by the Third Meeting of the REDDIG Coordination Committee, having in consideration the regional developments of multinational mechanisms.

MEVA II/REDDIG Interconnection

1.1.6 Following the recommendations of the Caribbean and South American Regional Planning and Implementation Group (GREPECAS), the mechanism in charge of ensuring the continued implementation of the regional air navigation plan and identify the specific problems affecting air navigation suggesting appropriate solutions, it was established the need to achieve the interconnection between the communications networks of the CAR and SAM regions in order to enhance the availability of current services of voice and data communications and implant the new requirements of services (interconnection of automated systems such as radar data and flight plans, as well as ground-ground ATN applications as AMHS, AIDC, etc.).

1.1.7 The possibilities to achieve the interconnection of the two networks were considered and analyzed at a series of informal and coordination meetings. As a result, it was agreed a memorandum of understanding approved by all MEVA II and REDDIG members for the establishment of an homogeneous digital platform based on the interconnection of the two networks, which implantation would be carried out by executing the tasks defined in a plan of action drafted in that regard with the participation of the Central American Corporation of Air Navigation Services (COCESNA), responsible of the MEVA II node to be interconnected, and the REDDIG Administration.

Replacement of the REDDIG

1.1.8 The technology of equipment that makes up the nodes and control centers and REDDIG management dates back to 2002 and their useful life is about to be reached. Additionally, the most important teams of the nodes, FRAD and MODEM, are no longer commercially available, which precludes their replacement in case of irreparable failure.

1.1.9 Before this situation, the REDDIG Member States drew up a plan to implement a new digital network in the SAM Region, called REDDIG II, which will involve a complete change of technology that conforms the current equipment in order to meet the challenges of maintaining the current network, maintain the high levels of availability of the services foreseen by ICAO, assume the new requests of services of the region and implement an ATN network as specified by ICAO.

1.1.10 As part of the plan, it was elaborated a study of the new digital network, including the requirements of bandwidth required to support current services, radar data and new support services to air navigation. There were analyzed the different configurations of networks (satellite, terrestrial and mixed), it was carried out a technical and financial comparison of the networks analyzed and prepared a proposal for a mixed digital network structure (satellite- terrestrial). Member States examined and approved the technical specifications developed for this network, and agreed to request ICAO to implant the new REDDIG II under this project (Conclusion RAAC/12-6 Approval to start the bidding process for the implementation of the new digital network REDDIG II, of the Twelfth Meeting of Civil Aviation Authorities of the South American Region, Lima, Peru 3 to 6 October 2011).

2. End of project situation

2.1 With the execution of this project, the REDDIG will have 16 operating nodes, all transferred to States. It is expected that, when finalizing this project, States will count with a multinational mechanism activated for the network management, and the corresponding ICAO assistance regarding its management while this mechanism is established. Likewise, on the REDDIG platform, ATM/CNS applications identified by this project and agreed with the States would have to be put into practice.

2.2 The interconnection of the communications networks MEVA II of the CAR Region and REDDIG of the SAM Region will have been achieved through the implementation of the necessary hardware and software in the nodes of COCESNA, Bogota and Caracas.

2.3 It will have been purchased, installed, tested and started up the new digital and terrestrial network REDDIG II, including the rental of the satellite segment required, and its administration and maintenance by ICAO, as well as the supply of the terrestrial communications service by a provider of communications services, continuing the management of the entire system through this project until the operation of a multinational mechanism agreed for this purpose can be feasible.

3. Need for future assistance

3.1 In accordance with project progress, it is possible that participating States require additional assistance.

4. Target beneficiaries

4.1 Beneficiaries of the results of this project will be civil aviation administrations, air operators and services users. Also a sensible improvement of air communications systems will be achieved, which will redound in the increase of air operation safety, reduction of fuel cost, decrease of flight delays and increase of the capacity of voice and data communications of the air navigation system.

5. Project strategy and institutional arrangements

5.1 The strategy of the project is based in the participation of the civil aviation organisms and personnel from the States who have been participating in all the stages of its development with the advisory and technical support through missions of experts and follow up of support actions aiming to achieve the objective.

5.2 The civil aviation administrations of States where management nodes are established will provide the installations, services, supplies and personnel with the appropriate experience to ensure the satisfactory progress of the project activities, while the network is administered through it.

6. Reasons for the assistance of ICAO

6.1 The States, through the different stages of analysis in several meetings about the implementation and administration of the REDDIG, have agreed on the need to formulate an institutional agreement to operate and to manage this network. Within this approach, they agreed that a multinational mechanism would be most appropriate mechanism for this matter.

6.2 As the international aeronautical community is already aware, ICAO has been since more than half a century the organization of the United Nations system specialized in civil aviation and, under this condition, is responsible for the provision of the framework to virtually all the civil aviation regulations of its contracting States. The same experts providing assistance for the development and maintenance of this framework provide the technical support to the ICAO Technical Cooperation Programme. On this basis, ICAO, since 1952, has been executing technical assistance projects for its contracting States in a neutral non-profit and cost-effective manner.

7. Special considerations

7.1 The regional project will maintain links with the technical cooperation national programmes that have under execution participating States for the same sub-sector, with the purpose of coordinating and complementing the activities required at country level with the support of its national projects.

8. Coordination arrangements

8.1 Project coordination will be centralized in ICAO Technical Cooperation Bureau in Montreal, which will designate the International Coordinator and will inform participating States of this nomination.

8.2 The main function of the International Coordinator is to ensure that the project activities are completed successfully and in agreement with the instructions of the Technical Cooperation Bureau of ICAO and the policies, regulations and project budget. Likewise, he/she also has the following responsibilities:

a) Act as secretary of project monitoring annual meetings.

b) Authorize project expenditures and inform participating States about the expenditures incurred.

c) Ensure that the work of personnel hired under the project is carried out according to their terms of reference, taking into consideration the instructions of the ICAO Technical Cooperation Bureau and participating States.

d) Establish and maintain contacts with donor organizations with the purpose of fostering cooperation agreements

8.3 The ICAO South American Regional Office in Lima will support the International Coordinator nominated by ICAO Technical Cooperation Bureau in the supervision of the project activities in its technical and operational aspects; likewise it will be the official channel for communications with States participating in the project.

8.4 Regarding the technical aspect, the ICAO South American Regional Office will make the necessary arrangements for the control and follow-up of the activities and results of the project, taking into account, among other aspects, conclusions and recommendations adopted by States in the framework of the GREPECAS in items related to the objectives of the project.

8.5 The management of the REDDIG will be in charge of the network administrator who will be based in the NCC of Manaus, Brazil, and will be hired by ICAO Technical Cooperation Bureau, in agreement with his terms of reference, and who will be able to maintain informal communications with technical counterparts in each State in fulfillment of his/her activities. The alternate to Manaus is the Ezeiza NCC in Argentina, which will become operational in case of failure of the Manaus NCC or during the period assigned as part of the NCC operational rotation process.

9. Counterpart support capacity

9.1 Participating States should assume a full participation commitment in all the project activities and accept the technical and supervisory missions to be programmed to visit the installations and air navigation services involved. They convene, likewise, in applying or executing the results and recommendations of the project in aspects in which they are concerned.

9.2 The civil aviation administrations of participating States will provide the necessary counterpart support for the successful execution of the project and to ensure the maintenance of its results. This support could include the participation of professionals or other personnel at full or partial time, as well as the provision of offices, classrooms, furniture, equipment, expendable material, local transport, telephone, telephone/fax and other essential services for the effective performance of the activities of personnel assigned for the project during the period of their mission.

10. ICAO strategic objectives

10.1 Project objectives are directly linked to the strategic objectives of ICAO for the 2011-2013 period listed below, as shown in **Part D**, next to each item in the column **Outputs**:

Strategic objective A: Safety

3- Safety Management Implementation
5- ATM – Global Management
6- Regional Safety-related Activities
15- Qualified Aviation Professionals

Strategic objective C: Environmental protection and sustainable development of air transport

28- Data Link
29- Meteorology
30- CNS/Frequency Spectrum
31- Digital Aeronautical Information

C. DEVELOPMENT OBJECTIVE

The project will contribute to support the operation and expand the services of a modern regional aeronautical communications system in benefit of the international air transport, as means to support the social, economic and cultural development of the region.

D. IMMEDIATE OBJECTIVES, OUTPUTS AND ACTIVITIES

They are described on the following pages.

Abbreviations or words used in the third column mean:

CAA	Civil Aviation Administrations or equivalent authorities
Consultants	International professionals required for specific activities
Contractor	Winner of the contract for the provision of the REDDIG II
MSP	MEVA II Service provider
NA	Network Administrator
NMO	Network Management Offices
PRO	Procurement Unit of the ICAO Technical Cooperation Bureau in Montreal
RCC	REDDIG Coordination and Technical Committee
RO	ICAO South American Regional Office in Lima
TCB	ICAO Technical Cooperation Bureau in Montreal
TEN	Tenderers participating in the bidding for the REDDIG II

Immediate Objective No. 1

Elaborate a proposal for the establishment of a multinational mechanism for the definitive administration of the network, considering the studies on this subject to be carried out by GREPECAS.

Success Criteria

A harmonized proposal based on SAM States' interests will be available to them for the establishment of a multinational mechanism for the administration of the network.

Outputs	Activities	Party responsible for each activity
1.1 Analysis of the possible multinational mechanisms to provide air navigation services in order to determine an arrangement for the administration of the network. *(S.O. A3, A5, A6, C28, C29, C30, C31)*	1.1.1 Compile information from the existing multinational mechanisms for the provision of air navigation services, such as: a) COCESNA b) Eurocontrol c) Iceland Agreement d) Others	RO
	1.1.2 Prepare a comparative chart on the advantages and disadvantages of the possible multinational mechanisms in order to determine an arrangement on this matter for the administration of the network.	RO
	1.1.3 Analyze the best alternatives for a definitive arrangement that allows the establishment of a multinational mechanism for the administration of the network.	RO
1.2 Proposal for the establishment of a multinational mechanism for the administration of the network elaborated. *(S.O. A3, A5, A6, C28, C29, C30, C31)*	1.2.1 Considering the CAR/SAM FASID guidance material and the study of the previous output, prepare a multinational mechanism project for the administration of the network.	RO
1.3 Proposal on the definitive multinational mechanism for the administration of the network approved. *(S.O. A3, A5, A6, C28, C29, C30, C31)*	1.3.1 Project of proposal on the multinational mechanism presented to the following interested parties requesting their comments: a) SAM States; b) GREPECAS; and c) Meeting of Civil Aviation Authorities of the SAM Region.	RO
	1.3.2 Evaluate the comments received and consider them in the preparation of the final proposal.	RO

	1.3.3 Circulate the final proposal to the States requesting its approval	RO
	1.3.4 Approval of the proposal on a multinational mechanism for the administration of the network	CAA
1.4 Arrangements to activate the multinational mechanism for the administration of the network prepared. *(S.O. A3, A5, A6, C28, C29, C30, C31)*	1.4.1 Based on the result of 1.3, coordinate with the States the necessary arrangements for the implementation of the approved mechanism.	RO, TCB, CAA
	1.4.2 Based in activity 1.4.1 prepare a working programme and determine the date of activation of the multinational mechanism.	RO

Immediate Objective No. 2

Administration of the network under the conditions established by the Third Meeting of the Coordination Committee (RCC/3)

Success Criteria

Adequate administration of the network under the direct management of the project.

Outputs	Activities	Party responsible for each activity
2.1 REDDIG managed by the project for a period of two years. *(S.O. A5, A15, C28, C29, C30, C31)*	2.1.1 Management the network during the transition period to the definitive multinational mechanism providing the following services to keep the network operating:	TCB, NA, RO
	a) Assist the States and provide training for the correct operation of the network nodes	NA, RO
	b) Supervise and control in an efficient manner the network operation, providing the appropriate assistance to the nodes for the identification and solution of operation problems that might arise.	NA, RO
	c) Manage the network configuration keeping the system database updated with the corresponding information of the nodes bandwidth.	NA
	d) Prepare monthly reports on the activities of the network administration and the operating status of the system and circulate them to the States.	NA, RO
	e) Follow up the aspects of the guarantee contracted for the network.	NA, TCB
	f) Verify periodically the network maintenance programmes improving them as necessary, and advising in the planning and execution of the same.	NA, RO
	g) Propose the corresponding procedures to duly coordinate the NCCs' operation (Manaus/Ezeiza).	NA
	h) Based on the agreements reached at the RCC / 3 on spare parts management policy, propose a process for management of spare parts for the network and how to obtain them so as to ensure a continuous support and the timely supply of these inputs.	NA, RO
	i) Approve the procedures proposed in g) and h).	RCC

	2.1.2 Coordinate adequately with States, other administrative aspects established for the operation of the REDDIG such as: a) Supplies provided by States. b) Quantity and quality of the human resources to be provided by the States for the operation and maintenance of the network. c) Facilities, access to site, transportation/ mobilization, personnel assistance, telecommunications means, etc.	NA, RO
2.2 REDDIG Budget approved. *(S.O. A5, A15, C28, C29, C30 and C31)*	2.2.1 Prepare and submit annually to the ICAO Regional Office in Lima a budget for the REDDIG administration for approval.	RO, NA
	2.2.2 Prepare an annual report on the activities of the network management and the program of activities for the coming year, including budget estimates.	NA, RO
	2.2.3 Prepare the annual budget of the REDDIG.	RO
	2.2.4 Convene a meeting of the REDDIG Coordination and Technical Committee in April of each year.	RO
	2.2.5 Approve the annual budget of the network.	RCC
	2.2.6 Review and approve the annual activity report and the program of activities for next year, presented by the network administrator.	RCC
	2.2.7 Review and approve expenditures and accounts of the REDDIG administration.	RCC
2.3 Satellite segment leased. *(S.O. A5, C28, C29, C30, C31)*	2.3.1 Based on Conclusion RCC 3/7 of the Third Meeting of the Coordination Committee, establish the most convenient arrangement for leasing the satellite segment from PanAmSat, subsequently designated as Intelsat.	TCB, RO, NA
	2.3.2 Approve the arrangement to be proposed to PanAmSat, subsequently designated as Intelsat.	CAA
	2.3.3 Collect the funds to lease the satellite segment and sign the contract.	RO, TCB

Immediate Objective N° 3

In accordance with the requirements of the CAR/SAM FASID and of the Plan of Implementation of the Performance-based Air Navigation System for the SAM Region, plan the regional development of CNS/ATM applications and implement such applications in coordination with projects RLA/98/003 and RLA/06/901, as appropriate.

Success Criteria

Action plan for the implementation of CNS/ATM applications on the REDDIG platform developed in coordination with States.

