



International
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Organización
de Aviación Civil
Internacional

Международная
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авиации

منظمة الطيران
المدني الدولي

国际民用
航空组织

Bureau Afrique Occidentale et Centrale / Western and Central African Office

T2/7.1 - 0855

2 October 2012

Subject: AFI Region Seminar/ Workshop on WGS-84 Implementation to Support GNSS and PBN aeronautical operations (Dakar, Senegal, 3 –7 December 2012).

Action required: To reply and confirm participation by 15 November 2012.

Sir/Madam,

I have the honour to inform you that a Seminar/Workshop on the implementation of the World Geodetic System of 1984 (WGS-84), will be conducted for the benefit of States in the AFI Region, at the ICAO Regional Office in Dakar, Senegal, from 3-7 December 2012, to which your Administration is invited.

This Workshop is pursuant to Conclusion 17/96 of APIRG/17 which called on the ICAO Regional Offices, in Dakar and Nairobi, to assist AFI States having difficulties with WGS-84 implementation to complete the process. As you are aware, current and future developments in satellite technology such as GNSS will, to a large extent, reduce the dependence of civil aviation on ground based navigation aids, as well as permit improvements in overall efficiency of Air Navigation Systems.

The implementation of GNSS is dependent on States providing geographical coordinates based on the same geodetic datum, i.e. WGS-84 in conformity with provisions contained in Annexes 4, 11, 14 and 15 to the Convention on International Civil Aviation. It is therefore essential that all ICAO Contracting States be fully compliant with WGS-84 provisions.

To this effect, the Seminar/Workshop will review the results of the survey on the status of implementation of WGS-84 throughout the AFI Region. It is important to recall that Special AFI RAN/8 noted that APIRG and the AFI States had been working towards WGS-84 implementation for many years and that although a large part of the work had been completed by most States, considerable work still remained.

Additionally, the AFI RAN/8 meeting recognized that implementation is now most urgent, as availability of geographical coordinates in the commonly agreed WGS-84 reference system is a prerequisite for States to obtain the benefits of PBN, and also an important step in preparing for the transition from Aeronautical Information Services to Aeronautical Information Management (AIM), for which the provision of digital geographic data of appropriate quality will be essential, bearing in mind that the WGS-84 reference system requires regular updating.

.../..

The Workshop will provide hands on experience in downloading software for converting coordinate data into WGS-84 information. The US National Geospatial Agency (NGA) and the National Geodetic Survey (NGS), in accordance with series of interagency agreements with the Federal Aviation Administration (FAA), would provide free PC downloadable software that can transform geographic coordinates between datum and recommended for converting coordinate data for mapping, low-accuracy surveying, or navigation. The MSP GEOTRANS (Geographic Translator – provided by NGA) which runs in Microsoft windows is an application programme which allows participants to easily convert geographic coordinates among a wide variety of coordinate system, map projections and datum. The XYZ Geodetic tool conversion system will also be provided where given Airport/En route coordinates in a local (National) reference frame can be transformed into Airport/ En route coordinates in a Global (common) reference frame (WGS-84).

In order to allow for a comprehensive analysis of the status of implementation of WGS-84 throughout the AFI Region, it is important that appropriate background information be provided to substantiate any discrepancy in the current implementation status within your State. Your Administration is therefore invited to provide the ICAO Regional Offices in Dakar and Nairobi with information on the status of implementation of WGS-84 over the territory of your State by completing the questionnaire at Attachment D related to WGS-84 implementation, when responding to this letter.

Attendees should anticipate practical exercises including approximately two days of data processing, in addition to numerous informative presentations. I encourage your Administration to actively participate in this event by ensuring that delegates of your State are personnel with responsibility and experience in the field of aeronautical cartography, geodesy and mainly in the implementation of the WGS-84 system. The workshop will be conducted in English and French and simultaneous interpretation services will be provided.

The Objectives of the Seminar/Workshop are to:

- a) increase the level of awareness of AIS/AIM Service providers regarding the need for, and application of the SARPs contained in ICAO Annexes 4 and 15;
- b) accelerate and complete WGS-84 across the AFI Region.
- c) provide a forum for AIS/AIM users to articulate their specific needs and requirements; and
- d) provide a forum where technological advancement and enhancements in the field of AIM can be displayed and demonstrated.

In view of the above, your Administration/Organization is encouraged to submit discussion/information papers covering subjects contained in the provisional agenda. I would be grateful to receive any papers you wish to submit in electronic format at your earliest convenience and in any case not later than 15 November 2012, in order to allow for processing and advance posting on the ICAO website.

