

**INTERNATIONAL CIVIL AVIATION ORGANIZATION
South American Regional Office**

**REGIONAL PROJECT RLA/03/901
REDDIG SYSTEM MANAGEMENT AND SATELLITE SEGMENT ADMINISTRATION
TWELFTH REDDIG COORDINATION COMMITTEE MEETING (RCC/12)**

(Lima, Peru, 9-10 March 2009)

Agenda Item 2: Report of the activities carried out up to date since the last meeting of the REDDIG Coordination Committee

**REPORT ON ACTIVITIES CARRIED OUT SINCE THE LAST MEETING OF THE
COORDINATION COMMITTEE**

(Presented by the Secretariat)

SUMMARY

This paper presents information related with the activities carried out to date by the Project since the last meeting of the REDDIG coordination committee, held from 5 to 6 May 2008.

1. Background

1.1 The main activities agreed upon at the last meeting of the Coordination Committee (RCC/11, 5-6 May 2008) to be included in the 2008 Work Plan, in addition to network operation, support and maintenance, were the following: renewal with INTELSAT of the satellite service provision contract, follow-up to the activities regarding MEVA II/REDDIG interconnection implementation, REDDIG NCC and Management Centre operation alternation, 2008 training programme, holding of the third REDDIG technical-operational meeting, implementation of new services, and cost-benefit study for the improvement of the Linkway system's software. Important activities are also the logistics operations and the spare parts management.

2. Description

Renewal with INTELSAT of the satellite service provision contract

2.1 Taking into consideration that the satellite service provision agreement between ICAO and PanAmSat (now acquired by INTELSAT) ended in December 2008, the REDDIG Administration started coordinations with INTELSAT in April 2008 to renew said agreement and, to that end, requested a satellite segment service estimate for the same satellite band width, with a three-year service duration, and under the same terms as the initial agreement.

2.2 INTELSAT presented an estimate considering a three-year satellite segment service for the value of USD 231,264.00 per year, same annual amount as stipulated in the initial five-year duration service. Nevertheless, INTELSAT's initial position for the agreement's renewal was not to include the "exit clause", which permitted ICAO to terminate the agreement before the end of the complete service agreement period.

2.3 After the ICAO SAM Regional Office and the REDDIG Administration making the necessary arguments to the INTELSAT executives on the inclusion of the "exit clause", the agreement was finally signed and the clause was kept with the term '*Special Customer Termination Right*' of "FULL-TIME AGREEMENT-SERVICE ORDER #6803 – AMENDMENT 4".

2.4 The new agreement contemplates that the service will initially be provided by the IS-1R satellite (before PAS-1R) to continue in IS-14 satellite, replacement of IS-1R satellite.

2.5 The technical characteristics in the new agreement are the same as the previous one, presented in **Appendix A** to this working paper.

Follow-up to the activities regarding MEVA II/REDDIG interconnection implementation

2.6 At the Eleventh REDDIG Coordination Committee Meeting (RCC/11) information was provided as to how ICAO would proceed to carry out the necessary contractual aspects for the implementation of the MEVA II / REDDIG interconnection. In this respect, it was informed that the process would consist of two parts: the first, in the carrying out of a public bidding process for the purchase of the equipment necessary for MEVA II / REDDIG interconnection, and the second, the drafting of a service contract between ICAO and the MEVA network Service Provider, for the installation of the equipment necessary at the REDDIG nodes in Bogotá (Colombia) and Maiquetía (Venezuela), and for the recurrent costs necessary for the provision of the services at the interconnected network.

2.7 During RCC/11 meeting, the REDDIG budget was adjusted to include the costs necessary for equipment purchasing, installation and service provisions. In the 2008, 2009 and 2010 budgets, the equipment purchasing and recurrent costs for Brazil, Colombia, Peru and Venezuela were included.

2.8 The bidding process for the purchasing of the equipment started in May 2008. As a result, ICAO currently counts with all information regarding equipment costs. The list of the equipment budgeted is shown in **Appendix B** to this working paper.

2.9 With regard to the drafting of the contract between ICAO and the MEVA II Service provider for the implementation of the MEVA II/REDDIG interconnection, an agreement has been reached between ICAO and the MEVA II Service Provider as to the clauses therein.

2.10 In addition to the bidding process for equipment purchasing and the drafting of the contract between ICAO and the MEVA II Service Provider, ICAO elaborated, together with COCESNA, a document specifying the technical operational and administrative considerations between COCESNA and the REDDIG Administration (ICAO) for the MEVA II / REDDIG interconnection implementation, and the payment by COCESNA to REDDIG regarding recurrent services.

2.11 The MEVA II Service Provider changed the polarization at the MEVA II nodes from horizontal to vertical, with the aim of permitting the necessary connection between the MEVA II and REDDIG nodes.

2.12 The action plan for MEVA II / REDDIG interconnection, re-formulated during the Sixth MEVA II / REDDIG Coordination Meeting (MR/6) (Lima, 7-8 May 2008) was readjusted in correspondence to the afore indicated and is presented as **Appendix C**.

