UNIVERSITY OF NAIROBI
ICT ANNUAL REPORT FOR 2012

13th February 2013

1 INTRODUCTION

The ICT center has consistently provided excellent ICT services to the University community despite many challenges. In the Webometrics rankings, UoN climbed to position 12 in Africa and maintained the position 1 in Kenya.

The University System of Websites is under continuous improvement in term of content, design, visibility and openness. The University of Nairobi Digital Repository has been launched to provide open access to tones of research work previous not easily accessible. The University Website policy was approved by management in December 2012 to manage the University Web presence and content.

The University has invested heavily on IT infrastructure. Bandwidth available for the University community has peaked 500Mbps. There are several projects in place to increase access speeds, capacity and availability of the internet. These include LAN/WAN extensions, upgrade of old LANs and deployment of Wireless LANs popularly known as Wi-Fi. The University of Nairobi through ICT Centre has partnered with Google in projects aimed at supporting email services and infrastructure development.

The number of staff at the ICT Center stands at 120. 50 of the staff are based at Chiromo (headquarters) and the rest distributed across University campuses to support and strengthen the ICT usage at the colleges.

2 **UPDATES**

2.1   UNIVERSITY RANKINGS

The University of Nairobi has been monitoring her performance on Webometrics and 4ICU **university rankings**. The **University System of Websites** is continuously being updated at the faculty/institute/departmental levels. The content has been enriched and the design improved.

Webometrics ranking is among the first ranking that considered ranking world universities based on their websites. In the **February 2013** Webometrics ranking was based on a criterion that focused on visibility/Impact (50%) and Activity (50%) which was constituted by presence (1/3), openness (1/3) and excellence (1/3).

The University of Nairobi has steadily improved in its performance since 2004 when the first Webometrics ranking was released. In January 2013, UoN was ranked 1,326 in the World, 12th in Africa, and 1st in Kenya. The table below shows the University's performance in Webometrics ranking since January 2009.

			WORLD POSITION IN			
Ranking	AFRICA RANK	WORLD RANK	SIZE/ PRESENCE	VISIBILITY	RICH FILES/ OPENESS	SCHOLAR/ EXCELLENCE
Jan-09	29	4,046	3,069	5,413	3,851	3,839
Jul-09	24	4,467	2,490	7,001	4,327	3,711
Jan-10	28	3,897	3,136	4,679	4,363	4,104
Jul-10	26	3,190	1,905	4,119	3,447	3,809
Jan-11	27	3,136	1,976	4,335	3,310	4,382
Jul-11	26	2,452	2,045	4,215	4,942	1,706
Jan-12	17	1,367	631	1,794	2,761	1,724
Jul-12	14	1,435	839	2,010	4,057	1,342
Jan-13	**12**	**1,326**	**1,528**	2,981	950	1,346

Table 1: Webometrics ranking over the last 5 years

The staff profile website tool was also redeveloped and revamped and is now accessible through http://profiles.uonbi.ac.ke. The tool provides staff with more functionality and is aesthetically appealing.

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The Staff Intranet Portal was also redeveloped for document and content sharing. The new portal boosts better user experience and design in terms of access and upload of content.

2.2 MANAGEMENT INFORMATION SYSTEMS

The finance department in collaboration with ICT center started issuing **electronic pay slips** (e-pay slips) via email in May 2012. The objective was to reduce stationaery and administrative costs, and improve the distribution of pay slips. As of December 2012, all members of staff were receiving their pay slips through the email.

ICT has implemented the **Estates Management Information System** for the housing registry in Estates Department. The housing registry identified a need for a computer-based information system to automate management of tenants, applications, billing and rent collection.

The **Staff Performance Appraisal System** (USPAS) was developed for Central Administration and sought to automate the annual staff appraisal process. The system aims to simplify tracking of staff performance over time and hence inform its staff development policies. The process builds up from self, peer, supervisors and finally management appraisal. The system has been piloted in the Administration Department and the ICT Center with an intention to roll out in the entire University.

Coordinating transport operations and facilities in the University of Nairobi is a challenge owing to the geographical expansiveness of its campuses. To ease this, the ICT Center has developed a **Fleet Management System** that seeks to keep an inventory of the vehicles, monitor their status, keep insurance records, and track daily operations. The developers hope to integrate real time monitoring through Geographical Information Systems (GIS).

ICT center successfully launched the Joint Applications Board's (JAB) **online application** for degree choices by high schools. Using the online system, it is now possible for form four leavers and potential students to revise their degree choices online. The system is not only accessible via standard web browsers but also via mobile phones. The system has also integrated mobile money payment solutions.