Outputs	Activities	Party responsible for each activity
3.1 CNS/ATM applications identified. *(S.O. A5, C28, C29, C30 and C31)*	3.1.1 Researching the CNS/ATM applications available on the market and implemented successfully for the aeronautical fixed service.	RO, NA Consultants
	3.1.2 Researching from the technical point of view their application in the REDDIG platform and select the correspondent applications.	RO, NA, CAA
3.2 Plan for the implementation of CNS/ATM applications approved. *(S.O. A5, A15, C28, C29, C30 and C31)*	3.2.1 Coordinate with States and the GREPECAS the technical aspects required for the implementation of the CNS/ATM applications selected.	RO, NA, CAA
	3.2.2 In coordination with the activities of projects RLA/98/003 and RLA/06/901, as corresponds, prepare plans to implant CNS/ATM applications that include, *inter alia*, the following: a) Interoperability of the following applications: • AMHS; • AIDC; • Radar, ADS or multilateration surveillance systems; • Others. b) General technical specifications for equipment and programming (hardware and software); c) System requirements and functionalities; d) Costs; and e) Coordination arrangements and parties responsible.	RO, NA
	3.2.3 Approve plans developed under 3.2.2.	RCC

3.3 CNS/ATM applications for the fixed service implemented in the REDDIG platform. *(S.O. A5, A15, C28, C29, C30 and C31)*	3.3.1 Based on plans approved as per 3.2.3, execute the following:	
	a) Propose amendments to the project budget in order to develop action plans for the implementation of applications by the project.	TCB
	b) Approve the aforementioned amendments.	CAA
	c) Develop an action plan for the implementation of CNS/ATM applications in the REDDIG platform.	RO, TCB
	d) Approve the action plan.	CAA
	e) Hold meetings, workshops, and seminars to support the implementation of CNS/ATM applications.	RO
3.4 MEVA II/REDDIG interconnection for the interoperability of applications in the CAR and SAM Regions. *(S.O. A5, A15, C28, C29, C30 and C31)*	3.4.1 Provide, install, and test the equipment required to establish the interconnection.	TCB, NA, CAA
	3.4.2 Coordinate and supervise the tests and commissioning of the interconnection.	NA
	3.4.3 Establish communications required by the States of the SAM Region with the CAR Region through the MEVA II / REDDIG interconnection in the REDDIG nodes of Caracas and Bogota.	MSP
	3.4.4 Establish communication with the REDDIG as required by the COCESNA MEVA II node by means of two ATS voice channels with Bogota and Guayaquil, respectively.	NA, CAA
	3.4.5 Configure the nodes involved with the functionalities required for the interconnection.	NA
	3.4.6 Provide operational and maintenance support to the COCESNA node interconnected to the REDDIG on a 24x7 basis.	NMO

Immediate Objective N° 4

Procurement, installation, commissioning and maintenance of the new digital network REDDIG II, in accordance with the technical specifications agreed by the REDDIG member States.

Success Criteria:

New digital network REDDIG II installed and running with the required nodes in participating States.

Outputs	Activities	Party responsible for each activity
4.1 Final technical specifications of the REDDIG II and prior arrangements for the bidding established. *(S.O. A5, A15, C28, C29, C30, C31)*	4.1.1 Establish the final technical specifications of the REDDIG II based on the specifications agreed by States participating in the project.	RO, TCB, CAA
	4.1.2 Determine the schedule of actions to be developed for the invitation to bid once established the final technical specifications.	RO, TCB
	4.1.3 Elaborate criteria for the evaluation of bids by setting a weight for the various parts that make up the technical specifications.	RO, TCB, CAA
	4.1.4 Coordinate with States the participation of their representatives in the evaluation of bids, assuming the costs involved with funds other than those of the project.	RO, CAA
4.2 Tender for the provision of the REDDIG II under the "turn-key" modality. *(S.O. A5, A15, C28, C29, C30 and C31)*	4.2.1 Convene the international tender.	TCB
	4.2.2 Respond to queries from potential bidders.	RO, TCB
	4.2.3 Coordinate the mandatory bidders visits to the nodes of the REDDIG.	RO, CAA
	4.2.4 Conduct mandatory visits to the nodes of the REDDIG.	TEN, CAA
	4.2.5 Ensure that potential bidders have made visits to the nodes of the REDDIG.	CAA, NA, RO
	4.2.6 Evaluate bids received.	CAA, NA, RO, TCB
	4.2.7 Select the winning bid.	CAA, NA, RO, TCB
	4.2.8 Approve the winning bid.	RCC
	4.2.9 Negotiate and award the contract.	TCB
	4.2.10 Sign the contract.	TCB
4.3 REDDIG II installed and commissioned. *(S.O. A5, A15, C28,*	4.3.1 Execute the contract.	Contractor
	4.3.2 Coordinate with States the designation of national	RO, CAA

C29, C30 and C31)	personnel that will participate in the installation, adjustment and commissioning of the REDDIG II.	
	4.3.3 Advise States in the execution of the contract and/or coordinate the execution with respect to: a) Enabling the sites for the installation of VSAT equipment and other equipment associated with each REDDIG node, b) Study of the radio electric impact of each node, c) Factory testing, d) Sending and reception of equipment, e) Installation of equipment, f) Tests on site, g) Staffing and training requirements, h) Guarantees, i) Operation and maintenance of the REDDIG II during the installation phase, j) Possibility to integrate the new network with other local systems, k) Plan for the transfer of services to the new system, l) Operation of the MEVA II – REDDIG interconnection, m) Preparation of the operational requisites of each node, for the local telecommunications authority, n) Other relevant aspects.	RO, NA, CAA
	4.3.4 Evaluate the manufacturer manuals concerning instruction, installation, operation and maintenance of the REDDIG II, providing, if necessary, appropriate comments to the contractor.	NA, RO
	4.3.5 Establish the stock of spare parts and test instruments in each node.	NA
	4.3.6 Prepare, in coordination with States, the maintenance programme of the REDDIG II, to begin during the trial period by the contractor.	RO, NA, CAA
	4.3.7 Coordinate with States the local staffing requirements for the operation and maintenance of the REDDIG II nodes based on the training programme included in the contract, recommending the level of preparation that should prove the personnel to be trained.	RO, NA, CAA
	4.3.8 Advise States, as required, on courses that should be taken by the designated personnel locally and abroad.	RO, NA
	4.3.9 Nominate candidates for training programmes.	CAA
	4.3.10 Carry out training programmes locally or abroad in accordance with the established programme.	Contractor
	4.3.11 Assess the results of the instruction received by the	Contractor

personnel.	
4.3.12 Recommend the updating and refreshing programmes that will be necessary.	Contractor
4.3.13 Coordinate with States the participation of their personnel in factory tests, if deemed necessary, assuming the costs involved with funds other than those of the project.	RO, NA, CAA
4.3.14 Supervise the installation of the REDDIG II nodes by the contractor.	NA, CAA
4.3.15 Rent the space segment necessary.	TCB
4.3.16 Coordinate the implementation of technical-operational tests for the provisional reception of each node.	PRO, NA, RO, CAA
4.3.17 Coordinate the implementation of technical-operational tests for the provisional reception of REDDIG II.	PRO, RO, NA, CAA
4.3.18 Coordinate with States the execution of the trial period of operation of the REDDIG II by the contractor.	PRO, RO, NA, CAA
4.3.19 Participate in coordination with States in the final acceptance tests of the REDDIG II.	PRO, NA, RO, CAA
4.3.20 Subscribe minutes of final acceptance of the entire system.	PRO
4.3.21 Transfer the ownership titles of nodes to the authorities concerned.	TCB, CAA
4.3.22 Start the operation and network management by the project.	CAA, NA
4.3.23 Assess the operation of the network during the warranty period.	PRO, RO, NA
4.3.24 Contract the supply of the terrestrial communications service by the provider of communications services.	TCB

E. INPUTS

1. Inputs of participating Governments

1.1 Personnel

1.1.1 The States with Network Management nodes (NCC), Brazil and Argentina will provide:

a) The necessary national personnel to guarantee the monitoring of the network situation during the 24 hours of the day and that will support the activities carried out by the network Administrator.

b) The administrative support to the project's follow up missions, as necessary.

1.2 Training

1.2.1 Project member States will select and nominate candidates for the training events to be scheduled, adopting such measures as may be necessary for their retention in service for as long as they consider convenient after the completion of training.

1.2.2 When training takes place abroad, States will provide their candidates the airfare back and forth and continue paying wages and other regular assignments throughout the duration of the training programme.

1.3 Facilities and equipment

1.3.1 The equipment rooms, furniture, REDDIG equipment, local transportation and external communications facilities for the REDDIG management nodes and the Network Administrator will be provided by the States with management nodes. The project's International Coordinator in due time will communicate the details of these requirements.

2. ICAO inputs

2.1 Assignment of professional personnel

2.1.1 The following international professional personnel will be provided:

11-01	REDDIG Administrator	Permanent
11-97	Other consultants	As necessary

2.1.2 Line 11-97 for other consultants includes budgetary provisions for hiring different consultants to support result 3.1 and project implementation as necessary.

2.1.3 The project tentative work plan is presented in **Attachment 1** and the description of post 11-01 in **Attachment 3**.

2.2 Administrative support and national professionals

2.2.1 Argentina, with its management node in Ezeiza and Brazil with the management node in Manaus will provide the necessary technical and administrative support personnel to ensure the development of project activities.

2.2.2 Budget lines are provided for the recruitment of administrative support staff and national professionals required to implement the project.

2.3 Official travel and missions

2.3.1 Funds to cover the costs of official travel of project personnel and coordination, follow-up and project revision missions are provides as necessary.

2.3.2 Funds allocated for missions will also be used to finance the travel and stay of staff from project member States to be seconded to develop consulting activities or training at the project headquarters.

2.4 **Subcontracts**

2.4.1 The project will subcontract the renting of the satellite segment as well as providing communications service for the ground segment of the network, required for operation of the REDDIG II in accordance with the bandwidth necessary.

2.4.2 Budget lines are provided to finance the interconnection of the REDDIG with MEVA II network of the Caribbean and Central American Region, including recurrent expenditures originated by the maintenance of the MEVA II interconnection with the relevant REDDIG nodes.

2.4.3 Recurring costs for services that are attended by the MEVA II / REDDIG interconnection in the REDDIG nodes of Caracas and Bogota are established in the Purchase Order No. 22500187 issued by ICAO to the service provider of the MEVA II. The recurring costs of interconnection services MEVA II / REDDIG in the MEVA II node of COCESNA are established in the RLA/09/901 Project signed between COCESNA and ICAO, from which are transferred to Project RLA/03/901 at the request of COCESNA.

2.5 **Training**

2.5.1 The project will finance the costs of training events scheduled, including simultaneous interpretation services and translation of documents as needed.

2.5.2 The participation of personnel from member States of the project in scheduled training events may be achieved through fellowships. Costs involved shall be deposited in the account of the project.

2.6 **Transfer of the Lima management node and spare parts**

2.6.1 Funds are foreseen for the transfer of the Lima NCC to Manaus. The location of the NCC was initially established in Lima by RLA/98/019 project.

2.6.2 Likewise, funds are foreseen for the acquisition of the spare parts required for the proper operation of the REDDIG.

2.6.3 The States requesting spare parts should deposit in the project's account the costs of these replacements and the expenses to be incurred by the project for their shipment, handling and customs clearance.

2.7 **Premises, furniture and office equipment**

2.7.1 The States with REDDIG management nodes will provide the project premises, furniture and the necessary equipment, according to the list presented in **Attachment 4**.

2.7.2 The ICAO South American Regional Office will provide offices, meeting rooms, furniture and equipment for the administration of the project, for the development of meetings and training events scheduled, and for storage of spare parts.

2.7.3 Funds are included to finance the equipment of the REDDIG office and for the operation and maintenance of office equipment.

2.8 **Operational equipment**

2.8.1 Funds are provided for the implementation of the interconnection of the VSAT REDDIG and MEVA II networks. The interconnection involves the installation of additional equipment in the REDDIG nodes of Bogota (Colombia), Caracas (Venezuela) and in MEVA II node of COCESNA in Tegucigalpa, Honduras, and the updating of the configurations (software) of databases of the REDDIG and MEVA II.

2.8.2 Budget lines are provided to finance the acquisition, installation and start up of the REDDIG II in accordance with the results of the international tender convened by ICAO for that purpose.

2.8.3 The list of operational equipment of the project is included in **Attachment 5**.

2.9 **Miscellaneous**

2.9.1 Budgetary provisions to cover project miscellaneous expenses, preparation of reports and translation of documents are included.

2.10 **Cost sharing**

2.10.1 The costs of the leasing of the satellite segment will be initially distributed taking into consideration the bandwidth used by each node and afterwards based in the real traffic of each node. The detail is shown in the *Satellite Segment* table that is part of the project budget.

2.10.2 The costs of the communications service for the ground segment of the network will be distributed equally among all nodes of the REDDIG II.

2.10.3 The inputs cost balance, estimated in the project budget, will be equally distributed among participating States for each node.

2.10.4 Participating States undertake to make the deposit of their cost sharing contributions according to the *Payment schedule* that is part of the project budget.

2.11 **ICAO administrative overhead charges**

The administrative overhead charges of ICAO will be governed by the following parameters:

2.11.1 For the acquisition of equipment and services shall apply to each purchase order, as appropriate, one or several percentages of administration fee for the management by TCB, based on the known or estimated delivered value of each individual purchase order. The percentages of administrative costs shall apply to the total value of the purchase order by segments, as detailed in the following table:

Percentages and application of charges for administrative costs for the purchase of goods and services

Segmentation of the total value of the purchase order / service in USD	Percentage to be applied
Up to 10,000	10 %
From 10,001 to 100,000	8 %
From 100,001 to 1,000,000	6 %
From 1,000,001 to 5,000,000	4.9 %
Over 5,000,000	3.9 %

2.11.2 For the purposes of the foregoing, the total value of a purchase order/contract shall mean the price of the goods and/or services covered by it, together with the actual or estimated insurance and freight costs.

2.11.3 The above-mentioned charges cover the provision of the following procurement services:

a) Identification of supply sources on a worldwide basis;
b) Call for tenders;
c) Commercial evaluation of tenders;
d) Commercial contract negotiations;
e) Drafting and award of purchase order/contract documentation;
f) Commercial administration of purchase order/contract.

2.11.4 Form of payment of administrative costs to ICAO for subcontracts and purchase of equipment:

For the budget lines 20 "Subcontracts" and 40 "Equipment" shall apply the following scheme of payments of administrative costs:

- Payment of 25% of the estimated administrative cost at beginning the purchase process requested.
- Payment of 25% of the estimated administrative cost during the preparation of tender.
  Note: In these two initial phases of the process can only be set at an estimated cost, since the exact value of ICAO administrative costs can only be calculated where established and signed the corresponding contract.
- Payment of 40% of administrative cost at signing the Purchase Order (PO) by the part of ICAO and adjustment of payments of administrative costs made at a 90% of final value of the PO.
- Payment of 10% of the administrative cost at the settlement date of the PO.

2.11.5 Administrative costs do not cover the following optional technical services:

a) Preparation of detailed technical specifications;
b) Preparation of detailed systems design;
c) Preparation of technical tender documentation;
d) Technical contract negotiations;
e) Drafting of technical component of purchase order/contract document;
f) Site and equipment inspections;
g) Acceptance and commissioning activities, etc.

2.11.6 If for special circumstances TCB would be asked to lend other technical services outside of the mentioned above, the management costs resulting from said benefits shall be the 10% of the total value of service.

F. RISKS

1. Initial risk factors that could be causing delay or impeding the achievement of results and objectives of the project are shown in **Attachment 6**.

2. Likely medium-term risk factors that with the time could be the cause of serious delays or impeding the achievement of results and objectives of the project would be a drastic change of the political or economical situation of participating States and situational changes in project sites due to natural disasters.

G. PREVIOUS OBLIGATIONS AND REQUIREMENTS

1. The funds corresponding to cost sharing contributions of participating Governments should be deposited immediately after the project approval and, following contributions, in the dates foreseen in the *Payment schedule* that is part of the project budget, so that the executing agency could perform the activities adequately.

2. Host Governments of project activities will provide project's international personnel with all the reference material and background available regarding the activities to be developed, as well as the authorizations, approvals, licenses and logistics support required for the development of their functions.

