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Международная
организация
гражданской
авиации

منظمة الطيران
المدني الدولي

国际民用
航空组织

LN 3/20.1 – SA5357

6 August 2010

For: Mr. Pierre Dubois, Regional Director, ANS French Antilles and Guyana
Mr. Zulficar Mohamed, Director a.i., CAD Guyana
Mr. S. Saboerali, Director a.i., NCAA Suriname

Subject: **RLA/03/901 REDDIG – Technical-Operative Meeting on Communications
Networks and Data Transmission** (Lima, Perú, 11-15 October 2010)

Requested

Action: Your reply not later than 17 September 2010

Dear Sir,

I have the honor to inform you that according to the plan of activities of the RLA/03/901 Regional Project (REDDIG Management System and Satellite Segment Administration) approved for this year, a Technical-Operative Meeting on Communications Networks and Data Transmission will be held from 11 to 15 October, 2010 with the support of the Peruvian Corporation of Airports and Commercial Aviation (CORPAC S.A.) at the premises of its Civil Aviation Training Centre (CATC), located at the Lima / Callao Jorge Chavez International Airport.

The objective of the event is to update the technical staff in charge of the REDDIG maintenance in the communications networks and data transmission field, with special emphasis on aeronautical applications. The schedule and agenda of the event are presented in **Appendix A** to this document.

The event will be supported by instructors with recognized teaching experience within Peruvian universities, INEO Engineering & Systems personnel and ICAO through the REDDIG Administration.

Participants will receive updated information on communications networks and data transmission, with particular emphasis on aeronautical applications, allowing them to increase their skills and enhance the operational availability of the REDDIG.

To attend this event the following financing alternatives should be considered:

- a) Fellowships from an ICAO technical cooperation project approved for your State;
- b) Fellowships from the RLA/06/901 Regional Project, having two for each participant State in this project that does not count with the previous alternative, in which case the interested administration shall provide the round-trip air tickets; or
- c) Own resources of your administration, in the lack of any of the previous alternatives.

In accordance with the above, I am pleased to invite your administration to propose participants, completing the registration form contained in **Appendix B** and, if applicable, the application form for a ICAO fellowship (**Appendix C**) and submitting them to this Office no later than 17 September 2010. The reservation of vacancies will be handled on a first come first served basis.

General information on the venue and other useful information will be sent in due course.

Accept, Sir, the assurances of my highest consideration.



Franklin Hoyer
Regional Director
South American Office
Lima

cc.: Mr. M. Philippe Guivarch, Executive Manager, ANS French Antilles-Guyane
REDDIG Counterparts
ICAORD Mexico (for transmission to Trinidad and Tobago)
A/D/TCB for C/FAM

Atts.

APPENDIX A

**REGIONAL PROJECT RLA/03/901
REDDIG MANAGEMENT SYSTEM AND SATELLITE SEGMENT ADMINISTRATION**

**TECHNICAL-OPERATIVE MEETING ON COMMUNICATIONS NETWORKS
AND DATA TRANSMISSION**

(Lima, Peru, 11-15 October 2010)

SCHEDULE AND AGENDA OF THE EVENT

Hours	Monday 11
08:00 - 09:00	08:00 Registry
	08:45 Inaugural Session
09:00 – 10:45	<p>-- Introduction --</p> <p>1 Communications systems generalities</p> <ul style="list-style-type: none"> a. Data transmission b. Networks and their criteria c. Protocols and standards <p>2 Basic concepts</p> <ul style="list-style-type: none"> a. Link configuration b. Topology c. Transmission mode d. Network classes
10:45 - 11:00	<i>Coffe break</i>
11:00 - 12:45	<p>3 Signals, Coding and Modulation</p> <ul style="list-style-type: none"> a. Digital signals b. Analogical to digital conversion c. Digital to analogical conversion <p>4 Error correction and link control</p> <ul style="list-style-type: none"> a. Type of errors b. Detection and error correction c. Flux control d. Error control
12:45 - 13:30	<i>Break for lunch</i>
13:30 - 15:00	<p>5 Data transmission interfaces</p> <p>6 Data transmission media</p> <ul style="list-style-type: none"> a. Guided media (Plaited pair cable, coax cable, wave guide and optical fibre) b. Non-guided media (radio frequency and propagation, microwaves, via satellite) c. Transmission deterioration d. Media comparison
15:00 – 15:15	<i>Coffe break</i>