Please note that the use of hard copy (paper) documentation at the Seminar/Workshop will be kept to a minimum, in favor of the use of multimedia projectors and electronic copies of documents. Other than in exceptional cases, documentation will not be provided in hard copy format. You are kindly urged to ensure that your participant bring along suitable computer equipment and accessories such as laptops and USB keys to the Workshop to enable them participate effectively.

It would be appreciated if you could, as soon as possible, preferably by 15 November 2012, confirm the participation of your Administration/Organization in this Seminar/Workshop by forwarding your response to the following e-mail address (icaowacaf@dakar.icao.int) with a copy to (gbaldeh@dakar.icao.int) or fax number +22133 8236926, giving the name(s) and official/job titles of your participant(s).

For the use of participants, please find attached, the draft Agenda, Registration form, information bulletin, list of hotels within easy access of the Seminar/Workshop venue and the survey questionnaire related to WGS-84 implementation. The hotel rates indicated require confirmation when reservations are made.

Please accept, Sir/Madam, the assurances of my highest consideration.

Mam Sait Jallow
Regional Director

A handwritten signature in blue ink, appearing to read 'for Mam Sait Jallow', is written over the typed name and title.

Attachments:

- Attachment A: Draft Agenda
- Attachment B: Registration Form
- Attachment C: Information Bulletin and List of hotels
- Attachment D: Questionnaire on Survey inventory related to WGS-84 implementation



AFI Region Seminar/Workshop on WGS-84 Implementation

(Dakar, Senegal, 3-7 December 2012)

(DRAFT AGENDA)

Agenda Item 1. WGS-84 Implementation background

- a) FANS/4 Recommendation 3.2/1 Adoption of WGS-84
- b) February 1994, ICAO Council adoption of Amendment 35 to Annex 11 (*Air Traffic Services*) and Amendment 28 to Annex 15 (*Aeronautical Information Services*) which mandated the use of WGS-84 as the common geodetic reference system for civil aviation within an applicability from 1 January 1998.
- c) March 1997, ICAO Council adoption of Amendment 29 to Annex 15 (*Aeronautical Information Services*) which mandated the use of the vertical component of WGS-84 with selective applicability from 5 November 1998.

Agenda Item 2. Basic elements of WGS-84 in direct support to the effective implementation of GNSS


- a) What is WGS-84
- b) Why there is a need for a Global common reference system
- c) Geodetic Datum and Transformation
- d) Standard surveying of Navigation Facilities (*Mandatory requirements and Recommendations*)
- e) Quality assurance in WGS-84 implementation
- f) Surveying methods : Satellite technique; conventional techniques ; photogrametry.

Agenda Item 3. Status of WGS-84 Implementation

- a) Review of the current Status of WGS-84 implementation in the AFI Region
- b) Review of the current status of WGS-84 implementation at a Global level as compiled by Industry.
- c) State by State presentation of survey inventory related to WGS-84 implementation.

Agenda Item 4. Understanding Coordinates and Coordinate conversions.

- a) Geometric aspects of mapping through coordinate transformations
- b) Use of on-line downloadable software for local/national coordinate transformation and/ or conversion of the geographic data from a local geodetic reference , to the WGS-84 geodetic reference system
- c) Use of on-line downloadable software for determination of geoid data and its relationship with vertical data of the WGS-84 ellipsoid heights.



Agenda Item 5. On-line use of the National Geospatial Agency's (NGA) GEOTRAN version 3.2

- a) (Geographic Translator) which allows the easy conversion of geographic coordinates among a wide variety of coordinate systems.
- b) On-line use of the NGA's WGS-84 Geoid calculator program to convert orthometric heights (approximately mean sea level) and ellipsoid heights.
- c) Maintenance (*use of databases*)

Agenda Item 6. On-line use of the National GEODETIC Survey's (NGS) XYZ Conversion toolkit

- a) Use of Cartesian coordinates (XYZ) which allows for geodetic quality three dimensional positioning on an earth centered ellipsoid.
- b) Methods of converting between geodetic latitude-longitude-Ellipsoid heights.

Agenda Item 7. Introduction to a new AFI Region Project Management Initiative to enable a complete WGS-84 Implementation within the AFI Continental and Oceanic airspace

The African Geodetic Reference Frame (AFREF) *An African initiative to unify the geodetic reference frames of Africa based on ITFR through a network of GNSS based stations at a spacing such that users will be at most within 1000 km of a based station.*

Agenda Item 8. Any Other Business.