3. Participating Governments will provide the necessary counterpart support so that the project could obtain an efficient development, reach its objectives and keep its results. To that effect, technical cooperation recipient agencies, matter of this project, will participate with the assignment of the counterpart personnel required and will provide the necessary premises, office equipment, vehicles, materials and services.

4. Participating Governments will ensure the application of the legal dispositions necessary to retain in service the personnel trained by the project for at least two years.

H. SURVEILLANCE, PRESENTATION OF REPORTS AND PROJECT REVISIONS

1. The project will be monitored at least once every 12 months in the REDDIG Technical Committee and Coordination meetings, and the first of such monitoring meeting will be held within the first 12 months from the beginning of the complete execution and that will preferably be made in the month of April of each year. The project's international coordinator will prepare and submit a project monitoring report to each of the examination meetings using the project follow-up and annual evaluation tables shown in **Attachment 7**. During the project execution, other additional reports of this kind may be required, as necessary.

2. A project final report will be prepared for its consideration in the final examination meeting. The draft of such report will be prepared with enough anticipation so that the executing agency may review it and adjust the technical aspects at least four months before the final examination. A description of the project reports and examinations is included in **Attachment 2**.

3. ICAO could perform the following kinds of revisions to the present project document, which will be presented to the REDDIG Coordination Committee for its consideration and to ensure that the undersigned of the project document have no objections to the proposed changes.

a) Revisions of any of the attachments to the project document or additions to them;

b) Revisions that do not imply significant changes in the immediate objectives, the results or project activities, but are due to a redistribution of the inputs already agreed or to the increase of the expenses, due to the inflation; and

c) An obligatory annual revision through which the delivery of the project inputs agreed are spread out or the expenses increased due to the inflation or the flexibility margin of the executing agency regarding the expenses is considered.

I. BUDGET

The project budget is presented in separate Excel pages.

ATTACHMENTS

1. Project Tentative Work Plan
2. Project Revisions and Reports
3. Description of post 11-01
4. Furniture and office equipment
5. Operational equipment
6. Risk Assessment Form
7. Project follow-up and annual evaluation tables

TENTATIVE PROJECT WORK PLAN

Country: Regional for South America
Project N°: RLA/03/901
Title: REDDIG Management System and Satellite Segment Administration

Output	Activity	Description	Party responsible: Government	Party responsible: ICAO	Months 1	2	3	4	5	6	7	8	9	10	11	12
		Immediate objective # 1 Elaborate a proposal for the establishment of a multinational mechanism for the definitive administration of the network, considering the studies on this subject to be carried out by GREPECAS.														
1.1		Analysis of the possible multinational mechanisms to provide air navigation services in order to determine an arrangement for the administration of the network.														
	1.1.1	Compile information from the existing multinational mechanisms for the provision of air navigation services.		RO										2003		
	1.1.2	Prepare a comparative chart on the advantages and disadvantages of the possible multinational mechanisms.		RO	Activity executed by GREPECAS											
	1.1.3	Analyze the best alternatives for a definitive arrangement that allows the establishment of a multinational mechanism.		RO	Activity executed by GREPECAS											
1.2		Proposal for the establishment of a multinational mechanism for the administration of the network elaborated.														
	1.2.1	Prepare a multinational mechanism project for the administration of the network.		RO, NA	Activity executed with the support of Project RLA/98/003											
1.3		Proposal on the definitive multinational mechanism for the administration of the network approved.														
	1.3.1	Project of proposal on the multinational mechanism presented to the interested parties requesting their comments.		RO	Activity executed by GREPECAS											
	1.3.2	Evaluate the comments received and consider them in the preparation of the final proposal.		NA, RO									2009			
	1.3.3	Circulate the final proposal to the States requesting its approval.		RO										2009		
	1.3.4	Approval of the proposal on a multinational mechanism for the administration of the network.	CAA													2009
1.4		Arrangements to activate the multinational mechanism for the administration of the network prepared.														
	1.4.1	Based on the result of 1.3 coordinates with States arrangements for the implementation of the approved mechanism.	CAA	RO, TCB	To be defined											
	1.4.2	Based in activity 1.4.1 prepare a working programme and determine the date of activation of the multinational mechanism.		RO, NA	To be defined											

TENTATIVE PROJECT WORK PLAN																	
Country: Regional for South America **Project N°:** RLA/03/901 **Title:** REDDIG Management System and Satellite Segment Administration			**Party responsible**		**Months**											
Output	Activity	Description	Government	ICAO	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**

Immediate objective # 2
Administration of the network under the conditions established by the Third Meeting of the Coordination Committee (RCC/3).

2.1	REDDIG managed by the project for a period of two years.															
	2.1.1	Management the network during the transition period to the definitive multinational mechanism providing the following services to keep the network operating:		TCB, NA, RO	2004-2005											
		a) Assist the States and provide training for the correct operation of the network nodes.		NA, RO	Recurrent activity											
		b) Supervise and control the network operation, providing the appropriate assistance to the nodes.		NA, RO	Recurrent activity											
		c) Manage the network configuration keeping the system database updated with the corresponding information.		NA	Recurrent activity											
		d) Prepare monthly reports on the activities of the network administration and the operating status of the system.		NA, RO	Recurrent activity											
		e) Follow up the aspects of the guarantee contracted for the network.		NA, TCB	2004											
		f) Verify periodically the network maintenance programmes improving them as necessary.		NA, RO	Recurrent activity											
		g) Propose the corresponding procedures to duly coordinate the operation of the NCC.		NA	2004											
		h) Propose a procedure for the use of the network spare parts, to guarantee its support and continuous supply.		NA, RO		2004										
		i) Approve procedures proposed in g) and h).	RCC						2004							
	2.1.2	Coordinate with the States other administrative aspects established for the operation of the network.		NA, RO	Recurrent activity											
2.2	REDDIG Budget approved.															
	2.2.1	Prepare and present annually to ICAO Lima Office a budget on the network administration for its approval.		NA, RO	Every year											
	2.2.2	Prepare an annual activity report of the network administration and the programme of activities for the next year.		NA, RO	Every year											

TENTATIVE PROJECT WORK PLAN

Country: Regional for South America
Project N°: RLA/03/901
Title: REDDIG Management System and Satellite Segment Administration

Output	Activity	Description	Party responsible: Government	Party responsible: ICAO	Months 1	2	3	4	5	6	7	8	9	10	11	12
	2.2.3	Prepare the annual budget of the network.		RO	Every year											
	2.2.4	Convene the meeting of the REDDIG Coordination and Technical Committee in April of each year.		RO			Every year									
	2.2.5	Approve the annual budget of the network.	RCC				Every year									
	2.2.6	Verify and approve the annual activities report and the activities programme for next year.	RCC				Every year									
	2.2.7	Verify and approve the expenses and accounts of the network administration.	RCC				Every year									
2.3	Satellite segment leased.															
	2.3.1	Establish the most convenient arrangement for leasing the satellite segment from PanAmSat, subsequently Intelsat.		TCB, RO, NA	Recurrent activity											
	2.3.2	Approve the arrangement to be proposed to PanAmSat, subsequently designated as Intelsat.	CAA		Every three years											
	2.3.3	Collect the funds for the lease of the satellite segment and sign the contract.		RO, TCB	Recurrent activity											

TENTATIVE PROJECT WORK PLAN																	
Country: Regional for South America **Project N°:** RLA/03/901 **Title:** REDDIG Management System and Satellite Segment Administration			**Party responsible**		**Months**											
Output	Activity	Description	Government	ICAO	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
		Immediate objective # 3 In accordance with the requirements of the CAR/SAM FASID and of the Plan of Implementation of the Performance-based Air Navigation System for the SAM Region, plan the regional development of CNS/ATM applications and implement such applications in coordination with projects RLA/98/003 and RLA/06/901, as appropriate.														
3.1	CNS/ATM applications identified.															
	3.1.1	Investigate the CNS / ATM applications available on the market and implemented successfully for the aeronautical fixed service.		RO, NA Consultants	Recurrent activity											
	3.1.2	From the technical point of view investigate their application in the REDDIG platform and select the corresponding applications.	CAA	RO, NA	Recurrent activity											
3.2	Plan for the implementation of CNS/ATM applications approved.															
	3.2.1	Coordinate with States and GREPECAS the technical aspects required for the implementation of the CNS/ATM applications.	CAA	RO, NA	Recurrent activity											
	3.2.2	In coordination with projects RLA/98/003 and RLA/06/901, prepare implementation plans for CNS/ATM applications		RO, NA	Recurrent activity											
	3.2.3	Approve the plans developed under 3.2.2.	RCC		Recurrent activity											
3.3	CNS/ATM applications for the fixed service implemented in the REDDIG platform.															
	3.3.1	Based on the plans approved under 3.2.3, execute the following:														
		a) Propose amendments to the project budget in order to develop action plans to implement the applications.		TCB	Recurrent activity											
		b) Approve the aforementioned amendments.	CAA		Recurrent activity											
		c) Develop an action plan for the implementation of CNS/ATM applications on the REDDIG platform.		RO, TCB	Recurrent activity											
		d) Approve said action plan.	CAA		Recurrent activity											
		e) Hold meetings, workshops, and seminars to support the implementation of CNS/ATM applications.		RO	Recurrent activity											
3.4	MEVA II/REDDIG interconnection for the interoperability of applications in the CAR and SAM Regions.															
	3.4.1	Provide, install, and test the equipment required to establish the interconnection.	CAA	TCB, NA										2010		
	3.4.2	Coordinate and supervise the tests and commissioning of the		NA	2011											

TENTATIVE PROJECT WORK PLAN																	
Country: Regional for South America **Project N°:** RLA/03/901 **Title:** REDDIG Management System and Satellite Segment Administration			**Party responsible**		**Months**											
Output	Activity	Description	Government	ICAO	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
		interconnection.														
	3.4.3	Establish communication with the REDDIG as required by the COCESNA MEVA II node by means of two ATS voice channels with Bogota and Caracas.	CAA	NA				2011								
	3.4.4	Configure the nodes involved with the functionalities required for the interconnection.		NA							2011					
	3.4.5	Provide operational and maintenance support to the COCESNA node interconnected to the REDDIG on a 24x7 basis.		NA	Recurrent activity											

TENTATIVE PROJECT WORK PLAN																		
Country: Regional for South America **Project N°:** RLA/03/901 **Title:** REDDIG Management System and Satellite Segment Administration			**Party responsible**		**Months**											
Output	Activity	Description	Government	ICAO	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
		Immediate objective # 4														
		Procurement, installation, commissioning and maintenance of the new digital network REDDIG II, in accordance with the technical specifications agreed by the REDDIG member States.														
4.1	Final technical specifications of the REDDIG II and prior arrangements for the bidding established.															
	4.1.1	Establish the final technical specifications of the REDDIG II based on the specifications agreed by States participating in the project.	CAA	RO, TCB	2012											
	4.1.2	Determine the schedule of actions to be developed for the invitation to bid once established the final technical specifications.		RO, TCB	2012											
	4.1.3	Elaborate criteria for the evaluation of bids by setting a weight for the various parts that make up the technical specifications.		RO	2012											
	4.1.4	Coordinate with States the participation of their representatives in the evaluation of bids, assuming the costs involved.	CAA	RO		2012										
4.2	Tender for the provision of the REDDIG II under the “turn-key” modality.															
	4.2.1	Convene the international tender.		TCB				2012								
	4.2.2	Respond to queries from potential bidders.		RO, TCB				2012								
	4.2.3	Coordinate the mandatory bidders visits to the nodes of the REDDIG.	CAA	RO				2012	2012							
	4.2.4	Conduct mandatory visits to the nodes of the REDDIG.	CAA	TEN					2012							
	4.2.5	Ensure that potential bidders have made visits to the nodes of the REDDIG.	CAA	NA, RO					2012							
	4.2.6	Evaluate bids received.	CAA	NA, RO, TCB						2012						
	4.2.7	Select the winning bid.	CAA	NA, RO, TCB						2012						
	4.2.8	Approve the winning bid.	RCC									2012				
	4.2.9	Negotiate and award the contract.		TCB									2012			
	4.2.10	Sign the contract.		TCB										2012		

TENTATIVE PROJECT WORK PLAN																	
Country: Regional for South America **Project N°:** RLA/03/901 **Title:** REDDIG Management System and Satellite Segment Administration			**Party responsible**		**Months**											
Output	Activity	Description	Government	ICAO	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
4.3	REDDIG II installed and commissioned.															
	4.3.1	Execute the contract.		Contractor			2013									
	4.3.2	Coordinate with States the designation of personnel to participate in the installation, adjustment and commissioning of REDDIG II.	CAA	RO	2013											
	4.3.3	Advise States in the execution of the contract.	CAA	RO, NA			2013									
	4.3.4	Evaluate the manufacturer manuals concerning instruction, installation, operation and maintenance of the REDDIG II.		RO, NA					2013							
	4.3.5	Establish the stock of spare parts and test instruments in each node.		NA						2013						
	4.3.6	Prepare, in coordination with States, the maintenance program of the REDDIG II, to begin during the trial period by the contractor.	CAA	RO, NA						2013						
	4.3.7	Coordinate with States the local staffing requirements for the operation and maintenance of the REDDIG II nodes.	CAA	RO, NA					2013							
	4.3.8	Advise States, as required, on courses that should be taken by the designated personnel locally and abroad.	CAA	RO, NA					2013							
	4.3.9	Nominate candidates for training programmes.	CAA							2013						
	4.3.10	Carry out training programmes locally or abroad in accordance with the established programme.		Contractor							2013					
	4.3.11	Assess the results of the instruction received by the personnel.		Contractor												2013
	4.3.12	Recommend the updating and refreshing programmes that will be necessary.		Contractor							2013					
	4.3.13	Coordinate with States the participation of their personnel in factory tests, if deemed necessary, assuming the costs involved.	CAA	RO, NA								2013				
	4.3.14	Supervise the installation of the REDDIG II nodes by the contractor.		NA						2013						
	4.3.15	Rent the space segment necessary.		TCB												
	4.3.16	Coordinate the implementation of technical-operational tests for the provisional reception of each node.		PRO, NA, RO										2013		
	4.3.17	Coordinate the implementation of technical-operational tests for the provisional reception of REDDIG II.		PRO, NA, RO											2013	

TENTATIVE PROJECT WORK PLAN																
Country: Regional for South America **Project N°:** RLA/03/901 **Title:** REDDIG Management System and Satellite Segment Administration			**Party responsible**		**Months**											
Output	Activity	Description	Government	ICAO	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
	4.3.18	Coordinate with States the execution of the trial period of operation of the REDDIG II by the contractor.	CAA	PRO, NA, RO	2014											
	4.3.19	Participate in coordination with States in the final acceptance tests of the REDDIG II.	CAA	PRO, NA, RO		2014										
	4.3.20	Subscribe minutes of final acceptance of the entire system.		PRO		2014										
	4.3.21	Transfer the ownership titles of nodes to the authorities concerned.	CAA	TCB			2014									
	4.3.22	Start the operation and network management by the project.		NA			2014									
	4.3.23	Assess the operation of the network during the warranty period.		PRO, RO, NA			2014									
	4.3.24	Contract the supply of the terrestrial communications service by the provider of communications services.		TCB			2014									

ATTACHMENT 2

PROJECT MONITORING, REPORTING AND EVALUATION

1. Annual meetings of the REDDIG Technical and Coordination Committee will be made together with ICAO to monitor the advances of the project and for the approval of next year budget.