15:15 – 17:00	<p>7 Multiplexation</p> <ul style="list-style-type: none"> a. Frequency division (FDM) b. Time division (TDM) c. Applications and ranks <p>8 OSI Mode</p> <ul style="list-style-type: none"> a. Architecture and model levels b. Functions and levels interconnection
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Horario	Tuesday 12
09:00 – 10:45	<p>9 Data Link Protocols</p> <ul style="list-style-type: none"> a. Asynchronical and synchronic protocols b. Character-oriented protocols c. Bit-oriented protocols (HDLC) <p>10 LAN networks</p> <ul style="list-style-type: none"> a. Architecture types b. Access methods
10:45 - 11:00	<i>Coffe break</i>
11:00 - 12:45	<p>11 LAN networks</p> <ul style="list-style-type: none"> c. 802 Project and standards d. Network comparison <p>12 Commuting</p> <ul style="list-style-type: none"> a. Circuits commuting b. Packages commuting c. Messages commuting <p>13 Telephone network applications</p> <ul style="list-style-type: none"> a. PPP protocol b. ISDN service
12:45 - 13:30	<i>Break for lunch</i>
13:30 - 15:00	<p>13 Frame Relay (Plot retransmission)</p> <ul style="list-style-type: none"> a. Operation b. Levels and congestion control
15:00 – 15:15	<i>Coffe break</i>
15:15 – 17:00	<p>13 Frame Relay (Frame retransmission)</p> <ul style="list-style-type: none"> c. Traffic control d. REDDIG Applications and use

Horario	Wednesday 13
09:00 – 10:45	14 Network devices and networks interconnection a. Repeaters b. Bridges c. Routers and algorithm d. Protocol converters (Gateways)
10:45 - 11:00	<i>Coffe break</i>
11:00 - 12:45	15 TCP/IP Protocols set a. TCP/IP – Internet – OSI
12:45 - 13:30	<i>Break for lunch</i>
13:30 - 15:00	15 TCP/IP Protocols set b. Network level - IP Protocol c. Addressing and sub-networks
15:00 – 15:15	<i>Coffe break</i>
15:15 – 17:00	15 TCP/IP Protocols set d. Other protocols at network level e. Transportation level

Horario	Thursday 14
09:00 – 10:45	15 TCP/IP Protocols set f. Client – server model
10:45 - 11:00	<i>Coffe break</i>
11:00 - 12:45	15 TCP/IP Protocols set g. Client – server applications: TELNET, FTP, SMTP, SNMP h. IPv4 and IPv6
12:45 - 13:30	<i>Break for lunch</i>

13:30 - 15:00	15 TCP/IP Protocols set i. Routers programming
15:00 – 15:15	<i>Cofffe break</i>
15:15 – 17:00	15 Set TCP / IP protocols j. REDDIG applications and uses

Horario	Friday 15
09:00 – 10:45	Aeronautical Communications Networks Presentation by INEO a. New technologies and trends in satellite networks b. Voice satellite communications for ground-air service
10:45 - 11:00	<i>Cofffe break</i>
11:00 - 12:45	16 IP aeronautical applications a. AMHS
12:45 - 13:30	<i>Break for lunch</i>
13:30 - 15:00	16 IP aeronautical applications b. Radar data exchange
15:00 – 15:15	<i>Cofffe break</i>
15:15 – 17:00	16 IP aeronautical applications c. GNSS d. CNS/ATM applications integration Certificates and Closing



APPENDIX B

**INTERNATIONAL CIVIL AVIATION ORGANIZATION
South American Office**

**REGIONAL PROJECT RLA/03/901
REDDIG MANAGEMENT SYSTEM AND SATELLITE SEGMENT ADMINISTRATION**

**TECHNICAL-OPERATIVE MEETING ON COMMUNICATIONS NETWORKS AND
DATA TRANSMISSION**

(Lima, Peru, 11-15 October 2010)

REGISTRATION FORM

1. State: _____

2. Name/Passport: _____

3. Title: _____

4. Participates as:

Delegate

Lecturer

5. Business address: _____

6. Tel.: _____ Fax: _____ E-mail: _____

7. Hotel or local address: _____

8. Flight information: Arrival flight/date/ hour: _____

Departure flight/date/hour: _____

Signature: _____ Date: _____



**INTERNATIONAL CIVIL AVIATION ORGANIZATION
TECHNICAL ASSISTANCE BUREAU**

GUIDE FOR THE COMPLETION OF ICAO FELLOWSHIP NOMINATION FORM

(This sheet should be detached by the originator prior to submitting the attached Fellowship Nomination Form to the local or regional UNDP Office for transmission to ICAO)

It is in the interests of Governments to ensure that the attached Nomination Form is fully completed for each nominee in *original and two copies*. All Nomination Forms should be submitted to the local UNDP Resident Representative who will then forward three copies to the appropriate ICAO Regional Representative. Nomination Forms should be received at the ICAO Regional Office at least *six months prior* to the starting date of the proposed courses.

