

# **Current Status of AFREF**

**Charles Merry**

**(on behalf of Richard Wonnacott)**

**Vienna, December 2004**

# Progress

- **Initial Meeting in Cape Town March 2001:**
  - to gauge level of interest among NMO's in region.
  - to inform potential international partners.
  - Representatives of 8 countries attended and supported the proposed project.
  - IAG/IGS, EUREF, NIMA supported project.
  - Meeting requested that project go under IAG banner.

# Progress (cont.)

- Initial funding proposal made to ICSU:

Expenses for: meetings, tutorials, travel, some equipment  
(unsuccessful)

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UN/USA GNSS Workshop - Lusaka, July 2002

*Surveying, Mapping and Earth Science, Recommendation 1:*

*“Establish a continental reference for Africa, or African Reference Frame (AFREF), consistent with the International Terrestrial Reference Frame”*

# Progress (cont.)

## UN/USA GNSS Workshops - Vienna 2002 & 2003

Recommendation to support the proposal:

*“Establish a permanent continental reference system for Africa, AFREF, consistent with ITRF to achieve a unified spatial reference frame, including geoid determination, for Africa, to aid the implementation of national and regional socio-economic development programmes under the NEPAD initiative.”*

- *UNOOSA requested to support regional technical meetings and training courses*

# Progress (cont.)

- Windhoek December 2002
  - Meeting held prior to RCMRD meeting
  - 8 Southern and East African member states represented
  - Prepared a selection of provisional cities / towns for permanent GPS base stations
  - Representative from UN ECA CODI also present
  - Prepared what has become known as “Windhoek Declaration”



# Progress (cont.)

- **UN ECA CODI (Committee on Development Information)**
  - Adopted the Windhoek Declaration April 2004
  - Established a Working Group on AFREF
  
- **African Association of Remote Sensing of the Environment (AARSE) (October 2004)**
  - Pre-conference AFREF meeting
  - Representatives from all regions
  - Implemented many of the recommendations from the UN/USA GNSS meeting of December 2003
  - Finalised structure and terms of reference

# Institutional Acceptance

- **UN ECA CODI have**
  - Adopted the Windhoek Declaration
  - Created a Working Group to deal specifically with AFREF
- **UN OOSA**
  - Have recognized importance of AFREF for variety of applications
  - Have been approached to assist with securing project funding
- **IAG**
  - Have recognized importance of AFREF and have committed support
- **IGS**
  - Has committed support to AFREF

# OBJECTIVES OF AFREF

- To determine a continental reference system for Africa consistent and homogeneous with the global reference frame of the ITRF as a basis for national 3-D reference networks.
- To realize a unified vertical datum and to support efforts to establish a precise African geoid.
- To establish continuous permanent GPS base stations at a spacing such that the users will be within 500km of a base station and that data is freely available to all nations.



# OBJECTIVES OF AFREF

- To provide a sustainable development environment for technology transfer so that these activities will enhance the national networks and other applications.
- Understand the necessary geodetic requirements of participating national and international agencies
- Assist in establishing in-country expertise for implementation , operation, processing and analysis of modern geodetic techniques, primarily GPS

# Organizational Structure

## CODI-Geo AFREF WG Steering Committee

W Ottichilo – Dir RCMRD (co-chair)  
M Unis – Sec Gen OACTS (co-chair)

Chair IAG SC 1.3d (Africa) – R Wonnacott  
CAFREF – Congo Brazaville  
EAFREF - L Mollel (Tanzania)  
NAFREF - Tunisia  
SAFREF - K Owalabi (Namibia)  
WAFREF – J Kufonyi (Nigeria RECTAS)  
HartRAO – L Combrinck

## Int Organisations

IAG  
IGS  
IERS  
UNOOSA

OACTS

RCMRD

RECTAS

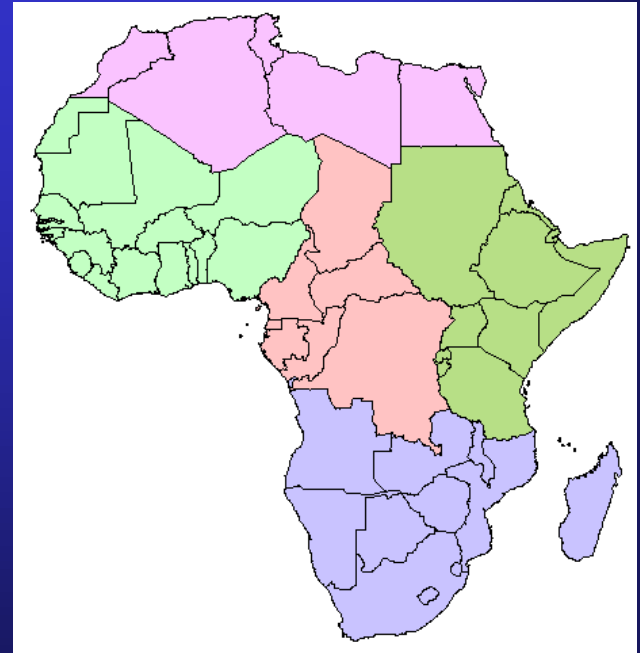
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# Implementation

- **Regions:**  
South, East, West, North, Central
- **Support:**
  - Political and financial support of national governments
  - Financial support from development partners
  - Technical support of collaborative partners - IGS, IAG, HartRao
  - Cost subsidies from GNSS manufacturers including



# What now?

- **Commitment from NMO's & Others**
  - Call for formal participation in the project
  - Get project “NEPAD” registered
- **Funding**
  - Seek assistance to source funding
  - Funding includes donation of equipment and material
- **Start planning and implementing**
  - technical meetings
  - training courses