2. When beginning the project activities and every time that it is deem necessary, the International Coordinator will revise and update the project work plan to submit it to the Technical Cooperation Bureau and ICAO Regional Office.

3. The revisions will be made against the Project Document and of the Project annual monitoring report to be prepared by the International Coordinator according to the established procedures for this type of reports.

4. The project experts will prepare reports on missions carried out to participating States that will be submitted to the ICAO Regional Office for onward transmission to the respective authorities.

5. The International Coordinator will prepare a Project Final Report for review by ICAO four months before the termination of the project. The final version of this report will be considered in the final review meeting.

POST DESCRIPTION

Project Nº: RLA/03/901
Post Nº: 11-01
Title: Network Administrator
Duty station: Manaus, Brazil
Starting date: 1 July 2003
Duration: 24 months extendable
Language requirements: Spanish and English

Qualifications:

1. University degree in Electronics Engineering with specialty in telecommunications.

2. Experience in the planning, preparation of technical specifications for digital VSAT networks, their installation and setting in operation; knowledge of handling of databases, calculations and computer science.

3. Five years of professional experience in the operation and maintenance of digital networks.

4. Experience acquired in a position of superior level in the administration of the pertinent services of electronics engineering and presentation of reports.

5. Knowledge of the industry regulations and international regulations applicable to digital nets.

6. Knowledge of ICAO standards and recommended practices, procedures, manuals and regional planning.

7. It is desirable to be familiar with ICAO administrative procedures, coordination requirements, guidelines and regulations that govern the Technical Cooperation Programme and experience in the handling of technical cooperation projects, including the coordination of their activities.

8. Posses initiative, tact, good judgment and ability to foster and maintain harmonious working relationships.

Competencies:

1. **Judgment/decision–making:** Proven ability to take ownership of all responsibilities and to honor commitments, to exercise mature judgment, to recognize key issues and analyze relevant information, to make feasible recommendations and to take sound decisions.

2. **Communication:** Ability to write clearly and concisely and to present articulate verbal reports.

3. **Teamwork:** Ability to work with colleagues to achieve the project goals and maintain harmonious working relationships in a multinational environment.

4. **Leadership, vision and management of performance**: Demonstrated ability to plan and guide the work of a technical team in a multinational environment, to identify priorities and adjust them as required.

5. **Client orientation:** Ability to establish and maintain partnerships with external collaborators, to work and advocate effectively in a consensus-based system and to successfully manage and resolve conflicts.

6. **Commitment to continuous learning:** Willingness to keep abreast of new developments in his professional field.

7. **Technological awareness:** Ability to use contemporary office automation equipment, software, databases.

Functions:

Under the technical coordination of the ICAO South American Regional Office:

1. Prepare a draft multinational mechanism for the REDDIG administration considering the guidance material of the CAR/SAM FASID. Evaluate the comments received on the proposal and consider them in preparing the final version.

2. Prepare a schedule of activities and determine the date of implementation of the multinational mechanism to coordinate with States the necessary arrangements.

3. Advise States and provide the training necessary to maintain proper operation of the REDDIG nodes.

4. Monitor and control the operation of the network for maximum efficiency possible and advice managers of the nodes to identify and resolve performance problems that arise.

5. Manage network configuration maintaining updated databases with the corresponding system information bandwidth per node.

6. Prepare monthly reports on the activities of the administration of the REDDIG and the operating status of the system and circulated to States.

7. Follow up the warranty aspects of the contract for the network and periodically check the maintenance programs for the network by performing appropriate improvements.

8. Establish procedures to properly coordinate the operation of the NCC (Manaus / Ezeiza).

9. Establish a management policy for the network spare parts and how to obtain them in such a way as to ensure continuous and timely supply and support of these inputs.

10. Coordinate with States the other aspects set for the operation of the REDDIG, such as:

    a) Inputs committed by States.
    b) Quantity and quality of human resources to be provided by States for the operation and maintenance of the REDDIG.
    c) Facilities, easy accessibility, mobility, support staff, communication facilities, etc.

11. Prepare and submit to the ICAO Regional Office in Lima the annual budget of the REDDIG administration for approval.

12. Prepare an annual report on the activities of the network management and program of activities for the coming year, including budget estimates.

13. Establish the most suitable arrangement with the provider for the lease of the satellite segment based on Conclusion RCC 3/7 of the Third Meeting of the Coordination Committee.

14. Studying in the market the CNS / ATM applications available to the aeronautical fixed service, successfully implemented by prestigious companies.

15. Study from the technical point of view the usefulness of the applications on the REDDIG platform and select those corresponding.

16. In coordination with the activities of projects RLA/98/003 and RLA/06/901, prepare a plan for the implementation of CNS / ATM applications, including inter alia the following:

    a) Interoperability with conventional applications;
    b) General technical specifications for hardware and software;
    c) System requirements and functionalities;
    d) Costs, and
    e) Coordination arrangements and responsible parties.

17. Develop other related activities as required.

OFFICE SPACE, FURNITURE AND EQUIPMENT AT THE NCC AND PROJECT OFFICE

1. Characteristics of the buildings and rooms

1.1 The buildings where the NCC will be installed should be of modern construction, with wide and clear atmospheres and possess good lighting.

1.2 The location of the NCC room should allow the direct connection of the equipment from the NCC to the equipment of the local REDDIG node. In the event of remote location of the NCC regarding the local REDDIG node, means should be provided to establish a redundant communication through independent ways.

1.3 The building, as it corresponds, must be of appropriate construction to withstand possible seismic activity and to support the hydro-meteorological characteristic conditions of the area.

1.4 The electric feeding system of the NCC wings, should have a continuous supply of commercial energy whose voltage and frequency do not vary more than 10% and 5% of the nominal values, respectively, with a back up of UPS and generator group of the true-on line type.

1.5 The NCC rooms should have different electric outlets for connection of the NCC equipment and computers, and for the connection of appliances, with boards of electric distribution with thermo-magnetic keys located in one of the rooms. The lighting system will be the appropriate one for a work atmosphere, and it should have interspersed switches to cover the areas.

1.6 Security access to the building and NCC rooms should be made available. There should not exist under any circumstance, restrictions to the entrance of authorized people to the building and the NCC room.

1.7 The dimension of the NCC room should not be less than 7x5 m2, and it should also have a storage place of 3x2 m2. This last preference area should be closed to the first one and have security access.

1.8 The NCC rooms should have a conditioned environmental system and pollution control, to maintain under control the temperature parameters, humidity, sterilization of the air and control of dust particles, within the conditions settled down in the category of bigger demand of ETSI standards.

1.9 The NCC room should be equipped with fire control detection equipment, and have appropriate manual extinguishers for the type of fire produced by electric shortcut and office materials.

1.10 It should have necessary sanitary bathrooms, operational and in perfect state of conservation.

1.11 A set of curtains/window shields should be available.

2. Communications

2.1 The NCC rooms should count with points of structured cabling for all the connections required for the NCC equipment, two more points for the connection of auxiliary additional equipment and 4 points for the office computer system.

2.2 The NCC room should count with a PSTN phone line for contingencies and recovery; a dedicated line for coordination and updating among NCC; two phone lines, one for the office and another for the coordination of the administration, and access to high speed Internet for office use.

2.3 The following communications equipment should be made available: telephones, a fax, a modem and a switch router.

3. **Office furniture**

3.1 All the furniture should be fire resistant.

3.2 Anti-static floor for the office and NCC control room.

3.3 Two modular desks for the office with drawers, specially designed for the use of computer equipment consisting of a CPU, 17 inches screen and with an adherent board for a printer.

3.4 Two ergonomic chairs with wheels, shocks and height adjustment.

3.5 Table for meetings with four chairs.

3.6 Whiteboard, and an eraser.

3.7 Two tables for telephone and fax.

3.8 Two filing cabinets and two shelves for books.

3.9 Modular furniture for three personnel, three 17 inches screens and 2 printers, and two positions for operators, including two ergonomic chairs with wheels.

4. **Computer equipment and software**

4.1 Two latest top technology computers equipped with 100GB or more disks, 1.44 Mb diskettes, serial port, parallel port, USB, CDR/W, DVD, speakers, ZIP, 1024Mb minimum memory, mouse, Spanish keyboard. Lifetime of the equipment: 2 years.

4.2 Access to a laser printer for medium duty cycle, high resolution and printing speed, a color printer with high resolution and printing speed. A high-resolution scanner. Lifetime of the equipment: 4 years.

4.3 Software: operating system Windows XP or higher, Office Professional, Visual Studio, Project Manager, Visio, Acrobat, Antivirus. Upgrades of software operating system and of applications every two years. Documentation of the software and reference books.

4.4 Access to photocopying service.

Note: *In case of being cheaper and more adequate, the computer equipment purchased by project RLA/98/019 could be used during the first year of activities of the project.*

4.5 Expendables:

a) Two mice;
b) Cartridges laser for printing of 3000 sheets, monthly average, and cartridges for color printer to print 300 sheets per month;
c) Bond A4/letter paper 3500 sheets per month;
d) 50 units blank CDs per month;

e) 20 diskettes per month;
f) 4 ZIP CDs per month.

5. **Office Stationery**

a) Two two-holes punchers.
b) Puncher for 3 and 4 holes configurable, professional type.
c) Two desk staplers to hold up to 20 sheets or more.
d) An adjustable stapler to hold up to 50, 100, 150 and 200 sheets.
e) A guillotine.
f) Two scissors.
g) A magnifying glass with light.
h) A set of squares and rules.
i) A scientific calculator.
j) 40 filing binders of three or four rings.

5.1 Other expendable supplies per year:

a) 50 plastic folders.
b) 05 binders.
c) 08 notebooks squared letter size.
d) 08 blocks for notes.
e) 02 calendars.
f) 04 boxes of staples for 20, 50 and 100 sheets, and a box for 150 and 200 sheets.
g) 04 text liner highlighters.
h) 04 sets of pens.
i) 04 sets of pencils and eraser.
j) 12 sets of plastic adhesive markers.
k) 15 sets of section separators for binder.
l) Highlighters.
m) 06 sets of correctors by adhesive tape.
n) 06 scotch tape invisible.
o) 04 boxes of clips.
p) 02 pots of white glue.
q) 3000 sheets of A4/letter bond paper per month.
r) Others.

6. **Miscellaneous**

6.1 Access to following dictionaries: Spanish, English, and Spanish-English.
6.2 Access to ICAO, ITU-T and ITU-R documents.
6.3 Access to a large water bottle with cooler base.
6.4 Access to coffeepot.
6.5 Glasses, cups, cutlery, sugar.
6.6 Expendables:

a) A large water bottle every week.
b) Toilet paper and paper towels, every two weeks.
c) Soap.
d) Cleaning materials, every two weeks.

e) Replacement of lighting lamps.

7. **Services**

7.1 Daily cleaning of the NCC control rooms, office and bathrooms. The cleaning of the office and of the NCC control room should be made under closed supervision of the NCC personnel.

7.2 Sporadic maintenance: plumbing, lighting, energy and others.

OPERATIONAL EQUIPMENT TO BE PROVIDED BY THE PROJECT

A. LIST OF EQUIPMENT FOR MEVA II / REDDIG INTERCONNECTION RELEVANT TO THE REDDIG NODES

Location	Additional equipment / Parts needed	Quantity
Caracas	Linkway 2100 with frame-relay card and V.35 cable	1
	Memotec Card DAV *(2 for MUX A, 2 for MUX B)*	4
	Memotec FXS SLIM LID *(3 for MUX A, 3 for MUX B)*	6
	2-port L-band Splitter	3
	2-port L-band Combiner	3
	Paradise 75W BUC	2
Bogotá	Linkway 2100 with frame-relay card and V.35 cable	1
	Memotec Card V.35H	1
	Memotec E1 DIM (*1) for MPS A, (1) for MPS B to be installed in slot 2*	2
	2-port L-band Splitter	3
	2-port L-band Combiner	3
Ecuador	E-1 Daughter Card for Memotec A and Memotec B	2

B. LIST OF EQUIPMENT FOR THE REDDIG II

Site	Item	Description	Unit	Qty	Total
Argentina	1.1	Equipment: Routing System	-	Lot	
(Ezeiza)	1.2	Equipment: VSAT Terminal	-	Lot	
	1.3	Equipment: Network Management System	-	Lot	
	1.4	Equipment: Ancillaries / Others	-	Lot	
	1.5	Equipment: Ground backbone terminal equipment	Included in MPLS services		
	1.6	Services: Installation	-	Lot	
	1.7	Services: Civil Works		N/A	
Bolivia	2.1	Equipment: Routing System	-	Lot	
(La Paz)	2.2	Equipment: VSAT Terminal	-	Lot	
	2.3	Equipment: Network Management System	-	Lot	
	2.4	Equipment: Ancillaries / Others	-	Lot	
	2.5	Equipment: Ground backbone terminal equipment	Included in MPLS services		
	2.6	Services: Installation	-	Lot	
	2.7	Services: Civil Works		N/A	
Brazil	3.1	Equipment: Routing System	-	Lot	
(Manaus)	3.2	Equipment: VSAT Terminal	-	Lot	
	3.3	Equipment: Network Management System	-	Lot	
	3.4	Equipment: Ancillaries / Others	-	Lot	
	3.5	Equipment: Ground backbone terminal equipment	Included in MPLS services		
	3.6	Services: Installation	-	Lot	
	3.7	Services: Civil Works		N/A	
Brazil	4.1	Equipment: Routing System	-	Lot	
(Recife)	4.2	Equipment: VSAT Terminal	-	Lot	
	4.3	Equipment: Network Management System	-	Lot	
	4.4	Equipment: Ancillaries / Others	-	Lot	
	4.5	Equipment: Ground backbone terminal equipment	Included in MPLS services		
	4.6	Services: Installation	-	Lot	
	4.7	Services: Civil Works		N/A	
Brazil	5.1	Equipment: Routing System	-	Lot	
(Curitiba)	5.2	Equipment: VSAT Terminal	-	Lot	
	5.3	Equipment: Network Management System	-	Lot	
	5.4	Equipment: Ancillaries / Others	-	Lot	
	5.5	Equipment: Ground backbone terminal equipment	Included in MPLS services		
	5.6	Services: Installation	-	Lot	
	5.7	Services: Civil Works		N/A	
Chile	6.1	Equipment: Routing System	-	Lot	
(Santiago)	6.2	Equipment: VSAT Terminal	-	Lot	
	6.3	Equipment: Network Management System	-	Lot	
	6.4	Equipment: Ancillaries / Others	-	Lot	
	6.5	Equipment: Ground backbone terminal equipment	Included in MPLS services		
	6.6	Services: Installation	-	Lot	
	6.7	Services: Civil Works		N/A	
Colombia	7.1	Equipment: Routing System	-	Lot	
(Bogota)	7.2	Equipment: VSAT Terminal	-	Lot	
	7.3	Equipment: Network Management System	-	Lot	
	7.4	Equipment: Ancillaries / Others	-	Lot	
	7.5	Equipment: Ground backbone terminal equipment	Included in MPLS services		

