

*Network for Capacity Building and Knowledge Exchange in the
Telecommunications Sector (NetTel@Africa)*

**Center to Bridge
the Digital Divide**

*Helping Communities through Outreach,
Assistance & Applied Policy Research*



Second Quarterly Progress Report
1 September to 30 November 2002

USAID/Leland Initiative Award Number: GDG-A-00-02-00008-00

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INTERNEWS 2nd Quarterly Progress Report

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Quarterly Highlights

The past quarter was a busy one for NetTel@Africa. Much time was spent developing each of NetTel's four components. The **Training Program in ICT Policy and Regulation** convened a week-long working group meeting in Africa to review work on the module development and the post-graduate diploma and Masters program development. New partnerships for the **Peer-to-Peer (P2P) Network** were forged. The first actions in the formation of the **Community-to-Community (C2C) Network** were taken in the proposal of a university partnership. An initial agenda for the **Research Program** was formulated.

During the quarter, funding was secured to fully fund the first year and the second year of the implementation of NetTel@Africa.

The following activities and achievements were accomplished during the second quarter and are detailed in this report:

- NetTel@Africa Work Group Meeting at Cape Town, South Africa
- NetTel@Africa's Training Program Prospectus Finalized
- Web site harmonized (<http://nettelafrika.org>)
- NARUC Meeting in Chicago
- First Field Attachment from the Nigerian Communications Commission to Washington, D.C. and Oregon PUC
- KERP subgrants to 5 universities in South Africa
- Completion of research review exploring ICT's impact on economic development
- Assistance to South African Department of Education to develop a policy framework on e-education and the cross-sectoral linkages with telecommunications policy, particularly universal access and e-rate for schools

Summary: Status of NetTel's Components

The NetTel@Africa activity has four components: 1) Training Program in ICT Policy and Regulation, 2) Peer-to-Peer (P2P) Network, 3) Community-to-Community (C2C) Network, and 4) Research Program. As of the date of this second quarterly report, each component is in a state of development, none has reached a state of full operation.

NetTel's Training Program

The Training Program is the most developed of the four components. Completion of the content for the training modules is expected next quarter at which time onsite trainings will be conducted to transfer modules into KEWL, the online learning management platform developed and hosted

by the University of Western Cape. On-site training on KEWL is scheduled in January/February; beta testing and quality assurance in February/March 2003; and pilot testing through "NetTel Safari", which will be loosely modeled after the "Camp NARUC" in April/May 2003.

Peer-to-Peer (P2P) Network

The P2P Network, while operational, is in the process of development. The National Association of Regulatory Utility Commissioners (NARUC) has expressed enthusiasm in participating in this network by sending and receiving field attachments, knowledge sharing and exchanging professional expertise. Additionally, individual commissioners, regulators and staff have indicated on which modules they would be able to provide expert/peer advice on resources, case studies, and other online materials, review modules, and, subject to availability of funding from resource partners, act as co-facilitators of the modules during the NetTel Safari. The P2P Network has already facilitated one face-to-face meeting between African and U.S. regulatory staffs and one field attachment between Nigeria Communication Commission and the Oregon Public Utility Commission.

The Community-to-Community (C2C) Network & Research Program

The C2C Network and the Research Program are the least developed NetTel@Africa components. Both are being actively shaped by separate proposals. For the C2C Network, a proposal has been submitted to the ALO to link South African and U.S. universities, high schools, and teachers-in-training. For the Research Program, an NSF project proposal is being prepared that will assess the impact ICT policy and regulation has on socio-economic development in the partner eight countries of NetTel (Botswana, Kenya, Nigeria, South Africa, Tanzania, Uganda, United States, and Zambia).