INTERNATIONAL CIVIL AVIATION ORGANIZATION

WESTERN AND CENTRAL AFRICAN OFFICE

**AFI REGION SEMINAR/WORKSHOP ON WGS-84 IMPLEMENTATION TO SUPPORT GNSS
AND PBN AERONAUTICAL OPERATIONS**

(Dakar, Senegal, 3-7 December 2012)

Kindly fill this form and return to (icaowacaf@dakar.icao.int / gbaldeh@dakar.icao.int)

REGISTRATION FORM

Last Name
(In block Letters)

First Name
(In block Letters)

State/Organization:

Official Designation in
Government/Organization:

Permanent Address to which
Mail should be sent after
your departure :

Telephone :

E-mail :

Fax N° :

Local Hotel and
Room Number:

Signature

Date

ATTACHMENT C



INTERNATIONAL CIVIL AVIATION ORGANIZATION

AFI Region Seminar/Workshop on WGS-84 implementation

(Dakar, Senegal , 3 - 7 December 2012)

INFORMATION BULLETIN

1. Venue of the Meeting

The Meeting will take place in the conference room of ICAO Regional Office for Western and Central Africa, located around Leopold Sedar Senghor International Airport, Dakar-Yoff, Senegal. The contacts of the WACAF Office are:

Tel.: (+221) 33 869 24 24

Fax: (+221) 33 820 32 59

Web Site: <http://legacy.icao.int/wacaf>

Email: icaowacaf@dakar.icao.int

2. Languages

The Meeting will be conducted in English and French languages and simultaneous interpretation will be provided.

3. Opening Session

The Opening Session of the Meeting will take place on Tuesday 13 November 2012 at 09:00 hours in the ICAO WACAF conference room, where subsequent sessions will also be held.

4. Registration

The registration of participants will take place at the site of the meeting on Tuesday, 13 November 2012 from 08:00 to 09:00 hours.

5. Documentation of the meeting

The documentation of the Seminar/Workshop will be given to participants at the Seminar venue, after registration.

6. Weather and Clothing

Average temperature in Dakar in November is 25°C to 35° C. normal light clothing is advisable during the meeting period.

7. Passport and visa requirements

Entry visa for temporary visitors to Senegal may be obtained from the Senegalese Embassy or Consulate in their country. Participants with no Senegalese embassy or consulate may forward a copy of their valid passport at least one month before their trip at nseck@dakar.icao.int for assistance.

8. Health

Participants are informed that a valid certificate of vaccination against yellow fever is required. The participants should ensure that they have applied for a valid health insurance for the coverage of any medical care during their staying in Senegal.


9. Banks

Banks are located not far away from the Airport and are opened from 07:40 to 12:15 hours and 13:40 to 15:45 hours from Monday to Friday. At the beginning of January 2011, the mean rate of the US dollar to the CFA franc was: 1US\$ = 470 CFA francs. The rate of the Euro to the CFA Franc is 1€ = 655 CFA Francs.

10. Hotels

A list of recommended hotels is attached hereto.

Name/Nom	Address/Adresse / 📍	Fax / E-Mail	Single	Double
YOFF				
ONOMO HOTEL****	Route de l'Aéroport – BP 16794 – Dakar/Yoff Tél. +221 33 869 06 10	Fax : 33 820 33 01 DAKAR@HONOMOHOTEL.COM http://www.onomohotel.com	41 800	
VIRAGE***	Le Virage (Route de l'Aéroport LSS) Tél. +221 33 820 30 80	Fax : 33 820 95 94 viragehotel@gmail.com www.leviragehotel.com Petit-déjeuner (A la carte)	36 600	41 600 Suite : 61 600
OCEAN***	Route de l'Aéroport – Yoff ;Tonghor Tel. +221 33 820 00 77	Fax : 33 820 27 37 hotelocean@orange.sn Petit-déjeuner : 3 000 F	28 000	35 000
SARGAL**	Entre Le Virage et l'Aéroport LSS Tél. +221 33 869 75 96	Fax : 33 820 31 20 infos@sargalhotel.com www.sargalhotel.com Petit-déjeuner : 3 500 F	26 100 36 550	32 100 42 500
CITE de l'ERNAM	BP 8001 Route de l'Aéroport Léopold Sédar SENGHOR-Dakar/Yoff TEL : +221 33867 51 13/ +221 33820 92 99/	FAX : +221 33 820 71 04 IDEMoussaBarkireMou@asecna.org	10 000 ventilées 15 000climatis ées	
NGOR				
N'GOR DIARAMA***	Route de l'Aéropor – N'Gor Tél. +221 33 820 27 24	ngordiarama@orange.sn www.ngordairama.com Petit-déjeuner inclus	55 000	60 000
ARCHOTEL**	Virage sur la route de N'Gor Tél. +221 820 41 63	Fax : +221 33 280 42 07 archhotel@orange.sn Petit-déjeuner : 4 000 F	30 600 35 600 40 600	36 200 41 200 46 200
LA BRAZZERADE**	Plage de N'Gor Tél. + 221 820 03 64	Fax : +221 820 06 83 brazzerade@orange.sn Petit-déjeuner : 3 500f www.brazzerade.com	25 000 30 000 40 000	
LA MADRAGUE**	Plage de N'Gor près de l'USAID Tél. +221 33 820 02 23	Hotel.sbs@ansa-group.com www.Hotel-madrague.com		