REDDIG NCC and Management Centre operation alternation

2.13 Following the recommendation made by the REDDIG Administration, the RCC/11 meeting agreed to continue alternating the operation of the REDDIG NCC and Management Centre between Ezeiza and Manaus.

2.14 In this respect, between 25 September and 10 October 2008, the NCC operation and the REDDIG Administration were temporarily transferred to Ezeiza, thus providing operational training to the SAEZ Node technical personnel. During this period, the operation of the NCC and the Management Centre was carried out normally. The spare part SUN equipment that had been sent from Lima was also configured at that time.

2.15 The Ezeiza SUN equipment were kept operating on line until 24 November 2008, for almost two months, with the purpose of verifying the SUN equipment's performance. During this time, the operation of the NCC and the Management Centre was carried out from Manaus.

2008 training programme

2.16 RCC/11 meeting, taking into account the training plan prepared by the REDDIG Administration and the Ad-hoc Group, agreed to hold the Basic Course on the REDDIG Station in 2008. The Agenda of the course is shown in **Appendix D** to this working paper.

2.17 Likewise, RCC/11 meeting also agreed that this basic course were dictated twice, one in Guyana, in English, and the other, in Venezuela, in Spanish. Argentina offered to dictate the course in Guyana, and so it was held.

2.18 The course in Guyana took place successfully from 25 to 29 August 2008 at the Georgetown, Guyana, Cheddi Jagan International Airport Control Tower. The summary of the course is shown in **Appendix E** to this working paper.

2.19 The course in Venezuela was successfully held in the Maiquetia, Venezuela, Instituto Nacional de Aviación Civil (INAC) ATC Building, from 3 to 7 November 2008. The summary of the course is shown in **Appendix F** to this working paper.

2.20 In total, at both courses, 51 delegates from Argentina, Brazil, France, Guyana, Paraguay, Peru, Suriname, Trinidad & Tobago, Uruguay and Venezuela participated.

Third REDDIG technical-operational meeting

2.21 The third REDDIG technical-operational meeting will be held in the last quarter of 2009. Further information in this respect is presented in WP/05, which describes the activities to be carried out in 2009.

Implementation of new services

2.22 Taking into consideration the implementation of new services in the SAM Region, which will run through REDDIG, the configurations previously incorporated in the networked were verified upon carrying out end-to-end connectivity tests, including routing equipment, between some REDDIG nodes such as SPIM-SAEZ, SGAS-SAEZ, SVMI-SBMN. Likewise, configurations were made to force double hoop satellite communications within REDDIG to test the VoIP application between the SBCT-Curitiba and SAEZ-Ezeiza nodes, passing through SBMN-Manaus. It is important to highlight that within REDDIG there is no double hoop satellite for communications between any of the nodes, since the REDDIG topology is full mesh.

Logistics operations and spare parts management

2.23 Logistics-related operations, mainly originated due to equipment failures, include remittance of REDDIG equipment or part of the spare parts lot from the storage in the Lima Regional Office, or from any other node having spare parts on loan, to the nodes who require them, coordination with the manufacturer for the repair of the equipment, payment for the transport of the equipment or spares, coordination and support to States for the import/export of the equipment and parts necessary at the nodes. This support also includes the purchase and transport of equipment requested by States for their respective nodes.

2.24 During 2008, twenty-one operations were carried out. To January 2009, two operations have been handled. Following is a summary of equipment and parts failure.

FRAD	Manufacturer: Memotec	
(2)	Power Supply Module	: (1) SBCT, (1) SYGC
(4)	Universal I/O Card	: (1) SYGC, (2) SGAS, (1) SCEL
(1)	Motherboard CX950	: (1) SGAS
(1)	V.35H Card	: (1) SGAS
(5)	Fast Ethernet Card	: (2) SEGU, (2) SVMI, (1) SBCT
(1)	E&M SLIM Card	: (1) SVMI
(8)	Internal Fan	: (4) SYGC, (1) SBRF, (2) SBCT, (1) SAEZ
MODEM	Manufacturer: ViaSat	
(7)	Linkway 2100	: (1) SAEZ, (1) SYGC, (2) TTZP, (2) SBMN, (1) SGAS
SSPA	Manufacturer: Paradise Datacom	
(3)	SSPA units	: (1) SKED, (1) SUMU, (1) SBRF
(11)	External Fan	: (2) SUMU, (4) SYGC, (1) SBRF, (4) TTZP
Others REDDIG		
(1)	Base Band Switch	: (1) SYGC

2.25 **Appendix H** to this working paper presents statistics pertaining to 2008 regarding the number of the requests for attention given to the network nodes, as well as their distribution as regards the type of equipment originating the request.

Cost-benefit study for the improvement of the Linway system software

2.26 This topic is analyzed in WP/04.

3. **Action suggested**

3.1 The Meeting is invited to:

- a) Take note of the information provided;
- b) Analyze the activities carried out by REDDIG project RLA 03/901 in 2008, presented in Section 2 of this working paper, and make recommendations in this regard, if necessary; and
- c) Analyze any other consideration the Meeting might deem necessary with regard to this Agenda Item.