Program Achievement 1: Work Group Meeting at Cape Town, South Africa (Sept 9-13, 2002)

This five-day work group meeting for the Network for Capacity Building and Knowledge Exchange in the Telecommunications Sector (NetTel@Africa) was convened by the following TRASA principals -- Papi Mewka, Thapelo Mogopa and Goodluck Ole-Medeye. Details concerning this meeting have been posted on the Internet, please visit the following web page: <http://cbdd.wsu.edu/networks/Meetings/CapeTown_2002/cpt02_home.htm>

Overview of Work Group Meeting

The goals of this work group meeting were ambitious and successfully met. Over thirty individuals from a dozen international institutions were in attendance. The primary objectives of this meeting were to discuss: Research Agenda, Monitoring and Evaluation Plan, Program Prospectus, Strategies for Gaining Faculty Senate Approval, Network Communication, Module Sequencing, Requirements for Post-Graduate Diploma and Masters Degree Program, Timeline for NetTel@Africa, Peer-review of the content development for each module (total of ten), and Learning Management Software (i.e., Blackboard, WebCT, KEWL). Beyond the specific objectives, this meeting provided both structured and unstructured time for current and prospective network members to strengthen relationships, share knowledge and explore possibilities for NetTel@Africa.

All five days of this meeting were punctuated by lively discussion on a broad array of issues. While many agreements were reached, certain issues will require follow-up actions. Some issues were tabled for further discussion; however, most have been charted out on a work plan (please see NetTel Work Plan). Table 1 presents the issues discussed during the meeting; those issues selected for inclusion in this summary are listed in **bold type**. For a complete description of the issues worked through at this meeting, please refer to the full report of this meeting.

TABLE 1: ISSUES DISCUSSED

NetTel Logo	HRD Standards	Module Delivery	KEWL
Web Sites	Profession Standards	Diplomas (BS or MS)	Module Sequencing
Program Prospectus	Communication	Credit	Program Timeline
Research Agenda	Regional Directory	Assessment	Potential Members
M & E Plan	Module Development	Quality Assurance	

Selected Issues

As part of the NetTel Coordinators' responsibilities, the development of a program prospectus was discussed. The Council on Higher Education structure presented by Toks Oyedemi (University of Fort Hare) will be used. Dr. Hashim Twaakyondo is taking the lead on this issue.

A work group focused on establishing a research agenda was formed during the meeting. This work group will also consider the issues of who will perform the research, how it will be paid for, and how the data collected will feed back into the content of the NetTel@Africa curriculum. The expected date of completion for the research agenda is December 2002. Prof. Beda Mutegahywa is taking the lead on this issue.

A monitoring and evaluation plan for the NetTel@Africa activity has been drafted and refined. To complete this plan, a timeline for monitoring needs to be established and the indicators to be used for evaluating the success of this activity needs to be defined. Ita Mannathoko, Maria Beebe and Matthew Mitchell are collaborating to develop and implement this plan.

The meeting's participants agreed that the module development will incorporate designs for two modes of delivery: face-to-face and online. Expected date for the completion of module development is the end of November 2002. The following academic institutions are responsible for module development: AFRALTI, UB, UDSM, UFH, UNISA, UNZA, UWC, and UWIT.

Module delivery will be available to all participating academic institutions via face-to-face instruction. Concerning the online delivery, those NetTel partners who developed content will have the exclusive right to offer their module online to other participating institutions on a reciprocal tuition arrangement. Pilot testing of the modules will begin in April/May 2003 followed by a formal launch of the two diploma programs (i.e., post-graduate and Masters) in October 2003.

Two diplomas will be offered: the first at the post-graduate level and the second at the Masters level. For the post-graduate level, it was agreed that the diploma will consist of 120 credits (see below) and require the successful completion of all ten modules offered at the basic level. For the Masters level, it was agreed that the diploma will consist of 240 credits and require a) the successful completion of requirements of the post-graduate diploma, b) the successful completion 3 modules (chosen by the student) offered at the advanced level excluding Module

10, ICT Applications, c) an appropriate graduate-level research methods course (to be developed and offered by the home institution), and d) a research-based thesis.

Credit was defined as being equal to 10 notional hours. A notional hour was defined as either contact hours (between students and lecturers) or non-contact hours. To earn a single credit, the ten notional hours must include at least 3 hours of contact between the student and lecturer. Contact can be virtual, it does not have to be face-to-face.

The NetTel partners agreed to use the KEWL platform developed by UWC. The benefits of KEWL include its being open-source, flexible design and simple interface. UWC will host the software on their servers and provide back-end support to NetTel partners who are involved in developing and delivering modules.