Name/Nom	Address/Adresse / 	Fax / E-Mail	Single	Double
ALMADIES				
KING FAHD PALACE*****	Pointe des Almadies – BP 8181/DAKAR-YOFF Tél. +221 33 869 69 49	Fax : 33 869 69 99 <u>Petit-déjeuner compris</u> Resa.dakar@lemeridien.com	86 000 102 000	100 000 116 000
FLEURS DE LYS **	Route des Almadies Tél. +221 330869 86 87	Fax: +221 33 820 74 20 <u>Petit-déjeuner inclus</u> contact@hotelfleursdelys.dakar.com www.hotelfleursdelys.com	Standard: 60 000	Suite : 120 000
LA RESIDENCE**	Route de la Pointe des Almadies Tél. +221 820 15 35	Fax : 33 868 25 57 info@laresidencedakar.com www.laresidencedakar.com <u>Petit déjeuner compris</u>	55 000	55 000
AIRPORT HOTEL**	Tél. + 221 33 869 78 78 CASINO DU CAP-VERT	Fax : 33 820 27 44 saccvhotel@orange.sn <u>Petit-déjeuner : 4 500 F</u>	49 600	57 200
SENEGANNE***	Route de N'Gor (Croisement Almadies) + 221 33 820 12 33	Fax: Non fonctionnel seneganne@orange.sn www.seneganne.com <u>Petit-déjeuner : 5 000 F</u>	45 000	50 000
AMBRE ***	Route de N'Gor (Croisement Almadies) Tél. +221 33 820 63 38	Fax : 33 820 63 38 info@ambre.sn www.ambre.sn Petit-déjeuner : 3 000 F	42 600	45 600
LA DETENTE BLEUE***	Route de la Pointe des Almadies Tél. +221 33 820 39 75	Fax : 33 820 38 49 ladetente@orange.sn ; <u>Petit-déjeuner compris</u> www.hotel-ladetente.com	39 500	47 000

Name/Nom	Address/Adresse / 📍	Fax / E-Mail	Single	Double
AZUR**	Route de la Pointe des Almadies	Fax : 33 820 23 06 hotelazursenegal@yahoo.fr www.hotelazursenega.com Petit-déjeuner inclus	36 000	45 000
RESIDENCE MADAMEL***	Route de la Pointe des Almadies Tél. +221 33 869 59 64	Fax. 33 869 42 45 contact@dala-hotels.com Petit-déjeuner www.residence-madamel.com compris	35 600	51 200
LE LODGE***	Route de la Pointe des Almadies Tél. +221 33 869 03 45	Fax : 33 869 03 50 hotellelodge@orange.sn Petit-déjeuner : 4 500 F www.lodgedesalmadies.com	34 800 37 800 41 100	35 400 38 400 41 700
FANA***	Route de la Pointe des Almadies Tél. +221 33 820 06 06	Fax : 33 820 69 69 fana-hotel@orange.sn Petit-déjeuner : 3 500 F www.sortiradakar.com/fiches/fana	33 600 38 600	39 200 44 200
QUEST FOIRE				
GALLE YANGUE ***	14-20, Ouest Foire Tél. +221 865 15 45	Fax: Non fonctionnel Dnfav2000@yahoo.fr Petit-déjeuner : 3 500 F 25 600	30 600	
CORNICHE/PLATEAU				
Radisson Blu ****	Route de la Corniche ouest BP 16868 Dakar Fann, 📞 +221 33 869 33 33	Fax : +221 33 869 33 66 info.dakar@radissonas.com http://www.radissononblu.com/hotel-dakar	130.000	