	7.6	Services: Installation	-	Lot	
	7.7	Services: Civil Works		N/A	
Ecuador	8.1	Equipment: Routing System	-	Lot	
(Guayaquil)	8.2	Equipment: VSAT Terminal	-	Lot	
	8.3	Equipment: Network Management System	-	Lot	
	8.4	Equipment: Ancillaries / Others	-	Lot	
	8.5	Equipment: Ground backbone terminal equipment	Included in MPLS services		
	8.6	Services: Installation	-	Lot	
	8.7	Services: Civil Works		N/A	
Guyana	9.1	Equipment: Routing System	-	Lot	
(Georgetown)	9.2	Equipment: VSAT Terminal	-	Lot	
	9.3	Equipment: Network Management System	-	Lot	
	9.4	Equipment: Ancillaries / Others	-	Lot	
	9.5	Equipment: Ground backbone terminal equipment	Included in MPLS services		
	9.6	Services: Installation	-	Lot	
	9.7	Services: Civil Works		N/A	
French Guiana	10.1	Equipment: Routing System	-	Lot	
(Cayenne)	10.2	Equipment: VSAT Terminal	-	Lot	
	10.3	Equipment: Network Management System	-	Lot	
	10.4	Equipment: Ancillaries / Others	-	Lot	
	10.5	Equipment: Ground backbone terminal equipment	Included in MPLS services		
	10.6	Services: Installation	-	Lot	
	10.7	Services: Civil Works		N/A	
Paraguay	11.1	Equipment: Routing System	-	Lot	
(Asuncion)	11.2	Equipment: VSAT Terminal	-	Lot	
	11.3	Equipment: Network Management System	-	Lot	
	11.4	Equipment: Ancillaries / Others	-	Lot	
	11.5	Equipment: Ground backbone terminal equipment	Included in MPLS services		
	11.6	Services: Installation	-	Lot	
	11.7	Services: Civil Works		N/A	
Peru	12.1	Equipment: Routing System	-	Lot	
(Lima)	12.2	Equipment: VSAT Terminal	-	Lot	
	12.3	Equipment: Network Management System	-	Lot	
	12.4	Equipment: Ancillaries / Others	-	Lot	
	12.5	Equipment: Ground backbone terminal equipment	Included in MPLS services		
	12.6	Services: Installation	-	Lot	
	12.7	Services: Civil Works		N/A	
Suriname	13.1	Equipment: Routing System	-	Lot	
(Paramaribo)	13.2	Equipment: VSAT Terminal	-	Lot	
	13.3	Equipment: Network Management System	-	Lot	
	13.4	Equipment: Ancillaries / Others	-	Lot	
	13.5	Equipment: Ground backbone terminal equipment	Included in MPLS services		
	13.6	Services: Installation	-	Lot	
	13.7	Services: Civil Works		N/A	
Trinidad and Tobago	14.1	Equipment: Routing System	-	Lot	
(Piarco)	14.2	Equipment: VSAT Terminal	-	Lot	
	14.3	Equipment: Network Management System	-	Lot	
	14.4	Equipment: Ancillaries / Others	-	Lot	
	14.5	Equipment: Ground backbone terminal equipment	Included in MPLS services		
	14.6	Services: Installation	-	Lot	

	14.7	Services: Civil Works		N/A	
Uruguay	15.1	Equipment: Routing System	-	Lot	
(Montevideo)	15.2	Equipment: VSAT Terminal	-	Lot	
	15.3	Equipment: Network Management System	-	Lot	
	15.4	Equipment: Ancillaries / Others	-	Lot	
	15.5	Equipment: Ground backbone terminal equipment	Included in MPLS services		
	15.6	Services: Installation	-	Lot	
	15.7	Services: Civil Works		N/A	
Venezuela	16.1	Equipment: Routing System	-	Lot	
(Maiquetia)	16.2	Equipment: VSAT Terminal	-	Lot	
	16.3	Equipment: Network Management System	-	Lot	
	16.4	Equipment: Ancillaries / Others	-	Lot	
	16.5	Equipment: Ground backbone terminal equipment	Included in MPLS services		
	16.6	Services: Installation	-	Lot	
	16.7	Services: Civil Works		N/A	
Others	17	Spare Parts	-	Lot	
	18	Measuring equipment and tools	-	Lot	
	19	Test equipment	-	Lot	
	20	Documentation	-	Lot	
	21	Factory Acceptance Tests	-	Lot	
	22	Site Acceptance Tests	-	Lot	
	23	Training: theoretical-practical	-	Lot	
	24	Training: OJT	-	Lot	
	25	Technical assistance for ground backbone (including preventive maintenance)	Included in MPLS services		
	26	MPLS services during the first six (6) months of operation of the new network.	-	Lot	
	27	Payment for the satellite segment during the first six (6) months of operation of the new network, if it is decided not to use the current satellite that provides such segment to the REDDIG (IS-14)	N/A		
	28	Warranty (2 years)	-	Lot	

C. DETAIL OF THE REDDIG II EQUIPMENT

Argentina (Ezeiza)

Item	Description	Unit	Qty
1.1	**Equipment: Routing System**		
	NETGEAR SW F/E Stackable Managed Sw	u	2
	NETGEAR ProSafe VPN Dual WAN Gigabit	u	1
	RSS-16 : RSS 16 Slot 4U Chassis, including:	u	2
	K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	2
	IPC-16-R : Network Control Card - 16	u	2
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	9
	AB-D25-R : D25 A/B Card	u	11
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	4
	AB-D25-R : D25 A/B Card	u	6
	FP-AB-RSS : Blank Panel for unused slots	u	2
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK, including:	u	6
	DATA license	u	2
	Communication Manager Express or SRST - 5 seat license	u	2
	4-Port Async/Sync Serial HWIC	u	2
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	6
	High Density 8-port Async Cable w/ 8 DB-25 Modem Connectors	u	2
	8-Port Async/Sync Serial HWIC, EIA-232	u	2
	Two-port Voice Interface Card - E and M	u	12
	Two-Port Voice Interface Card - FXS and DID	u	2
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK, including:	u	2
	DATA LICENCE	u	1
	Communication Manager Express or SRST - 5 seat license	u	1
	4-Port Async/Sync Serial HWIC	u	2
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	6
	Two-port Voice Interface Card - E and M	u	1
	Two-Port Voice Interface Card - FXS and DID	u	1
1.2	**Equipment: VSAT Terminal**		
	IDU 7000 Master and IDU 1070 19" NS + PS AC including:	set	1
	Lic-Key 1070 Full Power Package	u	1
	License OSPF	u	2
	Lic 8 PSK	u	2
	Lic-Key Mesh Topology	u	1
	SkyNMSCD	u	1
	Lic TCP-A	u	2
	VSAT antenna refurbishment	set	1
1.3	**Equipment: Network Management System**		
	HP ProLiant DL160 Gen8 Base - Server, including:	u	3
	Windows Server 2008 R2 Std + 5 CAL OEM HP	u	3
	Card PCI-Express 1X 4 ports series RS232 Std and Low Profile	u	3
	HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	6
	SAMSUNG screen LCD 27´´ Samsung SyncMaster S27A550H	u	3
	HP LaserJet Pro 400 M401dn /33ppm	u	1

	Eaton Ellipse ECO 1200 FR USB	u	3
	SQL SVR ENT OLV NL	u	1
	SQL USER CAL USR CAL	u	2
	WhatsUp Gold Distributed Central 25 Devices	u	1
	WhatsUp Gold Distributed Remote 25 Devices	u	1
	Antivirus	u	3
1.4	**Equipment: Ancillaries / Others**		
	Horloge RT CP 09	u	1
	UPS 5 KVA	u	1
	Rack	u	2
	Installation accessories	set	1
1.5	**Equipment: Ground backbone terminal equipment**		
	Included in MPLS Services offer	set	0
1.6	**Services: Installation**		
	Installation of equipment on site	set	1
1.7	**Services: Civil Works**		
	N/A	set	0

Bolivia (La Paz)

Item	Description	Unit	Qty
2.1	**Equipment: Routing System**		
	NETGEAR SW F/E Stackable Managed Sw	u	2
	NETGEAR ProSafe VPN Dual WAN Gigabit	u	1
	RSS-16 : RSS 16 Slot 4U Chassis, including:	u	1
	K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1
	IPC-16-R : Network Control Card - 16	u	1
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	6
	AB-D25-R : D25 A/B Card	u	4
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	2
	AB-D25-R : D25 A/B Card	u	2
	FP-AB-RSS : Blank Panel for unused slots	u	2
	Cisco 2911 UC Bundle, PVDM3-16, UC License PAK	u	2
	DATA license	u	2
	Communication Manager Express or SRST - 5 seat license	u	2
	4-Port Async/Sync Serial HWIC	u	2
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	8
	Two-port Voice Interface Card - E and M	u	4
	Two-Port Voice Interface Card - FXS and DID	u	2
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK, including:	u	2
	DATA LICENCE	u	1
	Communication Manager Express or SRST - 5 seat license	u	1
	4-Port Async/Sync Serial HWIC	u	2
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	6
	Two-port Voice Interface Card - E and M	u	1
	EVM-HD-8FXS/DID	u	1
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	1
	DATA LICENCE	u	1
	Communication Manager Express or SRST - 5 seat license	u	1
	2-Port Async/Sync Serial WAN Interface Card	u	1
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	2
	Two-port Voice Interface Card - E and M	u	1
	Two-Port Voice Interface Card - FXS and DID	u	1
2.2	**Equipment: VSAT Terminal**		
	IDU 1070 19" NS + PS AC	u	2
	Lic-Key 1070 Full Power Package	u	2
	License OSPF	u	2
	Lic 8 PSK	u	2
	Lic-Key Mesh Topology	u	2
	Lic TCP-A	u	2
	VSAT antenna refurbishment	set	1
2.3	**Equipment: Network Management System**		
	HP ProLiant DL160 Gen8 Base - Server, including:	1	1
	Windows Server 2008 R2 Std + 5 CAL OEM HP	1	1
	Card PCI-Express 1X 4 ports series RS232 Std and Low Profile	1	1
	HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	2	2

	SAMSUNG screen LCD 27´´ Samsung SyncMaster S27A550H	1	1
	HP LaserJet Pro 400 M401dn /33ppm	1	1
	Eaton Ellipse ECO 1200 FR USB	1	1
	WhatsUp Gold Distributed Remote 25 Devices	1	1
	Antivirus	1	1
2.4	**Equipment: Ancillaries / Others**		
	Horloge RT CP 09	1	1
	UPS 5 KVA	1	1
	Rack	1	1
	Installation accessories	1	1
2.5	**Equipment: Ground backbone terminal equipment**		
	Included in MPLS Services offer		
2.6	**Services: Installation**		
	Installation of equipment on site	1	1
2.7	**Services: Civil Works**		
	N/A	set	0

Brazil (Manaus)

Item	Description	Unit	Qty
3.1	**Equipment: Routing System**		
	NETGEAR SW F/E Stackable Managed Sw	u	2
	NETGEAR ProSafe VPN Dual WAN Gigabit	u	1
	RSS-16 : RSS 16 Slot 4U Chassis, including:	u	1
	K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1
	IPC-16-R : Network Control Card - 16	u	1
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	9
	AB-D25-R : D25 A/B Card	u	6
	Left	u	1
	RSS-16 : RSS 16 Slot 4U Chassis, including:	u	1
	K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1
	IPC-16-R : Network Control Card - 16	u	1
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	4
	AB-D25-R : D25 A/B Card	u	3
	FP-AB-RSS : Blank Panel for unused slots	u	10
	Cisco 2911 UC Bundle, PVDM3-16, UC License PAK	u	4
	DATA license	u	2
	Communication Manager Express or SRST - 5 seat license	u	2
	2-Port Async/Sync Serial WAN Interface Card		2
	4-Port Async/Sync Serial HWIC	u	2
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	12
	Two-port Voice Interface Card - E and M	u	8
	Two-Port Voice Interface Card - FXS and DID	u	2
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	1
	DATA LICENCE	u	1
	Communication Manager Express or SRST - 5 seat license	u	1
	4-Port Async/Sync Serial HWIC	u	1
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	3
	Two-port Voice Interface Card - E and M	u	2
	EVM-HD-8FXS/DID	u	1
3.2	**Equipment: VSAT Terminal**		
	IDU 7000 Master and IDU 1070 19" NS + PS AC including:	set	1
	Lic-Key 1070 Full Power Package	u	1
	License OSPF	u	2
	Lic 8 PSK	u	2
	Lic-Key Mesh Topology	u	1
	SkyNMSCD	u	1
	Lic TCP-A	u	2
	VSAT antenna refurbishment	set	1
3.3	**Equipment: Network Management System**		
	HP ProLiant DL160 Gen8 Base - Server, including:	u	3
	Windows Server 2008 R2 Std + 5 CAL OEM HP	u	3
	Card PCI-Express 1X 4 ports series RS232 Std and Low Profile	u	3
	HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	6
	SAMSUNG screen LCD 27´´ Samsung SyncMaster S27A550H	u	3

	HP LaserJet Pro 400 M401dn /33ppm	u	1
	Eaton Ellipse ECO 1200 FR USB	u	3
	SQL SVR ENT OLV NL	u	1
	SQL USER CAL USR CAL	u	2
	WhatsUp Gold Distributed Central 25 Devices Failover Management	u	1
	WhatsUp Gold Distributed Remote 25 Devices	u	1
	Antivirus	u	3
	IOMEGA NAS Extern 2T SATA DD 2To X 1Iomega Home Media Network Hard Drive Cloud Edition - NAS - 2 To – Serial ATA-300 - DD 2 To x 1 - Gigabit Ethernet	u	1
3.4	**Equipment: Ancillaries / Others**		
	Horloge RT CP 09	u	1
	UPS 5 KVA	u	1
	Rack	u	2
	Installation accessories	u	1
3.5	**Equipment: Ground backbone terminal equipment**		
	Included in MPLS Services offer	set	0
3.6	**Services: Installation**		
	Installation of equipment on site	set	1
3.7	**Services: Civil Works**		
	N/A	set	0

Brazil (Recife)

Item	Description	Unit	Qty
4.1	**Equipment: Routing System**		
	NETGEAR SW F/E Stackable Managed Sw	u	2
	NETGEAR ProSafe VPN Dual WAN Gigabit	u	1
	RSS-16 : RSS 16 Slot 4U Chassis, including:	u	1
	K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1
	IPC-16-R : Network Control Card - 16	u	1
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	7
	AB-D25-R : D25 A/B Card	u	1
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	3
	AB-D25-R : D25 A/B Card	u	1
	FP-AB-RSS : Blank Panel for unused slots	u	4
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	4
	DATA license	u	2
	Communication Manager Express or SRST - 5 seat license	u	2
	2-Port Async/Sync Serial WAN Interface Card		2
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	2
	Two-port Voice Interface Card - E and M	u	8
	Two-Port Voice Interface Card - FXS and DID	u	2
	Cisco 2911 UC Bundle, PVDM3-16, UC License PAK	u	1
	DATA LICENCE	u	1
	Communication Manager Express or SRST - 5 seat license	u	1
	2-Port Async/Sync Serial WAN Interface Card	u	1
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	1
	Two-port Voice Interface Card - E and M	u	2
	EVM-HD-8FXS/DID	u	1
4.2	**Equipment: VSAT Terminal**		
	IDU 1070 19" NS + PS AC	u	2
	Lic-Key 1070 Full Power Package	u	2
	License OSPF	u	2
	Lic 8 PSK	u	2
	Lic-Key Mesh Topology	u	2
	Lic TCP-A	u	2
	VSAT antenna refurbishment	set	1
4.3	**Equipment: Network Management System**		
	HP ProLiant DL160 Gen8 Base - Server, including:	u	1
	Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1
	Card PCI-Express 1X 4 ports series RS232 Std and Low Profile	u	1
	HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2
	SAMSUNG screen LCD 27´´ Samsung SyncMaster S27A550H	u	1
	HP LaserJet Pro 400 M401dn /33ppm	u	1
	Eaton Ellipse ECO 1200 FR USB	u	1
	WhatsUp Gold Distributed Remote 25 Devices	u	1
	Antivirus	u	1
4.4	**Equipment: Ancillaries / Others**		
	Horloge RT CP 09	u	1

