

ASSOCIATION OF AFRICAN UNIVERSITIES

Conference on African Research and Education Networking Infrastructure

Outline of proposed program [draft]

Higher education in Africa is increasingly recognized as an essential key to unlocking the continent's vast human potential. What is less recognized in the African context is that affordable, reliable, speedy Internet access is the lifeblood of modern education and research. Globally the Internet has become the key facilitator for tertiary institutions - for access to distance education and shared learning; research data and information; for collaboration with research partners globally; and, for publishing research. In order for higher education to flourish in Africa, the communications infrastructure that links African universities with each other and with the global research and education community desperately needs to be improved.

While communications infrastructure in Africa faces great challenges, there are also significant opportunities to make a difference in a comparatively short span of time. This Conference will review experience at four key levels and attempt to identify and secure commitment to critical opportunities for investments and partnerships that can lead to real change. The results will help guide the AAU in developing a coherent and strategically focused ICT programme, and contributing to better coordination of the various ICT initiatives of Africa's development partners and other major players.

Conference Organisers

The Conference is convened by the Association of African Universities and sponsored by IDRC (Connectivity Africa), OSISA, Partnership for Higher Education in Africa, SIDA and the World Bank Institute.

Venue

The Conference will be held at the Corinthia Khamsa Hotel, Les Côtes De Carthage, Gammarth, Tunisia on November 14.

Simultaneous interpretation between English and French will be available.

Documentation

Four documents will be made available to participants:

- Note on Role for the AAU in Enabling Member and Associated Institutions to Access More Bandwidth at Lower Cost;
- Promoting African Education and Research Networking – study sponsored by IDRC; Roy Steiner and colleagues; January 2005 (French summary)

- Africa Tertiary Institutions Connectivity Survey; African Virtual University; December 2004
- A Survey of investment in education and research networking in Africa; sponsored by IDRC; Kate Wild; June 2005 (French summary)

Conference Program

The program has five components.

1. Welcome by AAU Secretary General and a designated representative of the sponsoring organisations

2. Keynote speech identifying the importance and challenges of establishing networking infrastructure for research, higher education, science and technology for national development: Venancio Massingue, Minister of Science and Technology, Mozambique

3. The heart of the Conference: a series of **4 panels each providing four presenters with an opportunity to clarify the issues, highlight key achievements and identify critical actions to increase momentum in favour of research and education networking at campus, national, regional and Pan-African levels** –Presentations will be 10 minutes; discussion following the last speaker will be 30 minutes; the chair will have 10 minutes to introduce and sum up the sessions as a whole.

Level One: The University Campus

Internet access depends on a chain of connections from the massive Internet highways in North America and Europe to the under-resourced campuses of African universities. Like any chain, each link is equally important. For various reasons, campus-level infrastructure is often neglected. University bandwidth is often poorly distributed, poorly managed, or simply non-existent on campuses. Universities need to develop the financial resources and human capacity to design and manage their networks for maximum effectiveness and efficiency. Without this, increases in bandwidth will fail to translate into significant improvements in access for students and researchers. Capacity-building and funding for network design, management, and maintenance is therefore a critical element of effective network growth.

Proposed action: Help African universities to help themselves. Building on the successful African Network Operators Group (AFNOG), support the establishment of a networked community of university-level network operators. The network would be responsible for developing and implementing a capacity-building curriculum for university network operators, which could include the development of financial and advocacy strategies as well as technical aspects of networking.

Level Two: National Research and Education Networks (NRENS)

Elsewhere in the world NRENS have been the key agents for the establishment of next-generation high-speed academic networking. While high-speed networking is still years away for many African universities, the potential benefits of NRENS in Africa are manifold. They can serve to unite research and education infrastructure nationally, to exist as a consortia for

bandwidth purchase, to raise awareness nationally of academic infrastructure as a strategic asset, and to represent the country internationally in global networking fora. African NREN representatives could also form the basis of a critical community that could work to support regional and continental initiatives. In many ways NRENs are the lynchpin to African R&E networking. The main aim of the panel is to identify how to start new NRENs and support emerging ones. The results of this panel can be expanded in the workshop on the following day.

Proposed action: Establish an NREN Capacity-building Initiative. This initiative would establish a regular program for supporting the establishment and evolution of NRENs in Africa. Needs further development; results of this panel will be elaborated in the NREN workshop.

Level Three: Geographic and interest-based regional or multi-country initiatives

As a continent of 54 countries, Africa faces considerable challenges in establishing strong communications infrastructure among African universities. Regulatory constraints and a lack of cross-border infrastructure are considerable obstacles. However, opportunities exist to overcome them through regional agreements. In other parts of the world, universities have exploited alternative options such as communications infrastructure owned by energy and transport companies to establish high-speed connections among themselves. In other cases, they have received regulatory dispensations to form bandwidth consortia to realize substantial savings. These opportunities exist in Africa and need to be pursued.

Proposed action: Identify key regional opportunities and fund small work teams to develop proposal and to carry out advocacy. From alternative fibre infrastructure to bandwidth consortia, initiatives are already underway which have the potential to change the face of African R&E networking. More awareness and resources are required to target specific regional objectives.

Level Four: Continental Facilitation and Advocacy

Analysis of African research and education networking over the last 5 years has shown that, while there have several initiatives to support research and education infrastructure in Africa, most of these initiatives have been independent and largely unaware of each other. This has led to lost opportunities for economies of scale through collaboration and some duplication of efforts. Further, while great strides have been made in making content available to African universities, there has not been similar progress in widening the digital roads that lead to that content. Part of this is a similar lack of awareness at several levels of the critical importance of Internet infrastructure to African universities. Advocacy and networking are required to continuously work to better link initiatives and to raise awareness at the national and international level.

Proposed action: Establish an R&E Networking Secretariat at the African Association of Universities (AAU). The history of the development of the Internet and indeed its very nature is distributed with many independent initiatives working collaboratively and to common standards. The purpose of establishing a secretariat for African R&E networking would not be to mastermind the development of academic infrastructure in Africa. On the contrary the role of a small secretariat would be to stimulate voluntary collaboration among independent initiatives and to raise awareness in Africa and internationally of the need for investment in this resource. The AAU is the natural body to house such a secretariat being the single most

representative body of the African R&E community and having been given a mandate by its constituency in February 2005 to address this issue.

4. One hour **networking sessions** to allow participants to follow up specific issues with speakers

5. Concluding session: **The way forward**: summing up the main action points and implementation partnerships – initiating a process for moving forward – key African stakeholders and development partners

Conference Website

More information is available on the AAU Website, <http://www.aau.org/tunis/>.