Name/Nom	Address/Adresse / 📍	Fax / E-Mail	Single	Double
TERROUBI****	Bd Martin Luther King Corniche-Ouest – Tél. 33 839 90 39	Fax: 33 839 90 45 reservation@terroubi.com	Vue jardin 95 000 Vue de mer 112 000	
Teranga*****	Place de l'Indépendance (Rue Carnot x Colbert) B.P. 3380 📞 33 889 22 00 - 33 823 10 44 - 33 823 55 02	33 823 50 01 teranga@ns.arc.sn	Vue/ville 76 500 Vue/mer 93.000	76.500 93.000
Lagon 2****	Route de la Corniche-Est 📞 33 889 25 25 - 33 82360 31	33 823.77.27 Petit-déjeuner inclus lagon1@sentoo.sn	72.100	81.200
Savana****	Pointe Bernard Petite Corniche BP 6096 Dakar 📞 33 849 42 42	33 849 42 43/ 33 823 85 86 hotel@savanna.sn Petit-déjeuner: 8 000 CFA	60.800	65.100
Café de Rome****	30, Bd de la République Tél. 33 849 02 00	Fax: 33 823 63 84 Hotel.resa@anfa-group.com Petit déjeuner : à la carte	54 200 59 800	68 200 74 200
La Croix du Sud****	20, Avenue du Roi Hassane II (Ex Avenue Albert Sarraut) 📞 33 889 78 78	croixsud@orange.sn Petit-déjeuner inclus	50 600	61 200
Sohkamon****	Boulevard Roosevelt x Nelson Mandela Dakar 📞 33 889 71 00	33 823 59 89 hotelsokhamon@sentoo.sn Petit-déjeuner : 5 500 CFA	43 200 63 000	47 700 67 500
Faidherbe***	Avenue Faidherbe x Raffenel B.P. 3197 Dakar 📞 33 889 17 50 – 33 889 17 40	faidherbe@orange.sn Climatisé+TV📺 PD: 4.400	38 400	45.400
Farid***	51, Rue VINCENS B.P. 1514 📞 33 821 61 27	33 821 08 94 000 PD : 4	38.100	42.200

Name/Nom	Address/Adresse / 📍	Fax / E-Mail	Single	Double
Al Afifa***	46 Rue Jules FERRY B.P. 3474 📞 33 89.90.90	33 823 88 39 gmbafifa@orange.sn Petit déjeuner 3 600	37 950	41 250
Ganale ***	38, Rue Amadou A. NDOYE 📞 33 889 44 44 / 33 822 34 30	ganale@sentoosn Petit-déjeuner: 4 200 CFA	35.600	42.200
Nina***	Rue du Dr. Theze X Rue A.a. Ndoye 📞 33 889 01 20 - 33 889 01 81	hotelnina@sentoosn Petit déjeuner : 4000	30.000	36.000
Miramar***	25-27, Rue Félix FAURE 📞 33 823 20 97* (near/près UNESCO)	33 823 35 05 Petit déjeuner: 2 500 CFA	28 000	35.000
Plateau**	62, Rue Jules FERRY B.P. 2906 📞 33 823 44 20 33 823 15 26 33 823 47 80	33 822 50 24 Petit-déjeuner: 3 000 CFA	26.000	30.000
Al Baraka***	35, Rue El Hadj A. K. Bourgi, B.P. 578 📞 33 822 55 32	33 821 75 41 Petit-déjeuner: 3 500 F	25.600	31.200
Océanic**	Rue de Thann (Marché Kermel) 📞 33 822 20 44 - 33 822 17 18	33 821 52 28 Petit-déjeuner: 2 500 CFA	21.600	25.800
Saint Louis Sun**	68, Rue Félix FAURE 📞 33 822 25 70	33 822 46 51 Petit-déjeuner: 2 500 CFA	21 210	26.670

HOTEL LIST / LISTE DES HOTELS PRIN/PRICE: F. CFA

Name/Nom	Address/Adresse / ☎	Fax / E-Mail	Single	Double
YOFF				
ONOMO HOTEL ****	Route de l'Aéroport – BP 16794 – Dakar/Yoff Tél. +221 33 869 06 10	Fax : 33 820 33 01 DAKAR@HONOMOHOTEL.COM http://www.onomohotel.com	41 800	
VIRAGE***	Le Virage (Route de l'Aéroport LSS) Tél. +221 33 820 30 80	Fax : 33 820 95 94 viragehotel@gmail.com www.leviragehotel.com Petit-déjeuner (A la carte)	36 600	41 600 Suite : 61 600
OCEAN***	Route de l'Aéroport – Yoff / Tonghor Tél. +221 33 820 00 77	Fax : 33 820 27 37 hoteloccean@orange.sn Petit-déjeuner : 3 000 F	28 000	35 000
SARGAL**	Entre Le Virage et l'Aéroport LSS Tél. +221 33 869 75 96	Fax : 33 820 31 20 infos@sargalhotel.com www.sargalhotel.com Petit-déjeuner : 3 500 F	26 100 36 550	32 100 42 500
CITE de l'ERNAM	BP 8001 Route de l'Aéroport Léopold Sédar SENGHOR-Dakar/Yoff TEL : +221 33867 51 13/ +221 33820 92 99/	FAX : +221 33 820 71 04 IDEMoussaBakireMou@asecna.org	10 000 ventilées 15 000climatisées	
NGOR				
N'GOR DIARAMA***	Route de l'Aéroport – N'Gor Tél. +221 33 820 27 24	ngordiarama@orange.sn www.ngordairama.com Petit-déjeuner inclus	55 000	60 000
ARCHOTEL**	Virage sur la route de N'Gor Tél. +221 820 41 63	Fax : +221 33 280 42 07 archotel@orange.sn Petit-déjeuner : 4 000 F	30 600 35 600 40 600	36 200 41 200 46 200
LA BRAZZERADE**	Plage de N'Gor Tél. +221 820 03 64	Fax : +221 820 06 83 labrazzerade@orange.sn Petit-déjeuner : 3 500F www.brazzerade.com	25 000 30 000 40 000	
LA MADRAGUE**	Plage de N'Gor près de l'USAID Tél. +221 33 820 02 23	Hotel.sbs@ansa-group.com www.Hotel-madrague.com		
ALMADIES				
KING FAHID PALACE*****	Pointe des Almadies – BP 8181/DAKAR-YOFF Tél. +221 33 869 69 49	Fax : 33 869 69 99 Petit-déjeuner compris Ressa.dakar@lemeridien.com	86 000 102 000	100 000 116 000
FLEURS DE LYS **	Route des Almadies Tél. +221 330869 86 87	Fax : +221 33 820 74 20 Petit-déjeuner inclus contact@hotelfleursdelys.dakar.com www.hotelfleursdelys.com	Standard: 60 000	Suite : 120 000
LA RESIDENCE**	Route de la Pointe des Almadies Tél. +221 820 15 35	Fax : 33 868 25 57 info@laresidencecdakar.com www.laresidencecdakar.com Petit déjeuner compris	55 000	55 000
AIRPORT HOTEL **	Tél. + 221 33 869 78 78 CASINO DU CAP-VERT	Fax : 33 820 27 44 saccvhotel@orange.sn Petit-déjeuner : 4 500 F	49 600	57 200