The program timeline for the rollout of NetTel@Africa was proposed by NetTel’s Steering Committee. Please refer to Table 2 for a graphical display of this timeline.

ACTIVITY	2002 09	10	11	12	2003 01	02	03	04	05	06	07	08	09	10	11	12	2004 01	03	04
Complete Module Development																			
Program Approved by Univ. Authority																			
Workshop for Course Trainers																			
Pilot Test Modules																			
Launch Post-Graduate & Masters Diploma Programs																			
Design Logo																			

Program Achievement 2: Progress in Training Program

Significant progress has been achieved with the NetTel@Africa Training Program. Beginning in early September, Tom Wilson from WSU consulted in person with AFRALTI in Nairobi, Kenya for one week. The focus of Tom’s visit was to help AFRALTI develop their module on Service Pricing.

The NetTel@Africa Coordination Team produced two important development tools for NetTel’s Training Program. The first tool is a prospectus detailing the outcomes and assessment criteria for each module. The content of the prospectus is being edited and modified by the various module developers. An updated draft of the prospectus can be downloaded at the following link: http://cbdd.wsu.edu/networks/Resource_Files/ProgramProspectus2.doc.

The second tool developed by the Coordination Team is a harmonized Web site for NetTel@Africa that is hosted by UWC. Following the recommendation by the NetTel Communication Work Group, two previous Web sites hosted by UDSM and WSU were combined into a single site. Additionally, the new site is hosted by a server on the African continent; previously, both UDSM’s or WSU’s sites were hosted in U.S. servers. The new NetTel@Africa Web site can be found at <<http://nettelafrika.org>>

Another accomplishment regarding module development is the aggregation of relevant on-line resources. The reason for pooling these resources is to help module developers design their

syllabi and reading assignment around freely available digital content rather than expensive printed materials. A list of these resources can be viewed on the new NetTel Web site mentioned above.

Program Achievement 3: Progress in Peer-to-Peer Network

The Peer-to-Peer (P2P) Network has experienced considerable progress. Three accomplishments are reported here. First, in late September, Ms. Funlola Akiode, Head of the Business Development Unit at the Nigerian Communications Commission, participated in a job shadowing at the Washington, DC Public Utilities Commission and the Oregon State Public Utilities Commission. The focus of her visit included financial accounting issues and a review of the day-to-day operations of a U.S. telecommunications regulatory body. Second, Dr. Bill Gillis, Director of the WSU Center to Bridge the Digital Divide (CBDD), presented the P2P Network to the National Association of Regulatory Utility Commissioners (NARUC) at their annual meeting in Chicago, IL in November 2002. Many regulatory staffs expressed serious interest in participating in this network and a plan for moving forward is being formulated, which is directly related to the third accomplishment. Third, an on-line survey is being collaboratively developed by NARUC and CBDD. This survey will assess the interest and relevant skills for specific regulatory staff members as identified by NARUC. The survey will also collect the contact information for those who qualify and express an interest. A working draft of this survey can be viewed at the following link: http://cbdd.wsu.edu/networks/other/p2p_survey_v1.htm. A similar survey will be done with African regulators and their staff.

Program Achievement 4: Formation of Community-to-Community Network

The Community-to-Community (C2C) Network has initiated three sets of activities:

Knowledge Exchanges and Learning Partnerships (KELP)

The objective of KELP is to catalyze major improvements in African institutions through the integration of instructional technologies into the research, teaching, and learning processes. ELP acts as a catalyst for knowledge exchanges and learning partnerships that are based not only on face to face interaction but also on judicious use of information, communication, and knowledge technologies, including the Internet, CD ROM, videoconferencing, and traditional print media. What is envisioned is engagement between African and American networks; away from a one-way process in which one transfers its expertise to the other towards commitment to sharing and reciprocity; where partnerships are two-way streets defined by mutual respect among the partners for what each brings to the table.

The direct beneficiaries of KELP are a broad array of individuals--faculty, researchers, and students; African institutions with improved knowledge base that are relevant to 21st century jobs; and African networks with improved policies for knowledge exchanges and learning partnerships within the continent and between African and American institutions.