	UPS 5 KVA	u	1
	Rack	u	1
	Installation accessories	u	1
4.5	**Equipment: Ground backbone terminal equipment**		
	Included in MPLS Services offer	set	0
4.6	**Services: Installation**		
	Installation of equipment on site	set	1
4.7	**Services: Civil Works**		
	N/A	set	0

Brazil (Curitiba)

Item	Description	Unit	Qty
5.1	**Equipment: Routing System**		
	NETGEAR SW F/E Stackable Managed Sw	u	2
	NETGEAR ProSafe VPN Dual WAN Gigabit	u	1
	RSS-16 : RSS 16 Slot 4U Chassis	u	1
	K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1
	IPC-16-R : Network Control Card - 16	u	1
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	7
	AB-D25-R : D25 A/B Card	u	4
	RSS-16 : RSS 16 Slot 4U Chassis	u	1
	K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1
	IPC-16-R : Network Control Card - 16	u	1
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	4
	AB-D25-R : D25 A/B Card	u	2
	FP-AB-RSS : Blank Panel for unused slots	u	15
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	4
	DATA license	u	2
	Communication Manager Express or SRST - 5 seat license	u	2
	4-Port Async/Sync Serial HWIC		2
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	8
	Two-port Voice Interface Card - E and M	u	8
	Two-Port Voice Interface Card - FXS and DID	u	2
	Two-Port Voice Interface Card – FXO	u	2
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	2
	DATA LICENCE	u	1
	Communication Manager Express or SRST - 5 seat license	u	1
	2-Port Async/Sync Serial WAN Interface Card	u	1
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	2
	Two-port Voice Interface Card - E and M	u	2
	Two-Port Voice Interface Card - FXS and DID	u	1
	Two-Port Voice Interface Card – FXO	u	1
5.2	**Equipment: VSAT Terminal**		
	IDU 7000 Master	u	2
	IDU 1070 19" NS + PS AC	u	2
	Lic-Key 1070 Full Power Package	u	2
	License OSPF	u	2
	Lic 8 PSK	u	2
	Lic-Key Mesh Topology	u	2
	Lic TCP-A	u	2
	VSAT antenna refurbishment	set	1
	Feed horn pour refurbishment VSAT	set	1
5.3	**Equipment: Network Management System**		
	HP ProLiant DL160 Gen8 Base - Server, including:	u	1
	Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1
	Card PCI-Express 1X 4 ports series RS232 Std and Low Profile	u	1
	HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2

	SAMSUNG screen LCD 27´´ Samsung SyncMaster S27A550H	u	1
	HP LaserJet Pro 400 M401dn /33ppm	u	1
	Eaton Ellipse ECO 1200 FR USB	u	1
	WhatsUp Gold Distributed Remote 25 Devices	u	1
	Antivirus	u	1
5.4	**Equipment: Ancillaries / Others**		
	Horloge RT CP 09	u	1
	UPS 3 KVA	u	1
	Rack	u	1
	Installation accessories	u	1
5.5	**Equipment: Ground backbone terminal equipment**		
	Included in MPLS Services offer	set	0
5.6	**Services: Installation**		
	Installation of equipment on site	set	1
5.7	**Services: Civil Works**		
	N/A	set	0

Chile (Santiago)

Item	Description	Unit	Qty
6.1	**Equipment: Routing System**		
	NETGEAR SW F/E Stackable Managed Sw	u	2
	NETGEAR ProSafe VPN Dual WAN Gigabit	u	1
	RSS-16 : RSS 16 Slot 4U Chassis	u	1
	K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1
	IPC-16-R : Network Control Card - 16	u	1
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	6
	AB-D25-R : D25 A/B Card	u	3
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	2
	AB-D25-R : D25 A/B Card	u	1
	FP-AB-RSS : Blank Panel for unused slots	u	4
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	4
	DATA license	u	2
	Communication Manager Express or SRST - 5 seat license	u	2
	2-Port Async/Sync Serial WAN Interface Card		2
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	4
	Two-port Voice Interface Card - E and M	u	8
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	1
	DATA LICENCE	u	1
	Communication Manager Express or SRST - 5 seat license	u	1
	2-Port Async/Sync Serial WAN Interface Card	u	1
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	1
	Two-port Voice Interface Card - E and M	u	2
6.2	**Equipment: VSAT Terminal**		
	IDU 1070 19" NS + PS AC	u	2
	Lic-Key 1070 Full Power Package	u	2
	License OSPF	u	2
	Lic 8 PSK	u	2
	Lic-Key Mesh Topology	u	2
	Lic TCP-A	u	2
	VSAT antenna refurbishment	set	1
6.3	**Equipment: Network Management System**		
	HP ProLiant DL160 Gen8 Base - Server, including:	u	1
	Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1
	Card PCI-Express 1X 4 ports series RS232 Std and Low Profile	u	1
	HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2
	SAMSUNG screen LCD 27´´ Samsung SyncMaster S27A550H	u	1
	HP LaserJet Pro 400 M401dn /33ppm	u	1
	Eaton Ellipse ECO 1200 FR USB	u	1
	WhatsUp Gold Distributed Remote 25 Devices	u	1
	Antivirus	u	1
6.4	**Equipment: Ancillaries / Others**		
	Horloge RT CP 09	u	1
	UPS 3 KVA	u	1
	Rack	u	1

	Installation accessories	u	1
6.5	**Equipment: Ground backbone terminal equipment**		
	Included in MPLS Services offer	set	0
6.6	**Services: Installation**		
	Installation of equipment on site	set	1
6.7	**Services: Civil Works**		
	N/A	set	0

Colombia (Bogota)
Includes equipment for Tegucigalpa

Item	Description	Unit	Qty
7.1	**Equipment: Routing System**		
	NETGEAR SW F/E Stackable Managed Sw	u	2
	NETGEAR ProSafe VPN Dual WAN Gigabit	u	1
	RSS-16 : RSS 16 Slot 4U Chassis	u	1
	K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1
	IPC-16-R : Network Control Card - 16	u	1
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	3
	AB-D25-R : D25 A/B Card	u	7
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	1
	AB-D25-R : D25 A/B Card	u	4
	FP-AB-RSS : Blank Panel for unused slots	u	1
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	3
	DATA license	u	2
	Communication Manager Express or SRST - 5 seat license	u	3
	2-Port Async/Sync Serial HWIC		4
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	14
	Two-port Voice Interface Card – FXS and DID	u	1
	2 Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	u	2
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	1
	DATA LICENCE	u	1
	Communication Manager Express or SRST - 5 seat license	u	1
	4-Port Async/Sync Serial HWIC	u	1
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	4
	2 Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	u	1
7.2	**Equipment: VSAT Terminal**		
	IDU 1070 19" NS + PS AC	u	3
	Lic-Key 1070 Full Power Package	u	3
	License OSPF	u	3
	Lic 8 PSK	u	3
	Lic-Key Mesh Topology	u	3
	Lic TCP-A	u	3
	VSAT antenna refurbishment	set	1
7.3	**Equipment: Network Management System**		
	HP ProLiant DL160 Gen8 Base - Server, including:	u	1
	Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1
	Card PCI-Express 1X 4 ports series RS232 Std and Low Profile	u	1
	HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2
	SAMSUNG screen LCD 27´´ Samsung SyncMaster S27A550H	u	1
	HP LaserJet Pro 400 M401dn /33ppm	u	1
	Eaton Ellipse ECO 1200 FR USB	u	1
	WhatsUp Gold Distributed Remote 25 Devices	u	1
	Antivirus	u	1
7.4	**Equipment: Ancillaries / Others**		

	Horloge RT CP 09	u	1
	UPS 3 KVA	u	1
	Rack	u	1
	Installation accessories	u	1
7.5	**Equipment: Ground backbone terminal equipment**		
	Included in MPLS Services offer	set	0
7.6	**Services: Installation**		
	Installation of equipment on site	set	1
7.7	**Services: Civil Works**		
	N/A	set	0

Ecuador (Guayaquil)

Item	Description	Unit	Qty
8.1	**Equipment: Routing System**		
	NETGEAR SW F/E Stackable Managed Sw	u	2
	NETGEAR ProSafe VPN Dual WAN Gigabit	u	1
	RSS-16 : RSS 16 Slot 4U Chassis	u	1
	K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1
	IPC-16-R : Network Control Card - 16	u	1
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	3
	AB-D25-R : D25 A/B Card	u	3
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	1
	AB-D25-R : D25 A/B Card	u	2
	FP-AB-RSS : Blank Panel for unused slots	u	7
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	2
	DATA license	u	2
	Communication Manager Express or SRST - 5 seat license	u	2
	4-Port Async/Sync Serial HWIC	u	2
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	6
	1 Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	u	2
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	1
	DATA LICENCE	u	1
	Communication Manager Express or SRST - 5 seat license	u	1
	2-Port Async/Sync Serial WAN Interface Card	u	1
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	2
	1-Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	u	1
8.2	**Equipment: VSAT Terminal**		
	IDU 1070 19" NS + PS AC	u	2
	Lic-Key 1070 Full Power Package	u	2
	License OSPF	u	2
	Lic 8 PSK	u	2
	Lic-Key Mesh Topology	u	2
	Lic TCP-A	u	2
	VSAT antenna refurbishment	set	1
8.3	**Equipment: Network Management System**		
	HP ProLiant DL160 Gen8 Base - Server, including:	u	1
	Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1
	Card PCI-Express 1X 4 ports series RS232 Std and Low Profile	u	1
	HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2
	SAMSUNG screen LCD 27´´ Samsung SyncMaster S27A550H	u	1
	HP LaserJet Pro 400 M401dn /33ppm	u	1
	Eaton Ellipse ECO 1200 FR USB	u	1
	WhatsUp Gold Distributed Remote 25 Devices	u	1
	Antivirus	u	1
8.4	**Equipment: Ancillaries / Others**		
	Horloge RT CP 09	u	1
	UPS 3 KVA	u	1
	Rack	u	1

	Installation accessories	u	1
8.5	**Equipment: Ground backbone terminal equipment**		
	Included in MPLS Services offer	set	0
8.6	**Services: Installation**		
	Installation of equipment on site	set	1
8.7	**Services: Civil Works**		
	N/A	set	0

Guyana (Georgetown)

Item	Description	Unit	Qty
9.1	**Equipment: Routing System**		
	Parte VSAT		
	NETGEAR SW F/E Stackable Managed Sw	u	2
	NETGEAR ProSafe VPN Dual WAN Gigabit	u	1
	RSS-16 : RSS 16 Slot 4U Chassis	u	1
	K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1
	IPC-16-R : Network Control Card - 16	u	1
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	5
	AB-D25-R : D25 A/B Card	u	4
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	2
	AB-D25-R : D25 A/B Card	u	2
	FP-AB-RSS : Blank Panel for unused slots	u	3
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	2
	DATA license	u	2
	Communication Manager Express or SRST - 5 seat license	u	2
	4-Port Async/Sync Serial HWIC	u	2
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	8
	Two-Port Voice Interface Card - FXS and DID	u	2
	Four-Port Voice Interface Card - FXS and DID	u	2
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	1
	DATA LICENCE	u	1
	Communication Manager Express or SRST - 5 seat license	u	1
	2-Port Async/Sync Serial WAN Interface Card	u	1
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	2
	Four-Port Voice Interface Card - FXS and DID	u	1
9.2	**Equipment: VSAT Terminal**		
	IDU 1070 19" NS + PS AC	u	2
	Lic-Key 1070 Full Power Package	u	2
	License OSPF	u	2
	Lic 8 PSK	u	2
	Lic-Key Mesh Topology	u	2
	Lic TCP-A	u	2
	VSAT antenna refurbishment	set	1
	Feed horn pour refurbishment VSAT	set	1
9.3	**Equipment: Network Management System**		
	HP ProLiant DL160 Gen8 Base - Server, including:	u	1
	Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1
	Card PCI-Express 1X 4 ports series RS232 Std and Low Profile	u	1
	HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2
	SAMSUNG screen LCD 27´´ Samsung SyncMaster S27A550H	u	1
	HP LaserJet Pro 400 M401dn /33ppm	u	1
	Eaton Ellipse ECO 1200 FR USB	u	1
	WhatsUp Gold Distributed Remote 25 Devices	u	1
	Antivirus	u	1
9.4	**Equipment: Ancillaries / Others**		

	Horloge RT CP 09	u	1
	UPS 3 KVA	u	1
	Rack	u	1
	Installation accessories	u	1
9.5	**Equipment: Ground backbone terminal equipment**		
	Included in MPLS Services offer	set	0
9.6	**Services: Installation**		
	Installation of equipment on site	set	1
9.7	**Services: Civil Works**		
	N/A	set	0

French Guiana (Cayenne)

Item	Description	Unit	Qty
10.1	**Equipment: Routing System**		
	NETGEAR SW F/E Stackable Managed Sw	u	2
	NETGEAR ProSafe VPN Dual WAN Gigabit	u	1
	RSS-16 : RSS 16 Slot 4U Chassis	u	1
	K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1
	IPC-16-R : Network Control Card - 16	u	1
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	5
	AB-D25-R : D25 A/B Card	u	2
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	2
	AB-D25-R : D25 A/B Card	u	1
	FP-AB-RSS : Blank Panel for unused slots	u	6
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	2
	DATA license	u	2
	Communication Manager Express or SRST - 5 seat license	u	2
	2-Port Async/Sync Serial WAN Interface Card	u	2
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	4
	Two-Port Voice Interface Card - FXS and DID	u	2
	Four-Port Voice Interface Card - FXS and DID	u	2
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	1
	DATA LICENCE	u	1
	Communication Manager Express or SRST - 5 seat license	u	1
	2-Port Async/Sync Serial WAN Interface Card	u	1
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	1
	Four-Port Voice Interface Card - FXS and DID	u	1
10.2	**Equipment: VSAT Terminal**		
	IDU 1070 19" NS + PS AC	u	2
	Lic-Key 1070 Full Power Package	u	2
	License OSPF	u	2
	Lic 8 PSK	u	2
	Lic-Key Mesh Topology	u	2
	Lic TCP-A	u	2
	VSAT antenna refurbishment	set	1
10.3	**Equipment: Network Management System**		
	HP ProLiant DL160 Gen8 Base - Server, including:	u	1
	Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1
	Card PCI-Express 1X 4 ports series RS232 Std and Low Profile	u	1
	HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2
	SAMSUNG screen LCD 27´´ Samsung SyncMaster S27A550H	u	1
	HP LaserJet Pro 400 M401dn /33ppm	u	1
	Eaton Ellipse ECO 1200 FR USB	u	1
	WhatsUp Gold Distributed Remote 25 Devices	u	1
	Antivirus	u	1
10.4	**Equipment: Ancillaries / Others**		
	Horloge RT CP 09	u	1
	UPS 3 KVA	u	1

	Rack	u	1
	Installation accessories	u	1
10.5	**Equipment: Ground backbone terminal equipment**		
	Included in MPLS Services offer	set	0
10.6	**Services: Installation**		
	Installation of equipment on site	set	1
10.7	**Services: Civil Works**		
	N/A	set	0

Paraguay (Asuncion)