Name/Nom	Address/Adresse /	Fax / E-Mail	Single	Double
SENEGANNE***	Route de N'Gor (Croisement Almadies) + 221 33 820 12 33	Fax: Non fonctionnel www.seneganne.com seneganne@orange.sn <u>Petit-déjeuner : 5 000 F</u>	45 000	50 000
AMBRE ***	Route de N'Gor (Croisement Almadies) Tél. +221 33 820 63 38	Fax : 33 820 63 38 info@ambre.sn www.ambre.sn Petit-déjeuner : 3 000 F	42 600	45 600
LA DETENTE BLEUE***	Route de la Pointe des Almadies Tél. +221 33 820 39 75	Fax : 33 820 38 49 ladetente@orange.sn , <u>Petit-déjeuner compris</u> www.hotel-ladetente.com	39 500	47 000
AZUR**	Route de la Pointe des Almadies	Fax : 33 820 23 06 hotelazursenegal@yahoo.fr www.hotelazursenegal.com <u>Petit-déjeuner inclus</u>	36 000	45 000
RESIDENCE MADAMEL***	Route de la Pointe des Almadies Tél. +221 33 869 59 64	Fax: 33 869 42 45 contact@dalahotels.com <u>Petit-déjeuner</u> www.residenceamadamel.com <u>compris</u>	35 600	51 200
LE LODGE***	Route de la Pointe des Almadies Tél. +221 33 869 03 45	Fax : 33 869 03 50 hotellodge@orange.sn <u>Petit-déjeuner : 4 500 F</u> www.lodgedesalmadies.com	34 800 37 800 41 100	35 400 38 400 41 700
FANA***	Route de la Pointe des Almadies Tél. +221 33 820 06 06	Fax : 33 820 69 69 fanahotel@orange.sn <u>Petit-déjeuner : 3 500 F</u> www.sortiradakar.com/fiches/fana	33 600 38 600	39 200 44 200
OUEST FOIRE				
GALLE YANGUE ***	14-20, Ouest Foire Tél. +221 865 15 45	Fax: Non fonctionnel Dnfax2000@yahoo.fr Petit-déjeuner : 3 500 F 25 600	30 600	
CORNICHE/PLATEAU				
Radisson Blu ****	Route de la Corniche ouest BP 16868 Dakar Fann, ☎ +221 33 869 33 33	Fax : +221 33 869 33 66 info.dakar@radissonsas.com http://www.radissonblu.com/hotel-dakar	130 000	