The five networks based in South Africa, pursue the following goals

- 1) To establish a Management Sciences Network at the Faculty of Management Sciences, University of the North.
- 2) To establish a Public Affairs Network at the Faculty of Economics, University of Pretoria.

- 3) To establish a Telematics Centres Network at the University of Durban-Westville.
- 4) To establish a Transformed Agricultural Education Network at the University of Fort Hare.
- 5) To establish a Recreation and Tourism Network at the University of Zululand (Umlazi).

The anticipated outcomes from each of these networks are:

- Professional development tools and models relating to instructional technology adapted by faculty members and staff
- Course content transformed into digital resources
- Partnerships using online collaborative teaching forged
- Policies regarding global/online education articulated

Network for Teaching, Learning and Technology

A proposal for a Network for Teaching, Learning and Technology has been jointly submitted to the ALO program by the University of the Witwatersrand and Washington State University. The intent of this planned project (Network) is to improve student achievement. The strategic goal of this project is to beneficially impact teacher training and teacher training colleges/institutes. There are four phases of this project's outcomes that will focus on the rapid scaling-up of certified teachers, the quality enhancement of in-service teachers, and capacity building.

The ultimate goal of the Network is to improve student achievement by employing best teaching and learning practices in classrooms in the United States and South Africa through a mix of face-to-face interaction and information and communication technologies. To this end the University of the Witwatersrand and the Washington State University (WSU) Center to Bridge the Digital Divide propose a collaborative partnership that allows for the sharing of expertise among faculty from universities, creating a knowledge base, training of teacher-trainers, and initiating collaborative activities among students.

The Network will operate at three levels: at the university faculty level, at the school teacher level, and at the student level. The Network will apply the following principles: mutual benefits of knowledge exchange/sharing, improved student achievement begins with the teacher, and providing training for teachers is necessary and critical to their success.

Of strategic interest to both parties is the training of pre-service teachers, and the development of new skills and strategies in classroom teachers. It is the intention of this Network to create a knowledge base of effective practices with a structure to deliver it in a systematic, effective way.

African Virtual Open Initiative

Derek Keats (University of Western Cape) attended the Policy Round table on strategies for US-developing country collaboration in distance education in Washington, D.C. One outcome of this visit is a concept paper on the African Virtual Open Initiative (AVOI) which is likely to be funded by the Shuttleworth Foundation and Carnegie Foundation. Leland is considering funding the initiative.

Program Achievement 5: Participation in the Development of e-Education in South Africa

The Department of Education in South Africa requested assistance to develop a policy framework on e-education. The policy framework will focus on the role that ICT can play in the general and further education process, and by extension in the development process. South Africa has a broad socio-economic development strategy that addresses factors such as HIV/AIDS, crime, the rule of law, physical infrastructure (for example, clean water and electricity), basic literacy and political instability close to the country's borders. To address these factors, South African leaders have recognized early on the need to integrate ICTs into the overall national development strategies to facilitate implementation, expand the scope and coverage, and increase the chances of success.

At least two global efforts have a bearing on the situation in South Africa. The UN ICT Task Force is supported by all Heads of State and Government who endorsed the ECOSOC Ministerial Declaration at the Millennium Summit. The declaration goals are to: provide a global forum for ICT-for-development issues, forge synergies to generate action through multi-stakeholder partnerships, help mobilize public and private resources, and promote universal, affordable, and meaningful access to ICT. The World Economic Forum (WEF), a key partner to the UN ICT Task Force, conducted a comprehensive initiative on e-readiness in the Southern African Region.

Despite being recognized as the ICT leader in the continent, there is a digital divide between South Africa and other countries with similar GDPs and within South Africa. In South Africa for every hundred inhabitants, there are only 11 main telephone lines, about 20 cell phone users, and 6 Internet users. The situation is as grim in schools. In 2000 only 25 percent had access to cell phones and only 7,5 percent of schools had access to the Internet, with an average learner-computer ratio of 164:1. This learner-computer ratio of 164:1 gives learners at most 13 minutes of computer time per week, assuming that one computer is available for 36 hours in a week or 2160 minutes in a week. This learner-computer ratio, however, is meaningless because of the disparity with access to computers between schools; with Mpumalanga showing the lowest percent of schools with computers (8,7%) and Gauteng showing the highest percent of schools with computers (82,5 %). Even in Gauteng schools there is uneven access by learners to computers and certainly access to the Internet.