2.3 INTERNET BANDWIDTH USAGE

In 2012 UoN consumed an average of 330 Mbps through the Kenya Education Network Trust (KENET). This was occasioned by peaks of up to 500 Mbps.
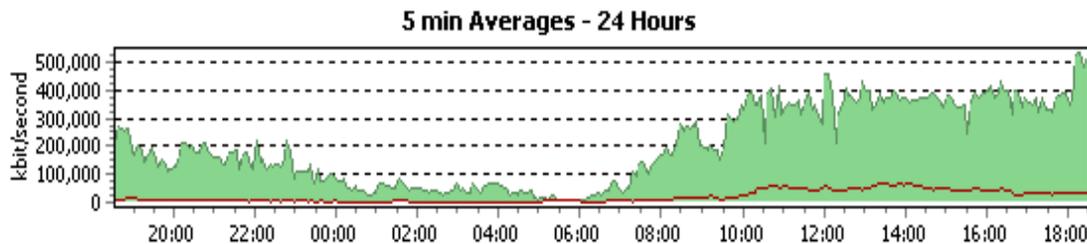

Figure 1 Total bandwidth consumption Jan 2013

The Wi-Fi network was rolled out in College of Education and External Studies, and work is ongoing in College of Health Sciences. This means our students are now able to access the University online resources and the internet any time of the day, using the popular *chemiweb* and/or *chemichemi* wifis.

The consumption of bandwidth on the wifi has reached an average of 80 Mbps from 28 Mbps in 2011.

2.4 PERSONAL COMPUTERS

There are over 7,300 PCs in the University at present. The computers are distributed through ICT centre to Colleges for use by staff and students. The University through ICT centre procures computers every year in order to ensure staff and students access and productively exploit available network resources.

ICT aims at achieving the ratios of 1:1 for Teaching and Senior Administrative staff and 1:10 for students in general by the year 2014.

The graph below shows the trend of computer purchase for the last eight years[1].

PCS DISTRIBUTION

No. of Computers (y-axis: 0 to 8000)

Values: 2800, 3500, 4015, 4425, 4700, 5600, 6200, 6800, 7400

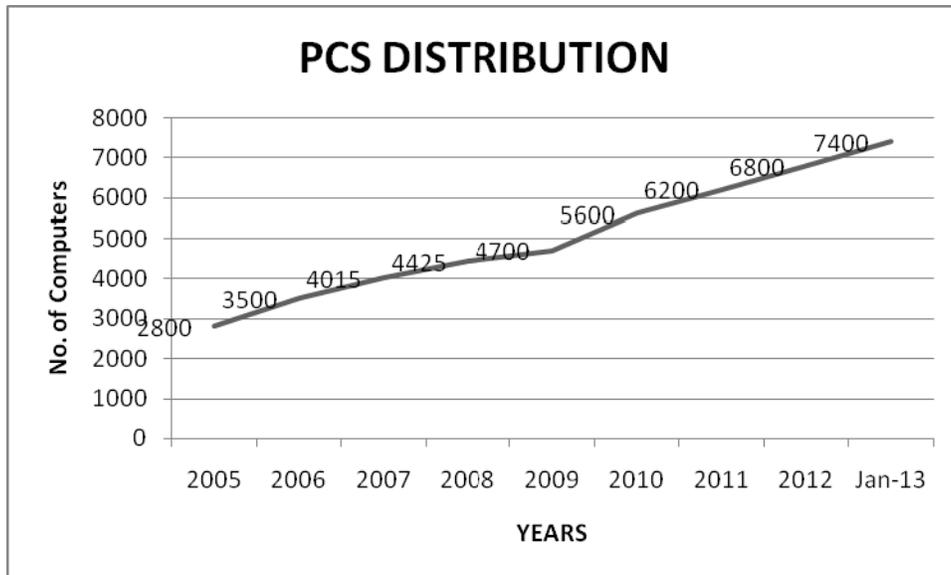**YEARS** (x-axis): 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, Jan-13

Figure 2 Number of PCs distributed through ICT centre

2.5 DATA ACCESS POINTS

ICT Centre has so far installed about 7,800 operational data points in its network infrastructure. The latest additions were in extra mural centers with 120 data points and School of Business Computer Lab with 40 points. This is a remarkable improvement of an additional 695 data access points up to the period December 2012.

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[1] The total number is higher as there are some departments that have PCs donated directly through grants and other programmes. University staff and students also have and use personally-owned PCs and Laptops on the University network.

