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## EDITORIAL FROM CEO, Adiel A. Akplogan

Dear Colleagues,

By the time you will be reading this newsletter, we will be running our 10th Public Number Resource Policy meeting, yes AfriNIC-10 already!

Congratulations to you all for your support and confidence in the fulfillment of our objectives. The path has been challenging and we still have a long way to go, but step-by-step we are working, with the support of the community towards a strong and sustainable organization. I would like to express my sincere recognition to the people who have worked during the past 5 years of **AfriNIC's formal existence, allowing us to achieve some successes with very limited resources!** I would also like to thank our past and present board and staff members for their contribution towards this journey.



In Cape Town in 2000, the vision was clearly set to create AfriNIC as the Regional Registry, but at the time, many of us did not know well all the implications in the setting up of an African Network Information Centre! After 5 years of operations, we can say today that we know the challenges and we managed to confront them. For the past 6 months, AfriNIC has faced different shakings; from our AfriNIC-9 meeting cancellation and re-scheduling at the very last minute in Mauritius, to staff movement, as announced last year as part of restructuring and strengthening of our human resource capacity. As in any organization, changes always come with shakes in habits and people inter-relation. AfriNIC has not been an exception but we need to keep focused with the strong belief that we are in the right direction and that this organization should continue to be strengthened to be taken to its optimal potential to support the Internet development by Africans and for African. We believe that this is an **important step in a young organization's path toward growth and sustainability.**

We have launched during the past six months some programs that reaffirm our commitment to support the community for the Internet growth: The first one is an Anycast Root Server Copy deployment at IXPs, which was launched together with a first workshop in Cairo, Egypt, November 2008. The first implementations will take place in Tanzania and Mozambique. The second project is our IPv6 awareness program which took a new impetus with the deployment (with the support of CISCO System and 6Deploy consortium) of the first virtual IPv6 Lab in Africa.

Since 2007 we have started a program to try to break the glass that always existed in our region between Policy makers, Regulators and the Internet Technical community. This was done through various activities and among them was the Policy Makers Day that we hosted during our AfriNIC-7 Public Policy Meeting. Last year this was taken to a regional level with more focus on the needs of our stakeholder from these regions. We organized with the support of the Senegalese Regulator, ARTP (Agence de Regulation des Télécommunications et des Postes the first regional seminar on Internet governance for regulators in the western African region. The outcome of the event confirmed the immediate need for more interactions between Experts and Policy Makers through such events in our service region. We would like to thank ISOC and ICANN who have significantly contributed to the success of this seminar. We are expecting to have more similar events in the coming months.

In May 2009, our sister organization AfNOG will be celebrating its 10th year anniversary. This is a very important milestone for an informal organization like AfNOG, which with the continuous contribution of volunteers worldwide, have trained more than nearly 800 engineers in the region. This is the time to congratulate and thank all of these volunteers, the administrative team of AfNOG and various organizations that all along, have supported this collaborative effort which is a vibrant contribution to scale Internet services and Infrastructure on the continent. As the instigator of the AfriNIC initiative, we are proud of the success achieved so far and we will continue to **support AfNOG's efforts to improve Internet technical knowledge in Africa.**

We hope you will enjoy this 9<sup>th</sup> edition of the AfriNICnews

# Measuring IPv6 deployment



Mr. Leo Vegoda  
Number Resources  
Manager, ICANN

*“Whichever measure we use, there are African ISPs among the leaders in IPv6 deployment and AfriNIC’s training programme has played a large part in that success.”*

When I wrote a short blog posting about IPv6 deployment in the different RIR regions I received several comments on how the single kind of measure I used does **not give the whole picture. Of course it’s not possible to give a complete picture from just one measurement - the Internet’s too big for that.**

I used public data from Geoff Huston’s breakdown of advertised ASs by RIR region and the SixXS project’s breakdown of the IPv6 prefixes visible per region. What I saw was a significantly higher proportion of IPv6 announcements in AfriNIC’s service region than in other RIRs’ service regions.

In contrast, other regions have a higher count of announced prefixes in total. But using a simple count of the number of IPv6 prefixes originated from each RIR service region is not a satisfying statistic either. One major problem is the large differences between the sizes of the ISPs in different parts of the world. Europe has a huge number of small ISPs, for instance, while Asia tends to have fewer but larger ISPs.

As an example, networks based in the Netherlands, a country with an estimated population of less than 16½ million, use more than 450 AS Numbers. In contrast, networks based in mainland China, with an estimated population of about 1½ billion, use fewer than 130 AS Numbers. This is evidence of more than just a difference in the state of development in those two countries, it shows a difference in style, too.

The problem is that counting the number of prefixes **doesn’t count their usage rates. So a single prefix used by millions of people in China will count the same as a Dutch network used by just a few hundred people.** And because it is possible to pack huge numbers of customers inside a single /32 allocation, the length of the prefix might not tell us how many users an ISP has.