Beyond access, there is a gap in the ability of learners and teachers to use these technologies effectively; to access high-quality and diverse content, and to create content of their own.

If South Africa is to succeed in their aspirations to move to a knowledge economy and a knowledge democracy, they can not allow this social exclusion to the digital world, this digital apartheid to continue. And that is why President Thabo Mbeki has underscored the importance of ICTs at numerous South African and international forum. In 2001 the President established a Presidential National Commission (PNC) on Information Society and Development (ISAD). PNC is made up of representatives from our country's public and private sector.

At the same time, the President established a Presidential International Advisory Council (PIAC) on ISAD. PIAC is made up of CEOs from major international corporations and experts active in the field of information and communication technology. When the PIAC on ISAD met in

September 2002 the top three focus areas for integrating ICT have been identified as: education, health and small, micro, medium enterprises (SMMEs).

In a related development, the African Union created the New Partnership for Africa's Development (NEPAD). Its ICT Task Team, the e-Africa commission identified education as a priority area with the development of e-schools as a top priority. The e-school concept includes the following: an e-school has a basic module of ICT tools, with basic standards related to curriculum and qualifications, supported by comprehensive content development. The e-school also serves as a health point.

The Department of Communications is developing a comprehensive e-strategy that is also focused on e-education and has been studying the feasibility of an education network (EduNet). The Telecommunications Act 64 of 2001 mandates the Department of Communication to establish universal service funds and an e-rate to provide access to telephones and Internet access to disadvantaged communities, including schools. The National Human Resources Development Strategy highlights the importance of high quality skills in the fields of Science, Engineering and Technology.

The Department of Education, in conjunction with the Department of Communications, developed a Strategy for Information and Technology in Education in November 2001. In his Foreword, the Minister has indicated that the question is no longer "whether we should introduce ICT in teaching and learning" but "how we can successfully introduce ICT into schools." In September 2002, HEDCOM established a sub-committee on ICT to set up to provide strategic direction and finalize this white paper and the national plan for e-education.

Work on the policy framework will continue during the next quarter.

Looking Ahead: Program Plans for the Next Quarter (Dec 2002-February 2003)

In the upcoming Third Quarter of the NetTel activity (1 December 2002 to 30 February, 2003), many tasks are anticipated. Below are listed some of these tasks:

- First draft of the content of the 10 modules is expected to be completed.
- Training for authoring course on the Knowledge Environment for Web-based Learning (KEWL) will be take place on location for each of the eight African module development partners (Jan-Feb 2003).
- A regime for beta testing and reviewing the quality of each module will begin (March – April 2003). Quality assurance visit will include checking on content for each module and ensuring coherence across the ten modules, beta testing with some regulatory staff in-country, and refining activities, projects, and assessment/grading procedures.
- The survey for the P2P Network (to include U.S. and African regulators) will be executed and the collected data will be compiled in a database for the purposes of building the P2P Network.
- A research proposal exploring the relationship between ICT policy and regulatory practices and socio-economic development will be drafted and submitted to the National Science Foundation (February 2003).

- Discussion with the University of Colorado regarding the development of a joint degree program for NetTel students (January 2003).
- Participation in a series of meeting related to NetTel in Africa (e.g., launch of the Association of the Information and Communications Regulators of Eastern and Southern Africa in Addis Ababa and workshop on capacity building on 22-24 January in Addis Ababa.)
- Publication of AfricaDotEdu in January/February 2003.
- Donor collaboration (ITU, DFID/CTO) with regard to the geographic expansion of NetTel training component, peer to peer, as well as the research component.
- 26-27 February 2003 - stakeholders' meeting with Nigerian universities to be hosted by the Nigerian Communications Commission (NCC); within the context of the planned African Telecommunications Institute by the NCC, the objective is to introduce the NetTel@Africa, encourage involvement and participation of Nigerian universities, tap from their wealth of knowledge, and introduce the NetTel@Africa modules delivery method.
- Planning for the NetTel Safari (boot camp, similar to Camp NARUC)

Implementation and Management Challenges

- The slowness of WSU Bureaucracy – The Center to Bridge the Digital Divide is working with the Office of Grants and Research Development and the Special Projects Office to ensure that advances and liquidation of advances are done in a timely manner.
- African leadership and American support – Ensuring that Africans lead and that the American partners play a supportive role is a delicate balancing act.