FULL-TIME AGREEMENT - SERVICE ORDER #6803 - AMENDMENT 4

	Intelsat Information:	Customer Information:
Name:	Intelsat Corporation (formerly known as PanAmSat Corporation)	International Civil Aviation Organization
Place/Type of Organization:	A Delaware corporation	An entity of the United Nations
Address:	3400 International Drive NW	999 University Street
City/Country:	Washington, DC 20008-3006	Montreal, Quebec, Canada H3C 5H7
Attention:	Contracts Administrator, Legal Department	Mr. Ruben Gallego
Telephone:	(202) 944-6800	(514) 954-8219, ext. 8010
Facsimile:	(202) 944-7529	(514) 954-6287

This "Amendment 4" modifies that certain Full-Time Agreement - Service Order #6803 entered into between Intelsat, formerly known as PanAmSat Corporation, as successor in interest to PanAmSat International Systems, Inc. and Customer on March 22, 2002, as amended on July 26, 2002, October 10, 2003 and January 13, 2004 (the "Full-Time Agreement"), to extend the Service End Date, as set forth below. Defined terms not otherwise defined herein shall have the meanings ascribed to them in the Full-Time Agreement. This Amendment 4 shall be subject to the terms and conditions of the Full-Time Agreement. To the extent of a conflict between the terms and conditions of this Amendment 4 and the Full-Time Agreement, the terms and conditions of Amendment 4 shall control.

General Information

Agreement	Service Start Date	Service End Date	Non-Recurring Connection Fee	Service Fee	Security Deposit (Last Month)	Total Initial Payment
Service Order #6803	June 1, 2002	May 31, 2003	N/A	US\$249,660 per year	N/A	US\$249,660
Amendment 1	October 1, 2002	September 30, 2003	N/A	US\$249,660 per year	N/A	N/A
Amendment 2	October 1, 2003	December 31, 2003	N/A	US\$62,415 (Service Term)	N/A	US\$62,415
Amendment 3	January 1, 2004	December 31, 2008	N/A	See Payment Schedule Below	N/A	US\$168,849
Amendment 4	January 1, 2009	December 31, 2011	N/A	US\$231,264 per year	N/A	US\$231,264

Payment Schedule*

Months	Service Fee
January 1-2004 - December 31, 2004	US\$168,849 per year
January 1, 2005 - December 31, 2011	US\$231,264 per year

*Notwithstanding anything to the contrary set forth in the Master Agreement (defined below), the Service Fee for the entire year shall be paid in full on January 1 of each year. In accordance with the Payment Schedule Set forth above, Customer's next payment will be due on January 1, 2009. Customer's last payment shall be due on January 1, 2011.

Transponder Segment Service

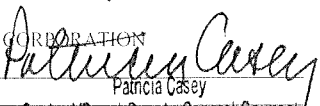
Satellite:	IS-1R (formerly known as PAS-1R) with follow-on Service to IS-14
Planned Orbital Location:	315° East
Beam(s):	US/Latin America Beam
Band:	C-Band
Bandwidth/Circuit:	4.38 MHz (NON-PREEMPTIBLE PREMIUM CAPACITY)

This Amendment 4 is subject to, and entered into in accordance with, that certain Master Services Agreement Number 6744 entered into by and between Intelsat and Customer, dated March 8, 2002 (the "Master Agreement"), which is incorporated herein by this reference. Any references to PanAmSat in the Master Agreement and/or this Full-Time Agreement (including any Attachments hereto or thereto) shall be deemed, in context, to refer to Intelsat. By signing below, Customer confirms receipt of and agreement to this Amendment 4, which, together with Service Order #6803 and the Attachments thereto, shall upon the Execution Date (defined below) thereafter collectively comprise the Full-Time Agreement:

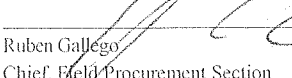
Attachment 1:	Transmission Parameters (attached to Amendment 2)
Attachment 2:	Service Attachment for Transponder Segment Services (attached to Service Order #6803)
Attachment 3:	Operational Requirements For Intelsat Satellites (attached to Service Order #6803)
Attachment 4:	Special Terms and Conditions (attached hereto)

Each of the parties has duly executed and delivered this Amendment 4 as of the latest date set forth below (the "Execution Date").

INTELSAT CORPORATION

By: 
Name: Patricia Casey
Title: Senior VP and Deputy General Counsel
Date: NOVEMBER 10, 2008

INTERNATIONAL CIVIL AVIATION ORGANIZATION

By: 
Name: Ruben Gallego
Title: Chief, Field Procurement Section
Date: 06 Nov 2008

APPENDIX B / APENDICE B

**LIST OF EQUIPMENT TO PURCHASE THROUGH THE ICAO TCB FOR THE MEVA II /
REDDIG INTERCONNECTION /
LISTA DE EQUIPO A ADQUIRIR A TRAVES DE TCB OACI PARA LA INTERCONEXION
MEVA II / REDDIG**