Gert Döring has regularly produced a set of statistics for the state of IPv6 at each RIPE meeting for the last several years. One of the measurements he has used is the **percentage of each RIR’s members with an IPv6 allocation.** This seems a good way of assessing the differences between the regions, although this particular measurement look at what is allocated and not what is routed.

In October 2008 his slides showed very similar figures for all five RIRs but **15.8% of RIPE NCC’s membership had IPv6 allocations in comparison with 10.2% of AfriNIC’s. This measurement didn’t count the provider independent IPv6 assignments that have been made by the RIRs and that would have raised the AfriNIC percentage.**

Why use these measurements?

Unfortunately, we are not well positioned to measure IPv6 deployment across the Internet. Some ISPs add IPv6 announcements onto their peering routers but **don’t use it inside their networks. Others run IPv6 in a lab but don’t announce their network prefix to other ISPs.** That means that measuring deployment needs to be a bit more fine grained. But that’s really difficult.

Although lots of Internet Exchange Points (IXPs) provide IPv6 **peering LANs they can’t always measure** the traffic that crosses them. And when they can measure the traffic going over the peering LAN they only capture native IPv6, missing the traffic **that’s tunneled inside IPv4. Another problem is that measuring traffic across an IXP’s peering LAN will miss traffic exchanged over private inter-connects.**

Measuring traffic at an end point will make sure that all the traffic can be measured, including traffic encapsulated in IPv4, but only traffic to that end site. Jordi Palet Martinez has developed a tool to do this and Geoff Huston has been analysing **web server logs but these measurements can’t tell us about the Internet at large unless these measurements come from many sites and are analysed as a huge array of data.**

Whichever measure we use, there are African ISPs among the **leaders in IPv6 deployment and AfriNIC’s training programme has played a large part in that success. It’s also clear that whichever measure we use, most African ISPs do not have IPv6 running on their networks yet. Despite the late hour, we are still in the early days of IPv6 deployment and African ISPs are well position to lead the way.**

References:

ICANN blog - <http://blog.icann.org/?p=365>

Geoff Huston’s AS Number report - <http://www.potaroo.net/tools/asn32/>

SixXS IPv6 Prefix Count - <http://www.sixxs.net/tools/grh/dfp/>  
RIPE NCC Statistics - <ftp://ftp.ripe.net/pub/stats/ripencc/delegated-ripencc-latest>

APNIC Statistics - <ftp://ftp.apnic.net/pub/stats/apnic/delegated-apnic-latest>

Gert Döring’s RIPE 57 presentation - <http://www.space.net/~gert/RIPE/R57-v6-table/>

Jordi Palet’s Martinez’s IPv6 measurements - [http://www.afrinic.net/meeting/afrinic-8/presentations/6meter\\_v0\\_5.pdf](http://www.afrinic.net/meeting/afrinic-8/presentations/6meter_v0_5.pdf)

Geoff Huston’s IPv6 deployment measurements - [http://www.ripe.net/ripe/meetings/ripe-56/presentations/Huston-Measuring\\_IPv6\\_Deployment.pdf](http://www.ripe.net/ripe/meetings/ripe-56/presentations/Huston-Measuring_IPv6_Deployment.pdf)

## Measuring IPv6 deployment

RIR IPv6 allocations			
RIR	No. of allocations	No. of allocations	%
AfriNIC	52	circa 423	15.0
APNIC	430	circa 2863	15.0
ARIN	487	circa 3200	15.2
LACNIC	101	circa 1006	10.1
RIPE NCC	1052	circa 5920	17.7

# AfriNIC-10



## In the city of the Pharaohs

This year, our Public Policy Meeting held jointly with AfNOG will take place in the country of the Pharaohs; Egypt. Cairo will be welcoming us at one of its most prestigious hotels, The InterContinental Cairo Citystars. Accommodation as well as training and meetings will all be under one roof for the convenience for each and everyone as from the 10<sup>th</sup> – 21<sup>st</sup> May 2009.

As for every Public Policy Meetings, this event will welcome AfriNIC members, Policy Makers, regulators, other RIR organizations, academia and other leaders and stakeholders in the internet Community.

We are expecting around 150-180 participants, representing various parts of Africa. We will also be celebrating AfNOG's 10<sup>th</sup> Anniversary, from Capetown to Cairo, a ten-year journey. This celebration is what

makes the event even more special! **This year's agenda will comprise IPv6/LIR training sessions, presentations from Industry leaders, such as ICANN and ISOC on issues that affect the overall success of the Internet throughout Africa, best practices discussions, topics on IGF, IPv6, and, Public Policy forums and board elections for the Eastern and Southern Regions.**

The meeting is open to anyone but is particularly relevant to members, ISPs, the Internet community, academia, governments and regulators. **The purpose of it being to "let people have their say on policy proposals that may directly affect the way their organization accesses Internet number resources" but also "hear world-class speakers discuss cutting-edge Internet resource management research" During this meeting, three important policies will be discussed: the "IPv4 Soft Landing Policy Proposal", "IPv6 Allocations to Non-Profit Networks" and "Global Policy Proposal**

for the Allocation of IPv4 Blocks to Regional Internet Registries." This is the occasion to learn about best practices in Internet resource management to make your business more efficient; and, to make valuable contacts for building business relationships

Special thanks go to the local hosts of this event, National Telecommunications Regulatory Authority (NTRA) of Egypt, the Ministry of Communications and Information Technology (MCIT), our sponsors, Internet Society (ISOC), Google, and CISCO, as well as our organizing partners, staff, community and friends who all participated in to make this event a success!