Name/Nom	Address/Adresse / 📍	Fax / E-Mail	Single	Double
TERROUBI****	Bd Martin Luther King Corniche-Ouest – Tél. 33 839 90 39	Fax: 33 839 90 45 reservation@terroubi.com	Vue jardin 95 000 Vue de mer 112 000	
Teranga*****	Place de l'Indépendance (Rue Carnot x Colbert) B.P. 3380 ☎ 33 889 22 00 - 33 823 10 44 - 33 823 55 02	33 823 50 01 teranga@us.arc.sn	Vue/ville 76 500 Vue/mer 93.000	76.500 93.000
Lagon 2****	Route de la Corniche-Est ☎ 33 889 25 25 - 33 82360 31	33 823.77.27 <i>Petit-déjeuner inclus</i> lagon1@sentoos.sn	72.100	81.200
Savana****	Pointe Bernard Petite Corniche BP 6096 Dakar ☎ 33 849 42 42	33 849 42 43/ 33 823 85 86 hotel@savanna.sn <i>Petit-déjeuner: 8 000 CFA</i>	60.800	65.100
Café de Rome****	30, Bd de la République Tél. 33 849 02 00	Fax: 33 823 63 84 Hotel.resa@anfia-group.com <i>Petit déjeuner : à la carte</i>	54 200 59 800	68 200 74 200
La Croix du Sud***	20, Avenue du Roi Hassane II (Ex Avenue Albert Sarraut) ☎ 33 889 78 78	croixsad@orange.sn Petit-déjeuner inclus	50 600	61 200
Sohkamon****	Boulevard Roosevelt x Nelson Mandela Dakar ☎ 33 889 71 00	33 823 59 89 hotelsokhamon@sentoos.sn <i>Petit-déjeuner : 5 500 CFA</i>	43 200 63 000	47 700 67 500
Faidherbe**	Avenue Faidherbe x Raffeneil B.P. 3197 Dakar ☎ 33 889 17 50 – 33 889 17 40	faidherbe@orange.sn Climatisé+TV ^{or} PD: 4.400	38 400	45.400
Farid***	51, Rue VINCENS B.P. 1514 ☎ 33 821 61 27	33 821 08 94 PD : 4 000	38.100	42.200
Al Afifa***	46 Rue Jules FERRY B.P. 3474 ☎ 33 89.90.90	33 823 88 39 gmbafifa@orange.sn Petit déjeuner 3 600	37 950	41 250

Name/Nom	Address/Adresse / ☎	Fax / E-Mail	Single	Double
Ganale ***	38, Rue Amadou A. NDOYE ☎ 33 889 44 44 / 33 822 34 30	ganale@sentoo.sn <u>Petit-déjeuner: 4 200 CFA</u>	35.600	42.200
Nina***	Rue du Dr. Theze X Rue A.a. Ndoye ☎ 33 889 01 20 - 33 889 01 81	hotelnina@sentoo.sn <u>Petit déjeuner : 4000</u>	30.000	36.000
Miramar***	25-27, Rue Félix FAURE ☎ 33 823 20 97 (near/près UNESCO)	33 823 35 05 <u>Petit déjeuner: 2 500 CFA</u>	28 000	35.000
Plateau**	62, Rue Jules FERRY B.P. 2906 ☎ 33 823 44 20 33 823 15 26 33 823 47 80	33 822 50 24 <u>Petit-déjeuner: 3 000 CFA</u>	26.000	30.000
Al Baraka***	35, Rue El Hadj A. K. Bourgi, B.P. 578 ☎ 33 822 55 32	33 821 75 41 <u>Petit-déjeuner: 3 500 F</u>	25.600	31.200
Océanic**	Rue de Thann (Marché Kermel) ☎ 33 822 20 44 - 33 822 17 18	33 821 52 28 <u>Petit-déjeuner: 2 500 CFA</u>	21.600	25.800
Saint Louis Sun**	68, Rue Félix FAURE ☎ 33 822 25 70	33 822 46 51 <u>Petit-déjeuner: 2 500 CFA</u>	21 210	26.670

* Special rates for ICAO. (Delegates should specify that they are attending an ICAO meeting).
Tarifs spéciaux pour l'OACI. (Les délégués doivent préciser qu'ils participent à une réunion OACI).

** Reservation may be requested by fax or e-mail and may indicate ICAO rates
Les réservations doivent être faites par fax ou par courriel en indiquant le tarif OACI

*** Hotel can provide transport from and to the airport at their own expense (Delegates should specify if they need transport)
Hôtel pouvant transporter les délégués à partir de l'aéroport et à leur départ de l'hôtel à leur propre charge (Les délégués doivent le préciser en faisant leur réservation)

8



AFI Region Seminar/Workshop on WGS-84 Implementation

(Dakar, Senegal, 3-7 December 2012)

SAMPLE QUESTIONNAIRE

Survey inventory related to WGS-84 implementation

Notes on the completion of Parts I and II:

