SnRER Update: New Opportunities for Science in Senegal

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SnRER: Where are we in 2011?
National Network Infrastructure
SnRER Challenges
US and Senegalese Science Collaboration
SnRER: Where are we in 2011
SnRER Membership

5 public universities

- University Cheikh Anta Diop of Dakar
- University of Thies
- University of Bambey
- University Gaston Berger of Saint-Louis
- University of Ziguinchor

Other Members

- Private universities/High School Institutions
- National Research Centers (ISRA, IRD etc.)
Goal

Building a national and regional academic infrastructure to:

- Support research and science collaboration
- Build a common information system and datacenter for higher education in the country (statistics)
- Share resources and applications: grid computing, e-learning, VoIP, videoconference, digital library, e-health, etc.
- Connect to other regional or international academic network (WACREN, GEANT, INTERNET2, etc.)
2011 is turning out to be a key year for SnRER

- March 2011: SnRER Creation approved by the Ministry of Higher Education
- March 2011: Mandated by WACREN to host the regional NOC
- April 2011: Training and capacity building in collaboration with our partner NSRC and the University of Oregon
- April 2011-July 2011: Design campus network in 5 public universities and upgrading network equipments
Active Collaboration with NSRC and the University of Oregon

1. April 2011: Training, capacity building and on site visit to design campus networks and the SnRER network

2. April 2011: Network Equipments Donations:
   - 2 Layer 3 Cisco Switches
   - 84 Layer 2 HP Switches
   - 5 Cisco Routers
   - 16 SFP Modules
National Network Infrastructure
SONATEL Terrestrial Transit Network
Governmental National Backbone: ADIE Network
Current Works for Regional Interconnection

- ACE: landing in Senegal at UCAD (UCAD is negotiating the rights of passage with SONATEL in exchange for a pipe from UCAD to the landing station)

- Main One: SnRER is in contact with Main One to connect WACREN NOC in Dakar to Accra or Lagos stations (Not landing in Senegal)

- Connecting WACREN to RENATER, the french NREN (we are working with Sonatel for this)
SnRER Challenges
Next Step to Have an operational Network

Negotiations with SONATEL:

- ACE cable landing at UCAD (UCAD is negotiating the rights of passage with SONATEL, in exchange for a pipe from UCAD to the landing station)
- Dark Fiber from UCAD to SONATEL backbone
- Co-location
- Backhauling
- Internet Transit

Reinforce partnership with ADIE to use the governmental national infrastructure and connect UCAD
Collaboration Reinforcement

1. Meet all requirement to host the WACREN NOC in Senegal (power, high speed BW)

2. Interconnect WACREN to other african regional RENs, as well as to INTERNET2, GEANT etc.

3. Support Science collaboration between Africans, Americans, and Europeans researchers

4. Provide more training and capacity building to network engineers

5. Attract more assistance and support from US experts in NREN design and monitoring
US and Senegalese Science Collaboration
An Example of Science Collaboration

- **Sharing data on climate and weather:** real-time monitoring and measurement, real-time forecast, data visualization, experience and knowledge sharing between Africans and Americans

- **LPAOSF (UCAD)-Howard University collaboration on climate and atmospheric research**
  - Real-time measurements
  - Global and regional climate modeling studies for understanding climate variability
  - Simulating regional climate
  - Atmospheric Aerosol measurements
Science Collaboration
Reinforcement

- Grid Computing
- E-Health
- E-library

Use regional NREN to improve communication and collaboration (video conferencing, Extranet, etc.)
THANK YOU FOR YOUR ATTENTION

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