LOCATION / LOCALIDAD	ADDITIONAL EQUIPMENT/PARTS NEEDED EQUIPO ADICIONAL/PARTES REQUERIDOS	QUANTITY/ CANTIDAD
COCESNA/ Tegucigalpa Honduras	ViaSat, Linkway 2100 with 1 frame-relay card and V.35 cable	1
	2-port L-band Splitter (1 port with DC block)	2
	2-port L-band Combiner (1 port with DC block)	2
Caracas/Venezuela	ViaSat, Linkway 2100 with frame-relay card and V.35 cable	1
	Memotec DAV Card (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 (1 port with DC block)	3
	2-port L-band Combiner (1 port with DC block)	3
	Paradise Datacom, Standard C-Band 75W SSPA, Internal BUC with 10 MHz External Reference	2
Bogota/Colombia	ViaSat, Linkway 2100 with 1 frame-relay card and V.35 cable	1
	Memotec DVP2 E-1 Daughter Card (1 for MPS A, 1 for MPS B)	2
	2-port L-band Splitter (1 port with DC block)	3
	2-port L-band Combiner	3
Ecuador	Memotec DVP2 E-1 Daughter Card (1 for MPS A, 1 for MPS B)	2

APPENDIX C / APENDICE C

UPDATED ACTION PLAN FOR IMPLEMENTATION OF MEVA II AND REDDIG INTERCONNECTIONS
PLAN DE ACCIÓN ACTUALIZADO PARA LA IMPLANTACIÓN DE LAS INTERCONEXIONES MEVA II Y REDDIG

Date/Fecha: February/Febrero 2009

Item No.	Action / Acción	Responsible / Responsable	Completion Date / Fecha de Finalización	Status- Encountered Difficulties / Estado-Dificultades encontradas
1	2	3	4	5
1	RFP Completion/Finalización del RFP	COCESNA	30-Apr-07	Completed / Finalizado
2	Required connections: / Conexiones requeridas: Aruba COCESNA Ecuador Colombia Peru Venezuela Brazil / Brasil Panama United States / Estados Unidos Jamaica Curacao / Curazao	MEVA II Service Provider and REDDIG Administration / Proveedor Servicio MEVA II y Administración REDDIG	30-Apr-07 / 30-Abr-07	Completed / Finalizado
3	Identification of Current Equipment / Identificación de Equipo Actual	MEVA II Service Provider and REDDIG Administration / Proveedor Servicio MEVA II y Administración REDDIG	28 Sep-07	Completed / Finalizado
4	Completion of SLA / Finalización de SLA	MEVA II Service Provider and REDDIG Administrator / Proveedor Servicio MEVA II y Administración REDDIG	Mar/09	Valid/Valido Is part of the Service Contract/Es parte del Contrato de Servicio

Legend / Leyenda:

MoU: Memorandum of Understanding / Memorando de Entendimiento

RFP: Request for Tecnical and Econmic Proposal / Solicitud de Propuestas Técnicas y Económicas

SLA: Service Level Agreement / Acuerdo de Nivel de Servicio

Item No.	Action / Acción		Responsible / Responsable	Completion Date / Fecha de Finalización	Status- Encountered Difficulties / Estado-Dificultades encontradas
1	2		3	4	5
5	Review of RFP / Revisión de RFP		MEVA II and REDDIG Members / Miembros MEVA II y REDDIG	29 June -07/ 29 Junio 07	Completed / Finalizado The RFP was reviewed and approved by all MEVA II / REDDIG Member Administrations. / El RFP fue revisado y aprobado por todas las Administraciones miembros de las redes MEVA II y REDDIG.
6	Proposals response / Respuesta de propuestas		MEVA II Service Provider and REDDIG Administration / Proveedor Servicio MEVA II y Administración REDDIG	26 Sep.-07	Completed / Finalizado The response for the RFP from the MEVA II Service Provider and REDDIG Administration was presented at the MR/5 Meeting/ Las respuestas al RFP por parte del Proveedor de Servicio MEVA II y la Administración de la REDDIG se presentó en la Reunión MR/5.
7	Proposals review / Revisión de propuestas		Coordination meeting / Reunión de coordinación	5 Oct.-07	Completed / Finalizado The proposal was reviewed in the MR/5 Meeting. / La propuesta se revisó en la Reunión MR/5.
8	Focal Point nomination / Nominamiento Punto Focal	Send a letter to MEVA II / REDDIG Member Administrations / Envío carta a las Administraciones miembros de las redes MEVA II y REDDIG.	ICAO Regional Offices / Oficinas Regionales OACI	15 Oct. 07	Completed / Finalizado The ICAO Regional Offices sent to the States/Organization involved in the MEVAII REDDIG interconnection a letter in order to nominate focal points. Las oficinas regionales de la OACI enviaron una carta invitando los Estados/Organización involucrados en la interconexión la nominación de puntos focales.