PART I — NOMINATION BY GOVERNMENT

Please note the following:

Paragraph 1 should indicate the *main* field of training as specified in SECTION I — LIST OF TRAINING COURSES of the ICAO TRAINING DIRECTORY.

Paragraph 2 should provide *specific* details as regards Host Countries, Training Institutes and Courses, e.g. Air Traffic Control — Aerodrome and Approach Control, Procedural; Aircraft Maintenance — Boeing 737 Air Frame and Powerplant Systems should be shown instead of general phrases such as ATC, Aircraft Maintenance, etc.

Paragraph 4. The objectives of the Fellowship should be stated concisely and accurately.

PART II — NOMINEE'S PERSONAL HISTORY

The technical and/or specialized training data is indispensable in the formulation of the Fellow's programme to indicate what prerequisite/basic or advanced course may have to be added/eliminated to achieve the optimum result. The employment data is also an essential ingredient in the formulation of the programme, as it helps to define the type and level of the requested training.

PART III — LANGUAGE TEST

Unless a Fellow has had his/her academic education, especially High School and/or College, in the language of instruction to be used by the Host Countries proposed for the Fellowship, it is essential that a Language Test be administered at a certified Language School or at the local Embassy/Council of the Host Country to ascertain that the Fellow understands, reads, writes and speaks the instructional language sufficiently well to receive instruction in it.

PART IV-A and PART IV-B — MEDICAL REPORTS

It is essential that a nominee be healthy and free of any sickness which may require further examination and/or treatment during the tenure of the Fellowship. ICAO/UNDP will not pay any medical expenses incurred by a Fellow for sicknesses existing prior to the starting date of his/her Fellowship. Such expenses must be borne by the Fellow and/or his/her Government. A prospective Fellow must be examined by a medical doctor recommended by the local UNDP Office. Flight Crew Members and Air Traffic Controllers should take a thorough medical examination (Part IV-B) as specified in ICAO Annex 1, Chapter 6, paragraph 6.6, if they are pursuing a course leading to the award of a licence. All others should take a general physical examination including a chest X-ray (Part IV-A).

INTERNATIONAL CIVIL AVIATION ORGANIZATION FELLOWSHIP NOMINATION FORM

NOTE: This form is available in English, French and Spanish.
Each item must be completed in full and all entries should be typewritten or written in block letters. The completed form should be forwarded in triplicate to ICAO through the Office of the UNDP Resident Representative for the country concerned at least six months prior to the starting date of the proposed programme. The UNDP Resident Representative will in turn forward the completed Form in triplicate to the appropriate ICAO Regional Representative.

PART I – NOMINATION BY GOVERNMENT

The Government of _____ hereby:

1. Nominates: Mr./Mrs./Ms.* _____
(family name) (first name) (middle name)

for an ICAO fellowship in the field of _____
(Please identify main Field of Training in accordance with the ICAO Training Directory, Section I – List of Training Courses)

2. Requests the following programmes of training under this fellowship:

(List in chronological sequence the various stages of training or study envisaged and identify the level as *ab initio*, advanced, refresher, further specialization, familiarization tour, on-the-job training (OJT), etc. If space is insufficient, please attach additional sheet using the same format.)

Host Country(ies)	Training Institute(s) (firms/organizations)	Specific Courses	Period		Duration (weeks)
			from	to	
Total duration					

NOTE: The final fellowship study programme will be prepared by ICAO in consultation with the host countries and/or institutions, as the case may be. It may differ in detail, particularly regarding the duration of training and choice of host countries, from that requested. However, the objectives of the requested training programme will be respected by ICAO whenever possible.

* delete that which is not applicable.

INTERNATIONAL CIVIL AVIATION ORGANIZATION FELLOWSHIP NOMINATION FORM

PART I – cont'd

3. Requests that this fellowship be financed under the following technical co-operation programme:
(Check as appropriate and insert project number.)

- | | | |
|-----------------------------------|--------------------|-----------------|
| ! UNDP Country Programme | Project No.: _____ | Post No.: _____ |
| ! UNDP Regional Programme | Project No.: _____ | |
| ! UNDP Interregional Programme | Project No.: _____ | |
| ! Trust Funds agreement with ICAO | Project No.: _____ | |

4. Declares that the objectives of this fellowship are:

5. Agrees that it will/will not* assume responsibility for the nominee's transportation costs to and from host country(ies)

6. Certifies that:

- a) The nominee is obligated to return to his/her country, on completion of the fellowship programme for duty assignment in civil aviation for a minimum period of _____ years.
- b) The nominee's employment status, rights, salary and seniority will not be adversely affected, during the period of his/her absence, under the fellowship.
- c) All sections of this Nomination Form have been duly completed and the Nominee is suitable for the proposed Training Programme.
- d) Nomineeis/will be in possession of a valid passport which does not expire before the termination date of the Fellowship.

