Building an internet world

By Alex Gakuru

FROM NOW ON Kenya joins the 'post community' as users of the officially recognised virtual 'post boxes'. Postal Corporation of Kenya will deliver 'registered email' via new .post domain thus expect the Postmaster General to invite applications for trusted email addresses like; gakuru@kenya.post.

This development follows a contract signed between the Internet Corporation for Assigned Names and Numbers (ICANN) and the Universal Postal Union (UPU) on 9th December 2009.

"Post will facilitate the development of secure and trusted postal services over the Internet and enable the UPU to reach the full potential of its original mission, to build a worldwide space without borders that facilitates personal and business communication in a secure and trusted environment," states www.upu.int

Shared the Internet

ICANN will be holding its 37th International public meeting in Nairobi on March 7th -12th, 2010. The organization was formed in 1998 as a non-profit, public-benefit corporation to co-ordinate the Internet's naming system to keep it secure, stable and inter-operable.

ICANN manages top level domain names like .com, .org, or .ke. It also allocates three sets of unique identifiers for the Internet; Domain Names (DNS), Internet Protocol (IP) addresses, and co-ordinates operation and evolution of the DNS root name server system. This is aimed at preventing colonisation and control of the Internet by some governments, businesses interests, transnational organisations or individuals manipulating the rules for allocation of names on the internet, disputes resolution and addressing participatory 'governance' co-ordinates policy development in relation to these technical functions with global participants.

ICANN meets different 'stakeholder groups' these being Non-Commercial, Intellectual Property Constituency, ISPs, Business, Government, Registries, Registrars, among others. Given their diversity of interests, geographical locations and linguistic differences, developing consensus is no easy task.

Analysing the competing interests on 'Looking Towards the Future', Vint Cerf, former Board Chairman, wrote, "ICANN is an experiment of balancing of multiple stakeholder interests in policy about the implementation, operation and use of the Domain Name System and the address spaces of the Internet."

The interests of a wide range of entities must be balanced in the process. he adds.

Non-commercial users

In his document, 'ICANN without restraints: the difficulties of co-ordinating stakeholders', Andy Oram wrote, "The non-commercial users remain the soul of ICANN, where the domain-name registrars and registries are its machinery. ICANN needs all these constituencies now they are being re-named 'stakeholder groups'.

ICANN Chair, Peter Dengate Thrush responded and said, "What we are doing is investigating the legal structure of ICANN and whether or not there may be a different legal structure for ICANN to be a better global, multi-stakeholder, open and transparent, bottom-up and a geo-diverse organization."

Rod Beckstrom a global entrepreneur, analyst, and author of The Starfish and The Spider a book on dynamics on the internet ecosystem, became President and Chief Executive Officer of ICANN on 26th June 2009. Among his ingenious initiatives are "Cash for network clunkers" to spur IPv6 upgrades. Now spearheading Internationalised Domain Names (IDNs) enabling non-Latin characters Greek, Russian, Arabic, Hangul (Korean), Japanese, and Chinese to be used as domain names.

Children worldwide will be able to use the Internet in their native languages; people will use keyboards in their own languages to access the Internet and local businesses can create localized web addresses. As such it will be easier for medical organizations, local news agencies, schools and other bodies to disseminate information online. "Over half the Internet users around the world do not use a Latin-based script as their native language. IDNs are about making the Internet more global and accessible for everyone. In 2010, these addresses may well be common-place on our screens and this opening-up of the Internet could be lauded as the widest-reaching example of social inclusion that cyberspace and the world have ever witnessed," Beckstrom said.

Thrush and Beckstrom oversaw the reduction of the US government's grip on ICANN turned into increased shared oversight with other governments and the 'Internet Community' with Affirmation of Commitments (AoC) signed last September. This replaced Joint Project Agreement (JPA).

Internet history

The Internet originated as a mechanism for the exchange of information by US government agencies and research bodies. Internet Society's 'Brief History of the Internet' narrates the computer research programme DARPA that begun in October 1962, emphasizing the importance of networking concept. This led to the first paper on packet switching theory being published in July 1961 and the first book on the subject in 1964 convincing networking scientists of the theoretical feasibility of communications using packets rather than circuits.

To make the computers 'talk' with each other, two computers in 1965, one in Massachusetts and the other in California were connected via a low speed dial-up telephone line creating the first wide-area computer network ever built. Successfully demonstrating time-shared computers could work well together, running programs and retrieving data as necessary on the remote machine, and that circuit switched telephone system was totally inadequate for the job. Vint Cerf, 'The Father of the Internet' who co-invented the internet with Robert Kahn over 40 years ago was instrumental in the formation of ICANN.

Growth of the ICANN

The late 1970s saw academic institutions growth driven by adoption of the Internet and more with the integration of the DNS in 1984. In 1991 the US government transferred responsibility for the non-military component of ARPANET to the National Science Foundation (NSF) who lifted restrictions on commercial use of the network. A year later, there was growth with connected machines doubling each quarter rather than each year. This was after the MOSAIC browser based on work by Tim Berners-Lee was commercialised by Netscape.

Bill Clinton's directive 'to privatise, increase competition and promote international participation in the domain name system' led to the 1997 discussion paper on a Proposal to Improve Technical Management of Names and Addresses released in January 1998.

In June 1998 the US National Telecommunications and Information Administration (NTIA) released a paper on Management of Internet Names and Addresses that reflected public

"Children worldwide will be able to use the Internet in their native languages; people will use keyboards in their own languages to access the Internet."

comments represented an official statement of policy. The new document emphasised consensus, something increasingly difficult to achieve because of conflicting interests and grandstanding.

Various advocacy groups responded to the *White Paper*, including 'An ad-hoc coalition of professional, trade and educational associations representing a diversity of Internet stakeholder groups.' Jon Postel responded with a revised

charter for internet protocol addresses, domain names, and protocol parameters to stating that this was to "Preserve the central co-ordinating functions of the global Internet for the public good."

In October 1998, the NTIA announced that NewCo would be called the Internet Corporation for Assigned Namesand Numbers (ICANN) to operate as a corporation under US law on the basis of agreements with the NTIA with oversight by the US congress and an interim board of directors appointed. Expectations were that ICANN would ensure competition in the delivery of domain registration services, introduce new gTLDs and act in an 'open, transparent and bottom-up fashion'.

Criticisms

Some were of these were that the US government was overly concerned to retain control of the net under the guise of ensuring. A reasonable and orderly transition" to a new non-profit organization notionally labelled NewCo or the new IANA; others noted that the proposal fundamentally diminished the roles of ISOC and WIPO.

The ICANN structure was criticized as giving particular stakeholders too much or too little influence while it was intended to be broadly representative, embracing governments which have taken an increasing interest in 'their' part of the net, the DNS industry (registrars and registry operators), trademark and other business interests, network administrators and internet users.

Professor Milton Mueller, an ICANN expert, cautions that "the Net's role as a site of radical business and technology innovation and its status as a revolutionary force that disrupts existing social and regulatory regimes, is coming to an end," in his book *Ruling the Root*.

The internet and ICANN continue to evolve reflecting changing community needs, interests and aspirations. With ICANN around, one may be forgiven for claiming that the Internet's Centre of Gravity will momentarily shift to Nairobi. We extend our warmest *Karibuni Kenya*. M

Alex Gakuru is an elected Africa Representative of ICANN's Non-Commercial Users Executive Committee. Email: gakuru@gmail.com