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1	2		3	4	5
		Focal point designation/ Designación punto focal	MEVA II and REDDIG Members involved / Miembros de MEVA II y REDDIG involucrados	30-Oct-07	Completed / Finalizado All the States/Organization members of MEVA II and REDDIG network involved in the interconnection nominated focal points. Todos los Estados/Organización miembros de la REDDIG y MEVA II involucrados en la interconexión nominaron puntos focales.
9	Application of MoU reviewed / Aplicación del MoU revisado		MEVA II / REDDIG Member Administrations / Administraciones miembros de las redes MEVA II y REDDIG	30-Oct-07	Completed / Finalizado The ICAO Regional Offices sent to the States/Organization of MEVA II and REDDIG network in order to sign the MoU reviewed.
10	Review and acceptance of equipment costs for the MEVA II / REDDIG interconnection by the REDDIG Member Administrations / Revisión y aceptación por parte de las Administraciones Miembros de la REDDIG sobre costo de equipamiento para la interconexión MEVA II / REDDIG		All the REDDIG Member States / Todos Estados miembros de REDDIG	30 Oct-07	Completed / Finalizado No comments were received No se recibieron comentarios al respecto
11	Review and acceptance of equipment costs for the MEVA II / REDDIG interconnection by the MEVA II Member Administrations involved / Revisión y aceptación por parte de las Administraciones Miembros de la MEVA II involucradas sobre costo de equipamiento para la interconexión MEVA II / REDDIG		Aruba, Curaçao, Jamaica, Panama, USA (Miami and Puerto Rico) and COCESNA / Aruba, Curaçao, Jamaica Panamá, USA (Miami y Puerto Rico) y COCESNA	30 Oct -07	Completed / Finalizado No comments were received No se recibieron comentarios al respecto

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Item No.	Action / Acción	Responsible / Responsable	Completion Date / Fecha de Finalización	Status- Encountered Difficulties / Estado-Dificultades encontradas
1	2	3	4	5
12	Review and acceptance of proposed recurrent costs for the MEVA II / REDDIG interconnection/ Revisión y aprobación costos recurrentes propuestos para la interconexión MEVA II REDDIG	MEVA II/ REDDIG Member Administrations involved / Administraciones Miembros de la MEVA II y REDDIG involucradas	30 Oct- 07	Completed / Finalizado No comments were received No se recibieron comentarios al respecto
13	Revised MoU Signature / Firma del MoU Revisado	MEVA II and REDDIG Members / Miembros MEVA II y REDDIG	30 Nov 07	Completed / Finalizado The following States sent the MoU reviewed signed/Los siguientes Estados enviaron el MoU revisado firmado: Argentina, Brasil, Chile, Cuba, COCESNA, Estados Unidos, Guyana, Peru y/and Uruguay
14	Review, approval and signing of contracts or contract amendments to carry out the MEVA II / REDDIG interconnection presented by the MEVA II Service Provider / Revisión, aprobación y firma de los contratos o enmienda de los mismos para llevar a cabo la interconexión MEVA II/REDDIG presentada a través del Proveedor de Servicio de la MEVA II	MEVA II Member Administrations involved and REDDIG Administration / Administraciones Miembros de la MEVA II involucradas y Administración REDDIG	Mar/ 2009	ICAO reviewed and coordinate with AGS the contract for the provision of the interconnection of the MEVA II and REDDIG Satellite Telecommunication network. The Review contract was accepted by both parts and its signature is pending. La OACI revisó y coordinó con AGS el contrato para la provisión de la interconexión de las redes de telecomunicaciones por satélite MEVAII y REDDIG quedando pendiente la firma del mismo. e tomada después de un largo periodo de diciembre de 2007 a abril de 2008. Para la adquisición del equipo se procederá a un proceso de licitación publica y por lo cual Cooperación Técnica de la

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1	2	3	4	5
				OACI procederá según este proceso. Para los costos de los servicios se consideró que AGS modificara el contrato de forma tal que incluyera solamente los costos de los servicios.

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1	2	3	4	5
15	To ensure that all MEVA II and REDDIG nodes work with IS-IR Satellite, using Band C transponder with US/Latin America hemispheric beam and Co-Linear Vertical polarization / Asegurar que todos los nodos de la MEVA II y REDDIG operen en el satélite IS-1R, empleando transpondedores de banda C con haz hemisférico US/Latin America y polarización co-lineal vertical.	MEVA II Service Provider and REDDIG Administration/ Proveedor Servicio MEVA II/ Administración REDDIG	30 Nov 07 Nov /08	Completed / Finalizado In the month of November 2008 AGS proceeded to change the polarity from horizontal to vertical of the MEVA II nodes. With this implementation all the preliminary requirements for the interconnection were satisfied. En el mes de noviembre de 2008 AGS procedió a la implantación del cambio de polaridad de horizontal a vertical de los nodos de la MEVA II. Con esta implantación todos los requerimientos preliminares para la interconexión MEVAII REDDIG están satisfechos.