Date: _____

Signature of Civil Aviation Authority

Name: _____
(type or print)

Title: _____
AFFIX OFFICIAL SEAL OR STAMP

OBSERVATIONS BY ICAO PROJECT MANAGER/MISSION CHIEF

I certify that all sections of this Nomination Form have been duly completed and the Nominee is suitable for the proposed Training Programme.

Date: _____

Signature

* delete that which is not applicable.

INTERNATIONAL CIVIL AVIATION ORGANIZATION FELLOWSHIP NOMINATION FORM

PART II – NOMINEE’S PERSONAL HISTORY

1. Name	2. Marital Status	3. Date of birth:			
4. Private address (for mailing purposes):					
5. Name and address of person to be notified in case of emergency (other than the government authorities):					
6. Language ability: a) Mother tongue _____ b) Language/s used in Primary and Secondary school _____ c) Other language/s of which nominee has a working knowledge _____ d) Language/s to be used in proposed fellowship programme _____					
7. School education record:					
	Period				
Name/Town/Country of School/s	from	to			
Grade completed and certificate acquired					
8. College/University education record:					
		Period			
Name of college/university	Subject/s studied	from	to		
Degree/Dip. acquired					
9. Technical and/or specialized training record: (If you have graduated with a diploma or degree indicate under "subject/s studied" only the major subject/s studies. Otherwise indicate all the subjects studied.)					
		Period			
Name and place of Training Institute	Subject/s studied	from	to	Duration	Diploma/Cert. acquired

INTERNATIONAL CIVIL AVIATION ORGANIZATION FELLOWSHIP NOMINATION FORM

PART II – cont'd

10. Employment record:
 (Indicate last five years and/or two positions)

Employer (name of firm/org.)	Position last held	Period		Duties and Responsibilities
		from	to	

11. Nominee's statement:

- (i) I understand that the ICAO fellowship will not become effective and no travel can be undertaken until I receive written notification and instructions of the award from ICAO.
- (ii) Should I be awarded this fellowship I hereby undertake to:
 - a) Conduct myself, at all times, in a manner compatible with my status as holder of an ICAO fellowship;
 - b) Devote all my time during the fellowship programme to the successful pursuit of my studies as directed by ICAO and by the designated institution in the country of study;
 - c) Refrain from engaging in political, commercial, or any activities detrimental to the host country;
 - d) Submit reports, as required by ICAO and comply with all ICAO instructions; and
 - e) Return to my country, on termination of my fellowship programme, and to apply my newly acquired knowledge to further the development of civil aviation in my country.

I certify to the best of my knowledge that all the information given above is true in all respects.

Date: _____

Nominee's Signature

INTERNATIONAL CIVIL AVIATION ORGANIZATION FELLOWSHIP NOMINATION FORM

PART III — LANGUAGE TEST

NOTE: This test is only required if the language to be used during the proposed fellowship programme is different from the mother tongue of the nominee or from the language used in the Primary and Secondary schools where he/she acquired his/her basic education (see PART II — item 6). The test should be conducted by a school of language or university unless otherwise designated by ICAO to meet the requirements of the host country. The office of the UNDP Resident Representative or ICAO Technical Assistance Mission should be consulted in this regard.

Name of institution conducting the examination: _____

Nominee's name: Mr./Mrs./Miss* _____

Language for which test was set: _____

RESULTS

(Check as appropriate)

1. Understanding:

- a) Understands without difficulty when addressed at normal speed.
- b) Understands nearly everything at normal speed although occasional repetition may be necessary.
- c) Understands almost everything if addressed slowly and carefully.
- d) Requires frequent repetition and/or translation of words and phrases.
- e) Does not understand even the simplest conversation.

2. Speaking:

- a) Speaks fluently, accurately and is easily intelligible.
- b) Occasionally makes errors which do not, however, obscure meaning.
- c) Makes frequent errors which occasionally obscure meaning.
- d) Speaks with so much difficulty that comprehension is difficult.
- e) Errors in speech so severe as to make comprehension virtually impossible.

3. Reading:

- a) Reads fluently with full comprehension.
- b) Reads slowly but understands almost everything he/she reads.
- c) Reads with difficulty; often consults the dictionary.
- d) Cannot understand what he/she reads.

