International Workshop on African Research & Education Networking

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Report on
Session 2-2 (part 2) The African Experience

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Based on Presentations by

This document reports the conclusions and recommendations from Session 2-2 of the International Workshop on African Research & Education Networking held on Monday 26th of September 2005 in CERN, Geneva..

It is meant to provide input to the agenda of decision makers responsible for policies on deployment of National Research and Education Networks in Africa, and in particular provide key members of existing or incubating NRENs in Africa with information about Policy, Technology, and Financial issues they should look out for when deploying eInfrastructures in Africa; provide input regarding "best-practices" as well as "bad-practices" to the agenda of national governments and funding bodies interested to deploy eInfrastructures in Africa. The input comes from the African Experience.

OBJECTIVES

To introduce of National RENs and Regional RENs and content initiatives as well as introduction of a set of regional and continental role-players active in this domain.

SUMMARY:

Certain key African role-players involved in Research and Education Networking were on the panel, although they are not the only African actors, who presented in other panels. The presentation on panel 2.2 ranged from the newest initiative, Afunet to the newly established Southern African Regional Universities, and the well-established regional Association des Universités francophones (AUF), and the continent-wide Association of African Universities (Vice Chancellors) presentations on their pursuit to address the challenges and process to develop national RENs as well as Regional RENS. The session also introduced the outcomes of the recent Internet2 meeting, a week earlier in Phillidelphia, which focused on building relationships with emerging African NRENs.

There were two presentations by working African NRENs namely from Morocco, MARWAN and from South Africa, the SANren.

COMMENTS

South Africa's SANren presented a very advanced process of participating in developing a bid for the competition for the Square Kilometer Array (SKA) Radio Telescope. It needs a high-speed network, links the initiative in South Africa with scattered other antennae over 1million kilometres in Namibia, Botswana, Mozambique, Mauritius, Madagascar, Ghana and Kenya. with an estimated budget of $1.5bn. In this bid the relative underdevelopment of the continent and "quieter skies" or the relative absence of electric light and radio frequency pollution is being used as a competitive advantage for the region (amongst the other bidding competitors are Australia, Japan, the US). It is necessary to link these sites by fibre, suggesting that there is reliance of the project on the EASSy initiative for fibre along the east coast of Africa (the western (SAT3 covers the western coast and SAFE the southern regions to Mauritus) because a radio telescope requires terabits of transmission capacity. As a build-up the initiative requires large scale science infrastructure in the developing world.

Marwan and SANren are already linked to GEANT.

ISSUES

Africa suffered not only from a digital divide but also a scientific divide. In his presentation the AUF representative mentioned that Africa contributes less that 3% to global published knowledge and South Africa represents half of that portion. It was not enough to have the networks and technologies, but the AUF was concerned with supporting universities to bridge this divide. The key was to connect the north and the south networks of people. This requires a high degree of collaboration between the deans and the heads of universities. The AUF sets up networks of researchers between

the north and south, and already supports 18 such networks. It wants to contribute to various centres of excellence at the regional level, also to fund laboratories (such as Mimcom) which deal with African problems such as Malaria, to upgrade universities both in the north and the south, and it is also creating joint and common degrees in distance learning. There are 35 distance learning degrees, and 35 digital campuses providing Masters and PhD opportunities through training of trainers. There is also an exchange scheme for 1700 students per year to participate in exchange study schemes per year in an effort to enable the disadvantaged African communities to participate in the globalised knowledge economy.

Afunet, a recent initiative presented over the previous-days workshop, brought several individual universities together who were joining the Afunet network with the Global Virtual University, to receive video content from the United Nations University, but constrained by lack of sufficient bandwidth. Similar problems exist with other such initiatives, such as the Partnership for Higher Education in Africa (PHEA), Eifl.net, Hinari, Agora, to mention a few content providers who have experienced bandwidth constraints with African university partners.

MARWAN, the Moroccan NREN, although initially established to deliver network services to primary, secondary and tertiary education networking with government commitment and budget, eventually decided to break away from the smaller demands from schools and resulted in a universities network. They wanted to be self-suppliers, but after some negotiations and lack of collaboration with the local telco, the Telco eventually provided them a VPN which meant they could spend more on campus infrastructure. MARWAN has successfully joined EUMED and GEANT.

CONCLUSIONS & RECOMMENDATIONS

The SARUA presentation demonstrated that organising into sub-regional buying consortia and AAU presentations demonstrated the effort required to achieve a continent-wide and international advocacy were necessary to address the bandwidth challenges in African universities. Despite two members in the audience expressing some concerns that the AAU was organisationally strong enough to address the universities bandwidth matter, the AAU consultant who produced the report encouraged the universities -- all members of the AAU -- to strengthen this member organisation through their own efforts to achieve a larger solution for African university. She pointed out the AAU was given a very strong mandate from the Vice Chancellors at the AGM in 2005 to pursue this continent wide advocacy initiative.
The conclusion would be for collaboration amongst the many initiatives with the lead actors.

CONCRETE RECOMMENDATIONS

All initiatives to achieve bandwidth solutions for African universities to collaborate with lead actors in order to build a continent-wide human and ICT-network.