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1	2	3	4	5
16	Equipment and spare parts acquisition for MEVA II/REDDIG interconnection/ Adquisición de equipamiento y repuestos para la interconexión MEVA II / REDDIG.	REDDIG Administration and MEVA II involved Member Administrations / Administración de la REDDIG y Administraciones Miembros de la MEVA II involucradas	Mar/ 09	The ICAO Technical Cooperation completed the bid process in the month of May 2008. The purchase of the equipments will be made once ICAO signs the Contract for the provision of the interconnection of the MEVA II and REDDIG Satellite Telecommunication network. with AGS La Cooperación Técnica de la OACI completó el proceso de licitación para la adquisición de los equipos en mayo de 2008. La adquisición de los equipos se hará una vez que la OACI firme el contrato para la provisión de la interconexión de las redes de telecomunicaciones por satélite MEVAII y REDDIG con AGS.
17	Site survey for Bogota, Caracas and COCESNA, / Inspección sitio para Bogota, Caracas and COCESNA,	MEVA II Service Provider and REDDIG Administration / Proveedor MEVA II y Administración REDDIG	May/ 09	Site survey is considered as part of the services to be provided. El estudio de sitio se considera parte de los servicios a ser provistos.
18	Site preparation for equipment installation for MEVA II / REDDIG interconnection / Preparación de los sitios para albergar equipamiento para la interconexión MEVA II / REDDIG	Colombia, Venezuela and/y COCESNA	Jun/09	
19	Delivery of purchased equipment at the required sites. / Entrega de equipamiento adquirido en los sitios requeridos	MEVA II Service Provider and REDDIG Administration / Proveedor de Servicio MEVA II y Administración REDDIG	Jul/09	

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1	2	3	4	5
20	Equipment installation / Instalación equipamiento	MEVA II Service Provider and REDDIG Administration / Proveedor de Servicio MEVA II y Administración REDDIG	Jul/09	
21	Satellite line-up, configuration of site equipment and NCC for the interconnection/ Line-up satelital, configuración equipamiento en sitio y NCC para interconexión	MEVA II Service Provider and REDDIG Administration / Proveedor de Servicio MEVA II y Administración REDDIG	Jul/09	
22	End-to-end trials for voice and data circuits / Pruebas de extremos a extremos para los circuitos de voz y datos	MEVAII Service Provider and REDDIG Administration / Proveedor de Servicio MEVA II y Administración REDDIG	Aug/09	
23	System Performance Evaluation / Evaluación de la performance del sistema	MEVA II Service Provider and REDDIG Administration / Proveedor de Servicio MEVA II y Administración REDDIG	Aug/09	
24	Service acceptance / Aceptación de los servicios /	MEVA II / REDDIG Member Administrations / Administraciones miembros de las redes MEVA II y REDDIG	Sep/09	
25	MEVA II / REDDIG Interconnection Implementation / Implantación de la interconexión MEVA II / REDDIG	MEVA II / REDDIG Member Administrations, MEVA II Service Provider and REDDIG Administrator / Administraciones miembros de las redes MEVA II y REDDIG, Proveedor Servicio MEVA II y Administración REDDIG	Sep/09	

Legend / Leyenda:

MoU: Memorandum of Understanding / Memorando de Entendimiento

RFP: Request for Tecnical and Econmic Proposal / Solicitud de Propuestas Técnicas y Económicas

SLA: Service Level Agreement / Acuerdo de Nivel de Servicio

APPENDIX D

BASIC COURSE ON REDDIG OPERATION AND MAINTENANCE

AGENDA

1.1 **Network Description**

- a) Services
- b) Theory of operation
- c) Mode of operation
 - Topology
 - Frequencies plan
 - Communications Sub-network (FR based)
 - Monitoring and Control Sub-network (IP based)
- d) Control and Management Centres (NCC/NMS)
- e) REDDIG stations

1.2 **REDDIG Station**

- a) Equipment rack
- b) Internal equipment (IDU)
 - PC Linux
 - i. Hardware
 - ii. Software
 - Voice and data interfaces
 - Base band switcher
 - FRAD Memotec
 - i. Hardware: MPS/MUX; Cards
 - ii. Software
 - MODEM Linkway 2100
 - i. Hardware: Módulos MODEM, FR, IP
 - ii. Software
- c) External equipment (ODU)
 - Antenna 3.7M
 - SSPA Paradise Datacom
 - i. Software M&C
 - LNB
 - Wave guidance switchers
 - i. Interconnection cables

1.3 **Station Maintenance**

- a) AC power feeding system
- b) Ground system
- c) IDU and ODU equipment cleaning plan

APPENDIX E

BASIC COURSE ON REDDIG OPERATION AND MAINTENANCE

(Georgetown, Guyana, 25 to 29 August)

BRIEF ON THE COURSE

1. **Site and duration**

1.1 The Basic Course on REDDIG Operation and Maintenance was carried out in the facilities of the Cheddi Jagan International Airport Control Tower, in Georgetown, Guyana, from 25 to 29 August 2008.

2. **Opening and closing ceremonies**

2.1 Mr. Zulficar Mohammed, Director General and Civil Aviation Authority, welcomed the participants to this course and thanked ICAO for the holding of this course in Guyana, highlighting the importance of training the technical personnel working in civil aviation. The closing ceremony was carried out by Ms. Chaitrani Heeralall, ANS Director.

3. **Instructors**

3.1 The course was dictated by Mr. Cristian Javier Vittor, Argentina Air Force, with the assistance of Mr. Luis Alejos, REDDIG Administrator.