Item	Description	Unit	Qty
11.1	**Equipment: Routing System**		
	Parte VSAT		
	NETGEAR SW F/E Stackable Managed Sw	u	2
	NETGEAR ProSafe VPN Dual WAN Gigabit	u	1
	RSS-16 : RSS 16 Slot 4U Chassis	u	1
	K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1
	IPC-16-R : Network Control Card - 16	u	1
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	6
	AB-D25-R : D25 A/B Card	u	3
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	2
	AB-D25-R : D25 A/B Card	u	2
	FP-AB-RSS : Blank Panel for unused slots	u	3
	Cisco 2911 UC Bundle, PVDM3-16, UC License PAK	u	2
	DATA license	u	2
	Communication Manager Express or SRST - 5 seat license	u	2
	4-Port Async/Sync Serial HWIC	u	2
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	6
	Two-Port Voice Interface Card – E and M	u	4
	EM-HDA-3FXS/4FXO	u	2
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	1
	DATA LICENCE	u	1
	Communication Manager Express or SRST - 5 seat license	u	1
	2-Port Async/Sync Serial WAN Interface Card	u	1
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	2
	Two-Port Voice Interface Card – E and M	u	1
	Two-Port Voice Interface Card - FXS and DID	u	1
11.2	**Equipment: VSAT Terminal**		
	IDU 1070 19" NS + PS AC	u	2
	Lic-Key 1070 Full Power Package	u	2
	License OSPF	u	2
	Lic 8 PSK	u	2
	Lic-Key Mesh Topology	u	2
	Lic TCP-A	u	2
	VSAT antenna refurbishment	set	1
	Feed horn pour refurbishment VSAT	set	1
11.3	**Equipment: Network Management System**		
	HP ProLiant DL160 Gen8 Base - Server, including:	u	1
	Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1
	Card PCI-Express 1X 4 ports series RS232 Std and Low Profile	u	1
	HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2
	SAMSUNG screen LCD 27´´ Samsung SyncMaster S27A550H	u	1
	HP LaserJet Pro 400 M401dn /33ppm	u	1
	Eaton Ellipse ECO 1200 FR USB	u	1
	WhatsUp Gold Distributed Remote 25 Devices	u	1
	Antivirus	u	1

11.4	**Equipment: Ancillaries / Others**		
	Horloge RT CP 09	u	1
	UPS 3 KVA	u	1
	Rack	u	1
	Installation accessories	u	1
11.5	**Equipment: Ground backbone terminal equipment**		
	Included in MPLS Services offer	set	0
11.6	**Services: Installation**		
	Installation of equipment on site	set	1
11.7	**Services: Civil Works**		
	N/A	set	0

Peru (Lima)

Item	Description	Unit	Qty
12.1	**Equipment: Routing System**		
	Parte VSAT		
	NETGEAR SW F/E Stackable Managed Sw	u	2
	NETGEAR ProSafe VPN Dual WAN Gigabit	u	1
	RSS-16 : RSS 16 Slot 4U Chassis	u	1
	K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1
	IPC-16-R : Network Control Card - 16	u	1
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	3
	AB-D25-R : D25 A/B Card	u	9
	RSS-16 : RSS 16 Slot 4U Chassis	u	1
	K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1
	IPC-16-R : Network Control Card - 16	u	1
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	1
	AB-D25-R : D25 A/B Card	u	5
	FP-AB-RSS : Blank Panel for unused slots	u	14
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	2
	DATA license	u	2
	Communication Manager Express or SRST - 5 seat license	u	2
	2-Port Async/Sync Serial WAN Interface Card	u	2
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	2
	High Density 8-port Async Cable w/ 8 DB-25 Modem Connectors	u	2
	8-Port Async HWIC	u	2
	1 Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	u	2
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	1
	DATA LICENCE	u	1
	Communication Manager Express or SRST - 5 seat license	u	1
	2-Port Async/Sync Serial WAN Interface Card	u	1
	4-Port Async/Sync Serial HWIC	u	1
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	5
	1-Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	u	1
12.2	**Equipment: VSAT Terminal**		
	IDU 1070 19" NS + PS AC	u	2
	Lic-Key 1070 Full Power Package	u	2
	License OSPF	u	2
	Lic 8 PSK	u	2
	Lic-Key Mesh Topology	u	2
	Lic TCP-A	u	2
	VSAT antenna refurbishment	set	1
12.3	**Equipment: Network Management System**		
	HP ProLiant DL160 Gen8 Base - Server, including:	u	1
	Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1
	Card PCI-Express 1X 4 ports series RS232 Std and Low Profile	u	1
	HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2
	SAMSUNG screen LCD 27´´ Samsung SyncMaster S27A550H	u	1
	HP LaserJet Pro 400 M401dn /33ppm	u	1

	Eaton Ellipse ECO 1200 FR USB	u	1
	WhatsUp Gold Distributed Remote 25 Devices	u	1
	Antivirus	u	1
12.4	**Equipment: Ancillaries / Others**		
	Horloge RT CP 09	u	1
	UPS 3 KVA	u	1
	Rack	u	1
	Installation accessories	u	1
12.5	**Equipment: Ground backbone terminal equipment**		
	Included in MPLS Services offer	set	0
12.6	**Services: Installation**		
	Installation of equipment on site	set	1
12.7	**Services: Civil Works**		
	N/A	set	0

Suriname (Paramaribo)

Item	Description	Unit	Qty
13.1	**Equipment: Routing System**		
	Parte VSAT		
	NETGEAR SW F/E Stackable Managed Sw	u	2
	NETGEAR ProSafe VPN Dual WAN Gigabit	u	1
	RSS-16 : RSS 16 Slot 4U Chassis	u	1
	K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1
	IPC-16-R : Network Control Card - 16	u	1
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	4
	AB-D25-R : D25 A/B Card	u	3
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	1
	AB-D25-R : D25 A/B Card	u	2
	FP-AB-RSS : Blank Panel for unused slots	u	6
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	2
	DATA license	u	2
	Communication Manager Express or SRST - 5 seat license	u	2
	4-Port Async/Sync Serial HWIC	u	2
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	6
	Four-Port Voice Interface Card - FXS and DID	u	2
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	1
	DATA LICENCE	u	1
	Communication Manager Express or SRST - 5 seat license	u	1
	2-Port Async/Sync Serial WAN Interface Card	u	1
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	2
	Two-Port Voice Interface Card - FXS and DID	u	1
13.2	**Equipment: VSAT Terminal**		
	IDU 1070 19" NS + PS AC	u	2
	Lic-Key 1070 Full Power Package	u	2
	License OSPF	u	2
	Lic 8 PSK	u	2
	Lic-Key Mesh Topology	u	2
	Lic TCP-A	u	2
	VSAT antenna refurbishment	set	1
	Feed horn pour refurbishment VSAT	set	1
13.3	**Equipment: Network Management System**		
	HP ProLiant DL160 Gen8 Base - Server, including:	u	1
	Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1
	Card PCI-Express 1X 4 ports series RS232 Std and Low Profile	u	1
	HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2
	SAMSUNG screen LCD 27´´ Samsung SyncMaster S27A550H	u	1
	HP LaserJet Pro 400 M401dn /33ppm	u	1
	Eaton Ellipse ECO 1200 FR USB	u	1
	WhatsUp Gold Distributed Remote 25 Devices	u	1
	Antivirus	u	1
13.4	**Equipment: Ancillaries / Others**		
	Horloge RT CP 09	u	1

	UPS 3 KVA	u	1
	Rack	u	1
	Installation accessories	u	1
13.5	**Equipment: Ground backbone terminal equipment**		
	Included in MPLS Services offer	set	0
13.6	**Services: Installation**		
	Installation of equipment on site	set	1
13.7	**Services: Civil Works**		
	N/A	set	0

Trinidad and Tobago (Piarco)

Item	Description	Unit	Qty
14.1	**Equipment: Routing System**		
	Parte VSAT		
	NETGEAR SW F/E Stackable Managed Sw	u	2
	NETGEAR ProSafe VPN Dual WAN Gigabit	u	1
	RSS-16 : RSS 16 Slot 4U Chassis	u	1
	K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1
	IPC-16-R : Network Control Card - 16	u	1
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	5
	AB-D25-R : D25 A/B Card	u	2
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	2
	AB-D25-R : D25 A/B Card	u	1
	FP-AB-RSS : Blank Panel for unused slots	u	6
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	2
	DATA license	u	2
	Communication Manager Express or SRST - 5 seat license	u	2
	2-Port Async/Sync Serial WAN Interface Card	u	2
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	4
	Two-Port Voice Interface Card - FXS and DID	u	2
	Four-Port Voice Interface Card - FXS and DID	u	2
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	1
	DATA LICENCE	u	1
	Communication Manager Express or SRST - 5 seat license	u	1
	2-Port Async/Sync Serial WAN Interface Card	u	1
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	1
	Four-Port Voice Interface Card - FXS and DID	u	1
14.2	**Equipment: VSAT Terminal**		
	IDU 1070 19" NS + PS AC	u	2
	Lic-Key 1070 Full Power Package	u	2
	License OSPF	u	2
	Lic 8 PSK	u	2
	Lic-Key Mesh Topology	u	2
	Lic TCP-A	u	2
	VSAT antenna refurbishment	set	1
14.3	**Equipment: Network Management System**		
	HP ProLiant DL160 Gen8 Base - Server, including:	u	1
	Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1
	Card PCI-Express 1X 4 ports series RS232 Std and Low Profile	u	1
	HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2
	SAMSUNG screen LCD 27´´ Samsung SyncMaster S27A550H	u	1
	HP LaserJet Pro 400 M401dn /33ppm	u	1
	Eaton Ellipse ECO 1200 FR USB	u	1
	WhatsUp Gold Distributed Remote 25 Devices	u	1
	Antivirus	u	1
14.4	**Equipment: Ancillaries / Others**		
	Horloge RT CP 09	u	1

	UPS 3 KVA	u	1
	Rack	u	1
	Installation accessories	u	1
14.5	**Equipment: Ground backbone terminal equipment**		
	Included in MPLS Services offer	set	0
14.6	**Services: Installation**		
	Installation of equipment on site	set	1
14.7	**Services: Civil Works**		
	N/A	set	0

Uruguay (Montevideo)

Item	Description	Unit	Qty
15.1	**Equipment: Routing System**		
	Parte VSAT		
	NETGEAR SW F/E Stackable Managed Sw	u	2
	NETGEAR ProSafe VPN Dual WAN Gigabit	u	1
	RSS-16 : RSS 16 Slot 4U Chassis	u	1
	K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1
	IPC-16-R : Network Control Card - 16	u	1
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	7
	AB-D25-R : D25 A/B Card	u	3
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	3
	AB-D25-R : D25 A/B Card	u	2
	FP-AB-RSS : Blank Panel for unused slots	u	1
	Cisco 2911 UC Bundle, PVDM3-16, UC License PAK	u	2
	DATA license	u	2
	Communication Manager Express or SRST - 5 seat license	u	2
	2-Port Async/Sync Serial WAN Interface Card	u	2
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	4
	Two-Port Voice Interface Card - FXS and DID	u	2
	EM-HDA-3FXS/4FXO	u	2
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	1
	DATA LICENCE	u	1
	Communication Manager Express or SRST - 5 seat license	u	1
	2-Port Async/Sync Serial WAN Interface Card	u	1
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	2
	Four-Port Voice Interface Card - FXS and DID	u	1
15.2	**Equipment: VSAT Terminal**		
	IDU 1070 19" NS + PS AC	u	2
	Lic-Key 1070 Full Power Package	u	2
	License OSPF	u	2
	Lic 8 PSK	u	2
	Lic-Key Mesh Topology	u	2
	Lic TCP-A	u	2
	VSAT antenna refurbishment	set	1
	Feed horn pour refurbishment VSAT	set	1
15.3	**Equipment: Network Management System**		
	HP ProLiant DL160 Gen8 Base - Server, including:	u	1
	Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1
	Card PCI-Express 1X 4 ports series RS232 Std and Low Profile	u	1
	HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2
	SAMSUNG screen LCD 27´´ Samsung SyncMaster S27A550H	u	1
	HP LaserJet Pro 400 M401dn /33ppm	u	1
	Eaton Ellipse ECO 1200 FR USB	u	1
	WhatsUp Gold Distributed Remote 25 Devices	u	1
	Antivirus	u	1
15.4	**Equipment: Ancillaries / Others**		

	Horloge RT CP 09	u	1
	UPS 3 KVA	u	1
	Rack	u	1
	Installation accessories	u	1
15.5	**Equipment: Ground backbone terminal equipment**		
	Included in MPLS Services offer	set	0
15.6	**Services: Installation**		
	Installation of equipment on site	set	1
15.7	**Services: Civil Works**		
	N/A	set	0

Venezuela (Maiquetia)

Item	Description	Unit	Qty
16.1	**Equipment: Routing System**		
	Parte VSAT		
	NETGEAR SW F/E Stackable Managed Sw	u	2
	NETGEAR ProSafe VPN Dual WAN Gigabit	u	1
	RSS-16 : RSS 16 Slot 4U Chassis	u	2
	K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	2
	IPC-16-R : Network Control Card - 16	u	2
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	8
	AB-D25-R : D25 A/B Card	u	10
	IPC-16-R : Network Control Card - 16	u	1
	AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	3
	AB-D25-R : D25 A/B Card	u	5
	FP-AB-RSS : Blank Panel for unused slots	u	6
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	4
	DATA license	u	2
	Communication Manager Express or SRST - 5 seat license	u	2
	2-Port Async/Sync Serial WAN Interface Card	u	2
	8-Port Async HWIC	u	2
	Two-Port Voice Interface Card – E and M	u	8
	Four-Port Voice Interface Card - FXS and DID	u	2
	Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	2
	DATA LICENCE	u	1
	Communication Manager Express or SRST - 5 seat license	u	1
	2-Port Async/Sync Serial WAN Interface Card	u	1
	4-Port Async/Sync Serial HWIC	u	1
	RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	5
	Two-Port Voice Interface Card – E and M	u	2
	Two-Port Voice Interface Card - FXS and DID	u	1
16.2	**Equipment: VSAT Terminal**		
	IDU 1070 19" NS + PS AC	u	2
	Lic-Key 1070 Full Power Package	u	2
	License OSPF	u	2
	Lic 8 PSK	u	2
	Lic-Key Mesh Topology	u	2
	Lic TCP-A	u	2
	VSAT antenna refurbishment	set	1
16.3	**Equipment: Network Management System**		
	HP ProLiant DL160 Gen8 Base - Server, including:	u	1
	Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1
	Card PCI-Express 1X 4 ports series RS232 Std and Low Profile	u	1
	HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2
	SAMSUNG screen LCD 27´´ Samsung SyncMaster S27A550H	u	1
	HP LaserJet Pro 400 M401dn /33ppm	u	1
	Eaton Ellipse ECO 1200 FR USB	u	1
	WhatsUp Gold Distributed Remote 25 Devices	u	1
	Antivirus	u	1

16.4	**Equipment: Ancillaries / Others**		
	Horloge RT CP 09	u	1
	UPS 3 KVA	u	1
	Rack	u	1
	Installation accessories	u	1
16.5	**Equipment: Ground backbone terminal equipment**		
	Included in MPLS Services offer	set	0
16.6	**Services: Installation**		
	Installation of equipment on site	set	1
16.7	**Services: Civil Works**		
	N/A	set	0

SPARE PARTS

This item includes the following equipment:

Description	Unit	Qty
RSS-16 : RSS 16 Slot 4U Chassis	u	2
K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	2
IPC-16-R : Network Control Card - 16	u	2
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	5
AB-D25-R : D25 A/B Card	u	6
Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	3
Cisco 2911 UC Bundle, PVDM3-16, UC License PAK	u	1
DATA license	u	3
Communication Manager Express or SRST - 5 seat license	u	3
2-Port Async/Sync Serial WAN Interface Card	u	2
4-Port Async/Sync Serial HWIC	u	2
8-Port Async HWIC	u	1
8-Port Async/Sync Serial HWIC, EIA-232	u	1
Two-Port Voice Interface Card – E and M	u	4
Two-Port Voice Interface Card - FXS and DID	u	2
Four-Port Voice Interface Card - FXS and DID	u	1
Two-port Voice Interface Card - FXO	u	1
1 Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	u	1
2 Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	u	1
EVM-HD-8FXS/DID	u	1
EM-HDA-3FXS/4FXO	u	1
NETGEAR SW F/E Stackable Managed Sw	u	2
NETGEAR ProSafe VPN Dual WAN Gigabit	u	1
IDU 7000 Master	u	1
Lic 8 PSK	u	3
IDU 1070 19" NS + PS AC	u	2
Lic-Key 1070 Full Power Package	u	2
License OSPF	u	3
Lic-Key Mesh Topology	u	2
Lic TCP-A	u	3
HP ProLiant DL160 Gen8 Base - Server - rack-mountable - 1U - 2-way - 1 x Xeon E5-2620/2 GHz - RAM 8 GB – SATA - Hot-swap 3.5"	u	1
Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1
Card PCI-Express 1X 4 ports series RS232 Std and Low Profile	u	1
HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2
SAMSUNG screen LCD 27´´ Samsung SyncMaster S27A550H	u	1
HP LaserJet Pro 400 M401dn /33ppm	u	1
Network Cable Cat 5e Shielded (FTP) 30 meters	u	1
Aten usb extender on jr45 ce700aAten usb extender on jr45 ce700a	u	1
Eaton Ellipse ECO 1200 FR USB	u	1
Antivirus	u	1
IOMEGA NAS Extern 2T SATA DD 2To X 1Iomega Home Media Network Hard Drive Cloud Edition - NAS - 2 To – Serial ATA-300 - DD 2 To x 1 - Gigabit Ethernet	u	1
Horloge RT CP 09	u	1

UPS 3 KVA		u	1
MEASURING EQUIPMENT AND TOOLS			
This item includes the following equipment:			
MS2722C	u	1	
S810D	u	1	
CMA 3000	u	1	
SCV AUDIO	u	1	
TEST EQUIPMENT			
This item includes the following equipment:			
MultImeter (one for each site)	u	16	
DOCUMENTATION			
Preparation			
Studies office			
Installation drawing			
All necessary documents for the project			
As build drawing			

OPTIONAL EQUIPMENT AND SERVICES ACCEPTED

Argentina (Ezeiza)

VSAT equipment proposed as optional	Unit	Qty
IBUC 25W	u	2
Tx 1+1 switching system	u	1
Rx 1+1 switching system	u	1
LNB	u	2
Handheld Terminal	u	1
Coaxial connector	u	5
Coaxial cable	m	120
Cat 5 Cable	m	120

Bolivia (La Paz)

VSAT equipment proposed as optional	Unit	Qty
IBUC 25W	u	2
Tx 1+1 switching system	u	1
Rx 1+1 switching system	u	1
LNB	u	2
Handheld Terminal	u	1
De-icing system	u	1
Coaxial connector	u	5
Coaxial cable	m	140
Cat 5 Cable	m	140

Brazil (Manaus)

VSAT equipment proposed as optional	Unit	Qty
IBUC 25W	u	2
Tx 1+1 switching system	u	1
Rx 1+1 switching system	u	1
LNB	u	2
Handheld Terminal	u	1
Coaxial connector	u	5
Coaxial cable	m	200
Cat 5 Cable	m	200

Brazil (Recife)

VSAT equipment proposed as optional	Unit	Qty
IBUC 25W	u	2
Tx 1+1 switching system	u	1
Rx 1+1 switching system	u	1
LNB	u	2
Handheld Terminal	u	1
Coaxial connector	u	5
Coaxial cable	m	160
Cat 5 Cable	m	160

Brazil (Curitiba)

VSAT equipment proposed as optional	Unit	Qty
IBUC 25W	u	2

Tx 1+1 switching system	u	1
Rx 1+1 switching system	u	1
LNB	u	2
Handheld Terminal	u	1
Coaxial connector	u	5
Coaxial cable	m	270
Cat 5 Cable	m	270

Chile (Santiago)

VSAT equipment proposed as optional	**Unit**	**Qty**
IBUC 25W	u	2
Tx 1+1 switching system	u	1
Rx 1+1 switching system	u	1
LNB	u	2
Handheld Terminal	u	1
Coaxial connector	u	5
Coaxial cable	m	200
Cat 5 Cable	m	200

Colombia (Bogota)

VSAT equipment proposed as optional	**Unit**	**Qty**
IBUC 25W	u	2
Tx 1+1 switching system	u	1
Rx 1+1 switching system	u	1
LNB	u	2
Handheld Terminal	u	1
Coaxial connector	u	5
Coaxial cable	m	80
Cat 5 Cable	m	80

Ecuador (Guayaquil)

VSAT equipment proposed as optional	**Unit**	**Qty**
IBUC 25W	u	2
Tx 1+1 switching system	u	1
Rx 1+1 switching system	u	1
LNB	u	2
Handheld Terminal	u	1
Coaxial connector	u	5
Coaxial cable	m	70
Cat 5 Cable	m	70

Guyana (Georgetown)

VSAT equipment proposed as optional	**Unit**	**Qty**
IBUC 25W	u	2
Tx 1+1 switching system	u	1
Rx 1+1 switching system	u	1
LNB	u	2
Handheld Terminal	u	1
Coaxial connector	u	5
Coaxial cable	m	80
Cat 5 Cable	m	80

French Guiana (Cayenne)

VSAT equipment proposed as optional	Unit	Qty
IBUC 25W	u	2
Tx 1+1 switching system	u	1
Rx 1+1 switching system	u	1
LNB	u	2
Handheld Terminal	u	1
Coaxial connector	u	5
Coaxial cable	m	80
Cat 5 Cable	m	80

Paraguay (Asuncion)

VSAT equipment proposed as optional	Unit	Qty
IBUC 25W	u	2
Tx 1+1 switching system	u	1
Rx 1+1 switching system	u	1
LNB	u	2
Handheld Terminal	u	1
Coaxial connector	u	5
Coaxial cable	m	60
Cat 5 Cable	m	60

Peru (Lima)

VSAT equipment proposed as optional	Unit	Qty
IBUC 25W	u	2
Tx 1+1 switching system	u	1
Rx 1+1 switching system	u	1
LNB	u	2
Handheld Terminal	u	1
Coaxial connector	u	5
Coaxial cable	m	160
Cat 5 Cable	m	160

Suriname (Paramaribo)

VSAT equipment proposed as optional	Unit	Qty
IBUC 25W	u	2
Tx 1+1 switching system	u	1
Rx 1+1 switching system	u	1
LNB	u	2
Handheld Terminal	u	1
Coaxial connector	u	5
Coaxial cable	m	100
Cat 5 Cable	m	100

Trinidad and Tobago (Piarco)

VSAT equipment proposed as optional	Unit	Qty
IBUC 25W	u	2
Tx 1+1 switching system	u	1
Rx 1+1 switching system	u	1

LNB	u	2
Handheld Terminal	u	1
Coaxial connector	u	5
Coaxial cable	m	100
Cat 5 Cable	m	100

Uruguay (Montevideo)

VSAT equipment proposed as optional	**Unit**	**Qty**
IBUC 25W	u	2
Tx 1+1 switching system	u	1
Rx 1+1 switching system	u	1
LNB	u	2
Handheld Terminal	u	1
Coaxial connector	u	5
Coaxial cable	m	120
Cat 5 Cable	m	120

Venezuela (Maiquetia)

VSAT equipment proposed as optional	**Unit**	**Qty**
IBUC 25W	u	2
Tx 1+1 switching system	u	1
Rx 1+1 switching system	u	1
LNB	u	2
Handheld Terminal	u	1
Coaxial connector	u	5
Coaxial cable	m	120
Cat 5 Cable	m	120

Spare Parts

VSAT equipment proposed as optional	**Unit**	**Qty**
IBUC 25W	u	2
IBUC 60W	u	1
Tx 1+1 switching system	u	1
Rx 1+1 switching system	u	1
LNB	u	2
Handheld Terminal	u	1

Warranty

1 (one) visit to each site (16) for preventive maintenance	set	1

RISK ASSESSMENT WORKSHEET
(Project RLA/03/901)

Project Formulation Risk Assessment	**Reviewed by:**	**Review date:**

1. Initial Risks

Immediate Objective # 1: Elaborate a proposal for the establishment of a multinational mechanism for the definitive administration of the network, considering the studies on this subject to be carried out by GREPECAS.

Ref. No.	**Risk Condition**	**Impact**	**Risk Factor**	**Controls in Place/ Actions Planned**
I-1a	Delay of Governments in depositing the funds necessary to finance the project.	The delay could increase the costs of the project and have a negative impact on its development.	Low	- Decision of the interested States to undertake the project. - Disposal of States, in principle, to deposit the funds.
I-1b	Delay in the approval of the proposed mechanism for the REDDIG administration.	The delay may postpone the activation of the mechanism and the possible operation and maintenance of the REDDIG under an autonomous scheme.	Medium	Disposal of States to approve, in principle, the REDDIG mechanism of autonomous management that may agree to adopt.

Immediate Objective # 2: Administration of the network under the conditions established by the Third Meeting of the Coordination Committee (RCC/3)

Ref. No.	**Risk Condition**	**Impact**	**Risk Factor**	**Controls in Place/ Actions Planned**
I-2a	Lack of adequate counterpart staff to ensure the proper operation of the network.	The lack of adequate personnel could have a negative impact on the REDDIG functioning.	Low	- Availability of aeronautical communications services heads. - Availability of technical staff and of administrative support.
I-2b	Possible delays in the process of approval of the annual budget and deposits of funds.	Delays can affect the normal development of activities foreseen and the efficient operation of the network.	Low	Disposal of member States to participate in the meetings of the project Coordination Committee that approve the annual budget and timely deposit of their cost-sharing contributions.

I-2c	Lack of suitable candidates for training programmes.	The lack of suitable candidates can affect the effectiveness of the training plan and have a negative impact in the results of the project.	Low	States have, in principle, suitable personnel available to participate in training programmes.
I-2d	Possible delays in logistics processes for the provision of spare parts.	Delays in the timely provision of spare parts could affect the proper operation of the network and the efficient provision of communications services.	Low	There is a central warehouse of spare parts stock available to be distributed in a timely manner when requested.
I-2e	Obsolescence of the network equipment.	The aging of the equipment can turn into a lack of replacement units and spare parts, affecting the proper functioning of the network.	Low	The stock of replacement units and spare parts in the warehouse permit to ensure the smooth operation of the network until achieving the full replacement of equipment.
I-2f	Possible delays in the management and payments of rental of the satellite segment.	Delays would have a negative impact on the network operation and could affect the efficient provision of aeronautical communications services.	Low	The management of the satellite segment rental is handled under contractual arrangements of three years duration, concluded in a timely manner with the provider of the service and payments are made annually in advance.

Immediate Objective # 3: In accordance with the requirements of the CAR/SAM FASID and of the Plan of Implementation of the Performance-based Air Navigation System for the SAM Region, plan the regional development of CNS/ATM applications and implement such applications in coordination with projects RLA/98/003 and RLA/06/901, as appropriate.

Ref. No.	Risk Condition	Impact	Risk Factor	Controls in Place/ Actions Planned
I-3a	Lack of opportunely available consultants to develop the planned activities.	The delay in the implementation of this objective can have a negative impact on the efficient use of the REDDIG capacity.	Low	- Disposition of States for the secondment of professionals to the project as required. - Availability of resources to finance the movement of consultants as needed.
I-3b	Lack of suitable candidates for training programmes.	The lack of suitable candidates can affect the objectives of the training plan and have a negative impact in the sustainability of project outputs.	Low	States have, in principle, suitable personnel available to participate in training programmes scheduled by the project.
I-3c	Possible delays in the procurement, installation and commissioning of the equipment required.	Delays can increase project costs and prolong the situation of inoperance of the interconnection of two regional networks.	Low	Interest of the CAR and SAM regions to establish as soon as possible the interconnection of the MEVA II and REDDIG.

Immediate Objective # 4: Procurement, installation, commissioning and maintenance of the new digital net REDDIG II, in accordance with the technical specifications agreed by the REDDIG member States.

Ref. No.	Risk Condition	Impact	Risk Factor	Controls in Place/ Actions Planned
I-4a	Lack of bids meeting the technical specifications.	The lack of bids that meet the specifications may delay the network renewal process.	Low	The formulation of the technical specifications for the network renewal was carried out with knowledge of the available technology in the industry.
I-4b	Possible delays in the procurement process of the REDDIG II for lack of funds to	Delays can increase project costs and postpone network renewal, required due to the inevitable	Low	- Interest of States in renewing the network. - Disposition of States to finance the renewal costs.

	finance the contract.	obsolescence of existing equipment.		
I-4c	Lack of counterpart staff for the REDDIG II installation, adjustment and operation.	The lack of counterpart personnel could have a negative impact in the new network installation and delay its start up.	Low	- Availability of heads of the aeronautical communications services. - Availability of technical administrative support personnel.
I-4d	Lack of suitable candidates for training programmes foreseen for the operation and maintenance of the REDDIG II.	The lack of qualified candidates may affect the objectives of the training plan and have a negative impact in the operation of the REDDIG II.	Low	States have, in principle, suitable staff available to participate in the training programmes scheduled for the operation and maintenance of the new network.
I-4e	Possible delays in the management and payments of rental of the satellite segment for the REDDIG II.	Delays would have a negative impact on the new network operation and could affect the efficient provision of aeronautical communications services.	Low	The management of the satellite segment rental is handled under contractual arrangements concluded in a timely manner with the provider of the service and payment is made in advance.

2. Medium-Term Risks				
MT-1a	Radical change in the political and economic situation in the participating States.	- Current situation. - Indefinite delay in the decision to execute the project.	Low	- The political and economic situation in the participating States is stable. - Decision of the civil aviation administrations and service provider organizations involved undertaking the project.
MT-1b	Changes of the situation in project sites due to natural disasters.	- Current situation. - Indefinite delay in the decision to execute the project.	Low	There is no history of natural disasters in places where the project will be developed.

FORMS FOR THE MONITORING AND ANNUAL EVALUATION OF THE PROJECT

1. Project status as of 31 December of each year and management indicators and results (Appendix A)

The purpose of this table is to assess project status from start-up until the end of the first year of operations and subsequently until the end of each year compared to the previous year. This information shall be updated on a yearly basis.

2. Project monitoring and control - Work plan for the commencing year (Appendix B)

The purpose of this table is determine the work plan of the commencing year, the activities and results foreseen at the end of the year in relation to each ICAO strategic objective, that will serve as a basis for assessing the percentage of compliance. This information shall be submitted on a quarterly basis to support decisions on implementation improvements.

3. Survey on management indicators and results for the year ended (Appendix C)

This section shall be presented on a yearly basis, and consists of the following parts to be completed by the Government executing agencies:

Section I	Assess the level of satisfaction of the State with regard to the project
Section II	Assess the attainment of project objectives
Section III	Assess project implementation and the provision of services by ICAO
Section IV	Determine the lessons learned, both positive and negative.

4. Timetable of delivery dates (Appendix D)

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