- 1. Part I should be completed by national aviation administrations.*
- 2. Part I, 25, items i to ix, should be completed for each navigation aid.*
- 3. Part II should be distributed by national aviation administrations to aerodrome/heliport authorities for completion — one questionnaire for each aerodrome/heliport. The cover page is to be completed by national administrations.*
- 4. Initially, Part II should be completed for aerodromes/heliports that have established instrument approach procedure(s) for the runway(s).*
- 5. For aerodromes/heliports where visual approach procedures only are established, the requirement is for information on the aerodrome/heliport reference point (ARP).*
- 6. Parts I and II have been designed so that the responses can be scanned automatically into a digital format. The majority of the questions are in a multiple-choice format. The scanning and formatting of the data will permit analysis using a PC-based tool. This PC programme is available to States from ICAO.*
- 7. Blank templates of the questionnaires are available from ICAO. These may be used by national administrations to insert text in their national language. It is important that the format and layout be maintained so that translated questionnaires may be scanned and analysed by the PC programme referred to in 6 above.*

5. If coordinates are obtained graphically from map products, what map scale (or nearest equivalent) is generally used?

	DME	VOR	DME/VOR	NDB	VORTAC	TACAN
>1/5 000	[]	[]	[]	[]	[]	[]
1/5 000	[]	[]	[]	[]	[]	[]
1/10 000	[]	[]	[]	[]	[]	[]
1/20 000	[]	[]	[]	[]	[]	[]
1/25 000	[]	[]	[]	[]	[]	[]
1/50 000	[]	[]	[]	[]	[]	[]
1/100 000	[]	[]	[]	[]	[]	[]
1/250 000	[]	[]	[]	[]	[]	[]
<1/250 000	[]	[]	[]	[]	[]	[]

6. To what accuracy are the coordinates determined?

Note.— This may differ from the resolution quoted in the AIP.

	DME	VOR	DME/VOR	NDB	VORTAC	TACAN
>1 NM	[]	[]	[]	[]	[]	[]
1 NM	[]	[]	[]	[]	[]	[]
0.1 NM	[]	[]	[]	[]	[]	[]
100 m	[]	[]	[]	[]	[]	[]
10 m	[]	[]	[]	[]	[]	[]
1 m	[]	[]	[]	[]	[]	[]

INFRASTRUCTURE

7. If coordinates are extracted from a map, is it known on which datum the map is based?

[] Yes [] No

8. Is the information in 7 above recorded as part of the survey?

[] Yes [] No

9. If instrument surveys are performed,

a) Is a record made of the reference frame used?

[] Yes [] No

b) Are permanent survey stations established as part of the survey?

[] Yes [] No

Yes No

17. Are such records free of inconsistencies?

Yes No

18. Is it possible to trace the data and the method of the survey/coordination of individual navaids?

Yes No

19. Are the survey records held centrally and, if yes, are they easily accessible?

Yes No

Yes No

20. Are the survey records held on computer?

Yes No

21. Are the survey records subject to regular maintenance?

Yes No

22. In the case of collocated navigation aids (VOR/DME), is it known to which facility the published coordinates relate?

Yes No

23. Is the physical separation of such pairs of facilities known?

Yes No

24. Where central records of precise coordinates of navigation aids are kept, are the published AIP coordinates checked for consistency?

Yes No

CONFIRMATION OF AIP ENTRY

25. Please indicate in Column A the number of navaids for which coordinates are published. In Column B state the number of navaids for which the coordinates are determined by the national civil aviation administration itself.

Yes No

(viii) In the case of VOR, TACAN and VORTAC, please state, if available, the value of the SITE DECLINATION (VARIATION) set at the last calibration.

DEGREES.XX East West

Date of last calibration

(ix) For collocated aids (e.g. VOR/DME), do the coordinates relate to the distance measuring element?

Yes No

Navigation Aid Survey Inventory

Questionnaire

Part II — Aerodrome/heliport points

This section to be completed by national administrations.

First name

Family name

Position

Address

Telephone

Facsimile

This section to be completed by the technical officer responsible for providing survey details.

First name

Family name

Position

Address

Telephone

Facsimile

AERODROME/HELIPORT NAVIGATION ELEMENTS

33. Which organization performed the aerodrome/heliport navigation elements survey?

- National aviation administration's internal survey unit
- Aerodrome/heliport staff surveyor
- National mapping agency
- National geodetic agency
- Local government survey unit
- Military survey department
- Private survey contractor
- Other specify

34. State the name of survey organization. (If more than one survey organization has been involved, state the name of the organization having done the most work.)

RUNWAY THRESHOLDS

35. How many runway thresholds are on the aerodrome/heliport?

- <1 1 2 3 4 5 6 7 8 9 10 >10

36. How many runways with precision approach facilities are on the aerodrome/heliport?

- <1 1 2 3 4 5 6 7 8 9 10 >10

37. How many thresholds have been surveyed?

- <1 1 2 3 4 5 6 7 8 9 10 >10

38. To which accuracy have these thresholds been surveyed?

- < 10 metres < 3 metres < 1 metre < 0.1 metre
-