4. **Languages**

4.1 The course was dictated in English.

5. **Contents of the course**

5.1 At the end of the course, a 279MB CD was delivered to each participating State, which contained the presentations made during the development of the course's agenda, as well as complementary technical information, such as the "REDDIG Operations & Maintenance Manual", technical manuals on the REDDIG equipment, general equipment maintenance procedures, among others.

6. **Participants**

6.1 The course counted with the participation of 14 delegates from France, Guyana, Suriname and Trinidad & Tobago.

APPENDIX F

BASIC COURSE ON REDDIG OPERATION AND MAINTENANCE

(Maiquetía, Venezuela, 3 to 7 November 2008)

BRIEF ON THE COURSE

1. Site and duration

1.1 The Basic Course on REDDIG Operation and Maintenance was carried out in the facilities of the ATC Building of the ATC del Instituto Nacional de Aviación Civil (INAC), in Maiquetía, Venezuela, from 3 to 7 November 2008.

2. Opening and closing ceremonies

2.1 Lt. Col (Av.) Rafael Torres, General Manager, Air Navigation Services, INAC, welcomed the participants to this course, highlighting the importance of training the technical personnel working in civil aviation. Words were also heard from Lic. María Salazar, Jefe Oficina Relaciones con la Aviación Civil and Mr. Florentino Pérez, Jefe División de Equipos de Ayuda a la Navegación Aérea.

2.2 The closing ceremony was carried out by Messrs. Florentino Pérez and Luis Escobar, Chief, Communications Department, Maiquetia Region.

3. Instructors

3.1 The course was dictated by Mr. Luis Alejos, REDDIG Administrator.

4. Languages

4.1 The course was dictated in Spanish.

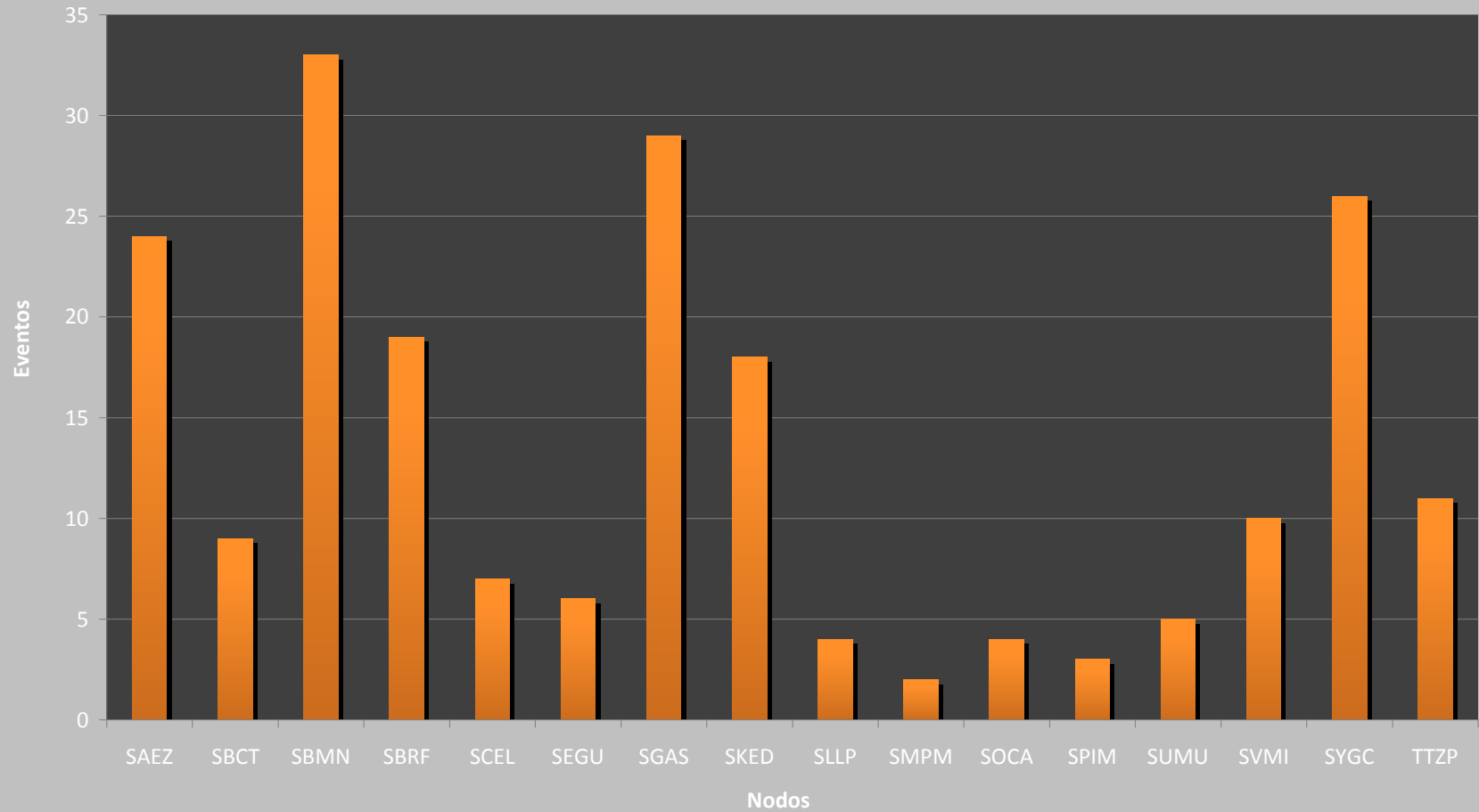
5. Contents of the course

5.1 At the end of the course, a 279MB CD was delivered to each participating State, which contained the presentations made during the development of the course's agenda, as well as complementary technical information, such as the "REDDIG Operations & Maintenance Manual", technical manuals on the REDDIG equipment, general equipment maintenance procedures, among others.