Final Notes from Program Director

NetTel@Africa continues to demonstrate the primacy of the following underlying principles

- African-led
- Connections with peers – between policy makers and regulators, academics, trainers, public and private sector, and citizens, across national boundaries through a combination of face to face interactions and virtual interactions
- Reciprocal exchanges
- Mutual benefits

“When the webs of the spider join, they can trap a lion.”

--Ethiopian proverb

Although the program is only in its second quarter of implementation, we have succeeded in getting the network partners to work together to achieve their shared objectives.

Maria A. Beebe

Program director, WSU Center to Bridge the Digital Divide

30 November 2002

ATTACHMENT 1: Participants at Work Group Meeting in Cape Town

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ATTACHMENT 2: Matrix of NetTel Modules

	<u>Module One</u> Macro Environment and Implications of Telecommunications	<u>Module Two</u> ICT Technologies	<u>Module Three</u> ICT Industry and Markets	<u>Module Four</u> Spectrum Management	<u>Module Five</u> Financial Analysis	<u>Module Six</u> Approaches to Regulation	<u>Module Seven</u> Universal Access and Quality of Service	<u>Module Eight</u> Service Pricing	<u>Module Nine</u> Policy, Law and Institutions	<u>Module Ten</u> ICT Applications
Lead Institution for Development	<u>University of Fort Hare</u> Toks Oyedemi G. B Boloka Noxolo Mafu Nhlangasino Dladla	<u>University of Botswana</u> Joseph Chuma Shedden Masupe Dominic Mbewe Bogadi Toteng	<u>University of Zambia</u> John S Munsaka Elizabeth Mumba Syamitiba Kanyanga Alec P Malichi Barbara N Munyati Saul Zulu	<u>University of Western Cape</u> Cedric Muleya Prof Robbie Lindsay Prof. D. Keats Prof Andy Bytheway Dr Keith Gottschalk	<u>University of Dar es Salaam</u> Marcellina Chijoriga Erasmus S. Kajjage Evelyne Richard	<u>University of South Africa</u> Marcia Wilson Musa W Ndlovu G K Matthys Marie-Helen Bataille	<u>University of Witwatersrand</u> Chalrie Lewis Alison Gillwald	<u>AFRALTI</u> Mohammed Noorani A. P. Rutainurwa	<u>University of South Africa</u> Marcia Wilson Musa W Ndlovu G K Matthys Marie-Helen Bataille	<u>University of Zambia</u> John S Munsaka Elizabeth Mumba Syamitiba Kanyanga Alec P Malichi Barbara N Munyati Saul Zulu
Personnel at Lead Institution										
Personnel at Support Institutions		<u>University of Maryland</u> Kelvin Wong <u>University of Colorado</u> Dale Hatfield	<u>University of Maryland</u> Kelvin Wong	<u>University of Colorado</u> Dale Hatfield	<u>University of Colorado</u> Scott Savage	<u>University of Florida</u> Mark Jamison Cynthia Stehouwer	Bill Melody			<u>University of Maryland</u> Kelvin Wong
Practitioner to Academic Peer Experts	<u>Montana PUC</u> Commissioner Bob Rowe	<u>DC – PSC</u> Joseph Nwude	<u>DOC – NTIA</u> James McConnaughey	<u>FCC</u> Paul Margie		<u>New Hampshire PUC</u> Barkley Jackson	<u>Alaska PUC</u> Commissioner Nanette Thompson,	<u>Washington PUC</u> Tom Wilson <u>TCC</u> Goodluck Ole-Medeye	<u>FCC</u> Paul Margie	<u>Texas PUC</u> Commissioner Brett Perlman