By June 2013, the section projects an additional of 500 data access points. The figure below depicts the growth of data access points over the past eight years.
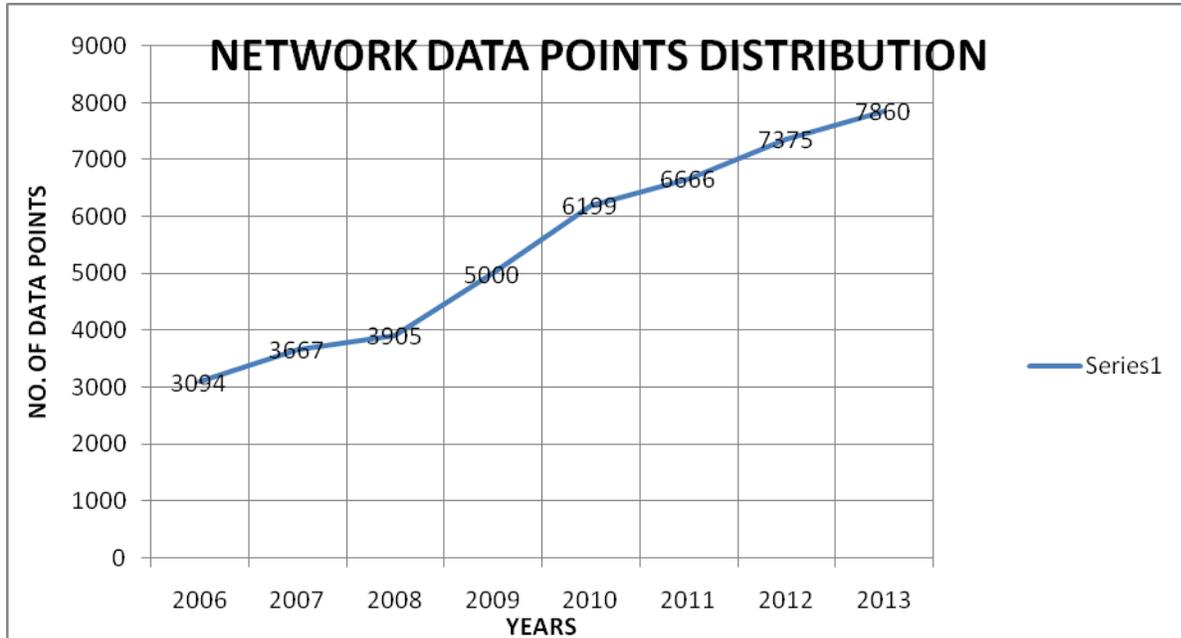

Figure 3 Number of data access points

2.6   LAN EXTENSIONS

The following LAN extension projects were completed in the year 2011/2012

- ADD network upgrade – where 453 data access points were activated at a cost of Ksh 13.5M.
- Kenya Science Lecture theatre network extension, with a total of 120 data access points and a WIFI network at a cost of Ksh 6.8 M.
- Extra Mural Centers network in Garissa, Meru and Kisii. A total of 120 data access at a cost of Ksh 8.5Million.

2.7 STAFFING

The ICT Centre has a strong workforce of 120 staff distributed across the five sections: Director's Office, Management Information Systems, Communication & Data Centre, Network and Infrastructure Services, and User Support Services & Maintenance. The Centre has a strong technical staff: approximately 20 with post-graduate and 30 with undergraduate qualifications in IT and Telecommunications. The Centre has a dedicated support staff.

3 UPCOMING PROJECTS

In line with its strategic plan and commitment to provide quality services, ICT Centre has embarked on upgrading the university's network infrastructure to UTP Cat 6 and fiber optic cabling, in order to provide high data transmission speeds. This will ensure that the university aligns itself with modern IT technology demands that will cater for teaching and learning applications as well as service delivery systems that demand high bandwidth capacities.

The following projects are at implementation stage for the year 2012/2013.

- Pre-Clinical department LAN Extension with 395 data access points at a cost of 10.1 Million
- Mombasa Campus Computer Laboratory with 50 data points at a cost of 1.5 Million
- Connectivity to SWA SMU units and student common rooms in SWA headquarters, Mamlaka 1 and 2, Box Stella Awinja, and student center. Most of this will focus on extending the existing wireless coverage at a cost of Ksh 15M.
- Wireless LANS (WiFi) for Mombasa, Kisumu, Parklands, CEES and Health Sciences.

The MIS section's planned projects include;
- Upgrade of the Data Center.
- Automation of the tax filing process on the HRMIS, popularly known as P9
- Online application for degree programmes
- Payment of selected university levies via mobile money e.g. exam center levies
- Automation of the procurement and cash module on the Financial Management System (FIMS).
- Implementation of WiFi networks in School of Law, and College of Agriculture and Veterinary Studies (CAVS).