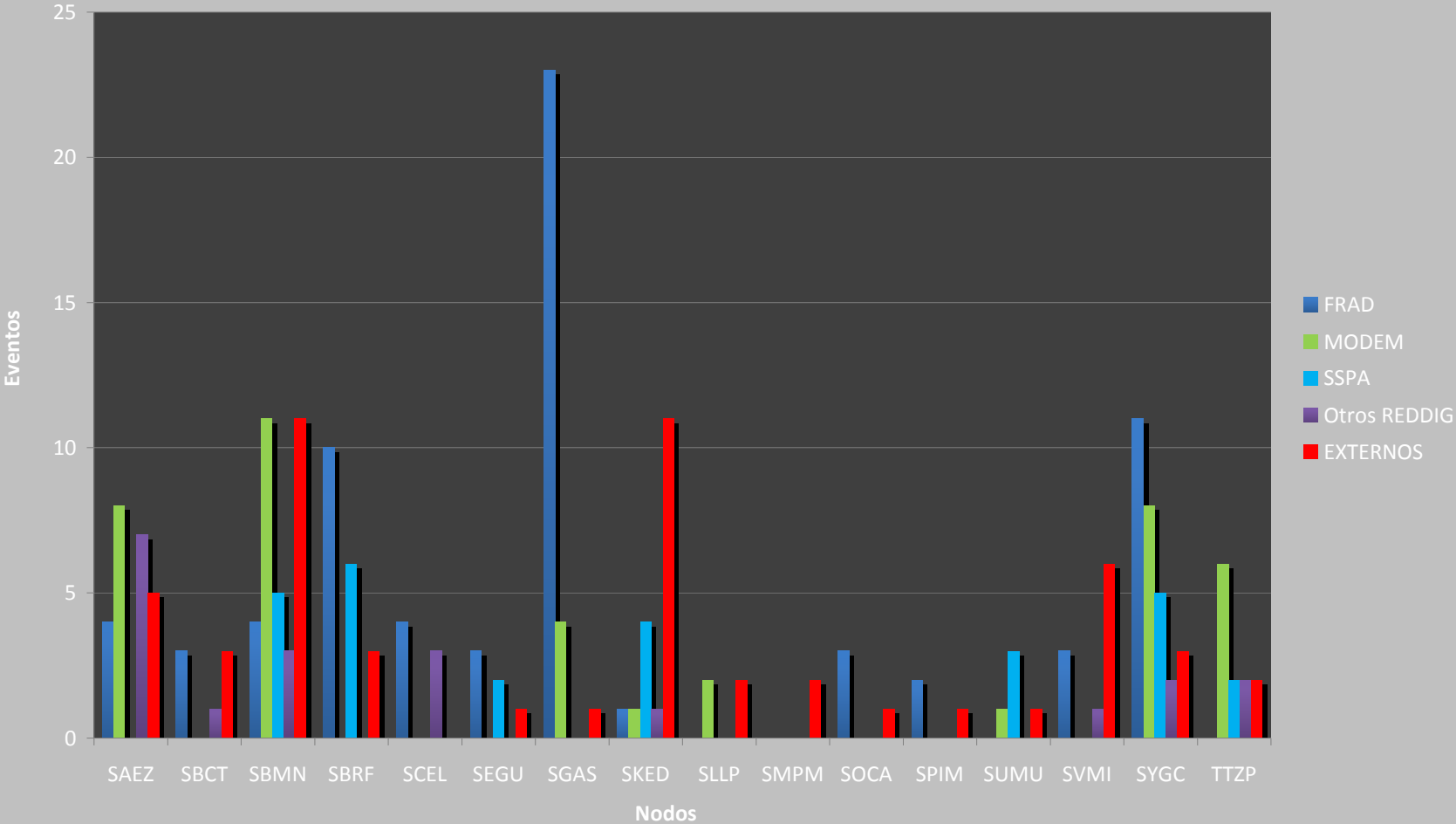
6. Participants

6.1 The course counted with the participation of 37 delegates from Argentina, Brazil, Paraguay, Peru, Uruguay and Venezuela.

REDDIG 2008
SERVICE TO NODES / ATENCIONES A LOS NODOS = 210



REDDIG 2008 DISTRIBUTION OF SERVICE/DISTRIBUCION DE ATENCIONES



REDDIG 2008
DISTRIBUTION OF SERVICE BY EQUIPMENT CATEGORY /
DISTRIBUCION DE ATENCION POR CATEGORIA DE EQUIPO