4. Writing:

- a) Writes with ease and accuracy.
- b) Writes with few mistakes; can be understood.
- c) Writes with difficulty and makes frequent mistakes.
- d) Cannot write.

CONCLUDING REMARKS

Would this person be able to follow a technical course in this language? Yes No

Date: _____

Signature of examiner

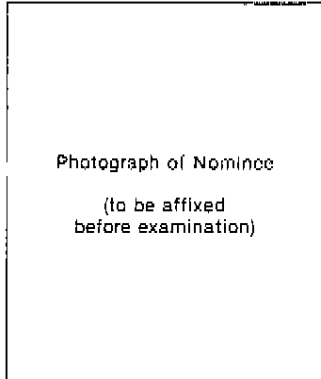
Name: _____

(type or print)

AFFIX OFFICIAL SEAL OR STAMP

* delete that which is not applicable.

Form 602-1
(Rev. 2/89)
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INTERNATIONAL CIVIL AVIATION ORGANIZATION FELLOWSHIP NOMINATION FORM

PART IV — A — MEDICAL REPORT

NOTES:

1. Flight Crew Members and Air Traffic Controllers who are to undergo training for the purpose of obtaining a licence in accordance with ICAO Annex 1 shall use the form in Part IV-B.
2. Every nominee must undergo a complete medical examination conducted by a registered medical practitioner, including thorough clinical and laboratory examinations and X-ray of the chest. Medical papers (examination, laboratory, X-ray results, etc.) should not be forwarded unless requested.

The undersigned, Dr. _____ having completed the medical examination of nominee Mr./Mrs./Miss* _____ whose photograph appears above, certifies the following: (Check as appropriate)

The Nominee:

1. Is physically able to travel abroad
2. Is mentally and physically able to carry out intensive studies
3. Is free from infectious diseases
4. Has good hearing
5. Has good eyesight
6. Is free from ailments that require treatment, or periodic medical examination during the proposed duration of the fellowship programme

Yes	No

Additional comments by Medical Practitioner:

Date: _____

Signature of Medical Practitioner

AFFIX OFFICIAL SEAL OR STAMP
(to be affixed across photograph also)

* delete that which is not applicable.

INTERNATIONAL CIVIL AVIATION ORGANIZATION FELLOWSHIP NOMINATION FORM

PART IV — B — MEDICAL REPORT
FOR FLIGHT CREW MEMBERS AND AIR TRAFFIC CONTROLLERS WHO ARE TO UNDERGO
TRAINING FOR A LICENCE AS SPECIFIED IN ICAO ANNEX 1.
THIS PAGE TO BE COMPLETED BY NOMINEE

Place and date of examination					
Full name			Nationality		Sex <input type="checkbox"/> M <input type="checkbox"/> F
Date of birth			Marital status		
Type of licence to be trained for:	Initial <input type="checkbox"/> ATCO <input type="checkbox"/>	PP <input type="checkbox"/> CP <input type="checkbox"/>	Other:		
Have you previously been examined for flight crew or air traffic control duties?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, where and when?		Were you declared:	Fit <input type="checkbox"/> Unfit <input type="checkbox"/>
Has a "medical waiver" ever been issued to you? Yes <input type="checkbox"/> No <input type="checkbox"/>					
Flying time: Total Last six months:					
Type of aircraft presently flown jet <input type="checkbox"/> prop <input type="checkbox"/> helicopter <input type="checkbox"/>					
Have you had any aviation accidents? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, elaborate under Remarks					
MEDICAL HISTORY Have you ever had or have you now any of the following: (elaborate yes answers under remarks)					
	yes	no		yes	no
Frequent or severe headaches			Nervous trouble of any kind		
Dizziness or fainting spells			Any drug or narcotic habit		
Unconsciousness for any reason			Excessive drinking habit		
Eye trouble except glasses			Attempted suicide		
Hay fever			Motion sickness requiring drugs		
Asthma			Rejection for life insurance		
Heart trouble			Admission to hospital in the last two years		
High or low blood pressure			Record of traffic convictions		
Stomach trouble			Record of other convictions		
Kidney stone or blood in urine			Gynaecological/Obstetrical conditions		
Sugar or albumen in urine			Other illnesses		
Epilepsy or fits			Are you in good physical and mental health as far as you know and believe		
Is there any family history of Diabetes <input type="checkbox"/> Cardiovascular disease <input type="checkbox"/> Tuberculosis <input type="checkbox"/>					
REMARKS					
NOMINEE'S DECLARATION: I hereby certify that all statements and answers provided by me in this examination form are complete and true to the best of my knowledge.					
Signature of Nominee: _____			Date: _____		