*"We will also be celebrating AfNOG's 10<sup>th</sup> Anniversary, from Capetown to Cairo, a ten-year journey".*

## UPCOMING EVENTS

meeting	Date	location
<a href="#">RIPE 58</a>	4 - 8 May	Amsterdam, The Netherlands
<a href="#">AfNOG-10/AfriNIC-10</a>	10 - 22 May	Cairo, Egypt
<a href="#">LACNIC XII</a>	25 - 29 May	Republic of Panama
<a href="#">ICANN</a>	21 - 26 June	Sydney, Australia
<a href="#">APNIC 28</a>	24 - 28 August	Beijing, China
<a href="#">ITU Telecom World 2009</a>	5 - 9 October	Geneva, Switzerland
<a href="#">ICANN</a>	25 - 30 October	Seoul, South Korea
<a href="#">IGF 2009</a>	15-18 November	Sharm El Sheikh, Egypt

# Open Source Development in Africa

by *Nouhoun Y. Diarra*



In recent years, the business of call centers has grown rapidly in Africa. Based on this fact, I was inspired to start a project of developing software for enterprises that operate in that sector. Most call centers have limited resources, so giving them an opportunity to manage their daily problems with an application that is freely available is important. Therefore the project has been made open source and is published under the GNU General Public License (GPL). It is named CA-OS (Centre d'Appel Open Source, in French) which means Open Source Call Center.

CA-OS in its first version (1.0) deals with incidents that occur during a call. Most call centers are used to manage that problem with lot of papers but CA-OS delivers an electronic work flow tool that **gets the job done with "zero paper"**. CA-OS enables managers to have an overview of recurring problems that arise on the call station and take measures to avert its instability. In addition, it's made to meet the needs of businesses in an African context. The ultimate goal of the application is to manage other aspects such as agenda, finances, customer management, business intelligence, etc. The first release is only in French, but translation in English and other languages is planned.

CA-OS was released for the first time in October 2007 and is hosted for download and contribution at the forge of AAUL (<http://forge.aaul.net>). Since then, a number of things happened in the life of the project. In November 2007, CA-OS was selected **Best Open Source Software by the "Rencontre Africaine des Logiciels Libres (RALL)"** in Rabat, Morocco. AfriNIC, the Regional Internet Registry for Africa, has awarded a special prize. As of today,

CA-OS has received almost 200 downloads and continues to be requested by the forge users.

AfriNIC's Prize, which was a fellowship amounting to US\$ 2,500 has served to cover my participation to the Internet Engineering Task Force 72<sup>nd</sup> (IETF) meeting in Dublin, Ireland, July-August 2008. That meeting was an exceptional experience for me as a software engineer. It allowed me to share with highly technically skilled persons who are at the origin of, or are working out many Internet Protocols we use today and will be using in the future. Before attending the meeting, Internet standard process was almost a myth to me. However, thanks to the contribution of AfriNIC and the personal involvement of its CEO, Mr. Adiel A. Akplogan, I've been trained on many subjects. I've attended many working groups session but one that captured my attention most is HIP WG (Host Identity Protocol). This Protocol is very interesting in that it aims to separate identifiers from locators in the well-known TCP/IP protocol. It inserts a new protocol layer between the network and transport layers of the TCP/IP stack. So HIP provides solutions in multi-addressing, mobility and security.

**AfriNIC's initiative to finance the participation of skilled African engineers to such a meeting is very beneficial for the continent, because there is still, a very few number of Africans participating to this type of meeting.**

After the IETF 72<sup>nd</sup> my goal is to serve the African Internet community with the knowledge I acquired.

September 24, 2008

Nouhoun Y. Diarra  
Best Open Software Developer 2007  
IT Consultant (Software Engineering)

*"AfriNIC's initiative to finance the participation of skilled African engineers to such a meeting is very beneficial for the continent..."*

## Quick Links



<http://www.afrinic.net/statistics/index.htm>



<http://www.afrinic.net/airrs/index.htm>



<http://wiki.icons.apnic.net/display/icons/Home>



<http://www.afrinic.net/projects/cvl.htm>



[http://www.afrinic.net/projects/project\\_anycast.htm](http://www.afrinic.net/projects/project_anycast.htm)



<http://my.afrinic.net/>

## An IGF meeting in West Africa:

*A call for more awareness raising and for strengthening regional Internet Governance*

by **Ken Lohento**

**Uses and Policies of Digital Technology (ICT) Programme , Panos Institute West Africa**

During the regional workshop organized by the Panos Institute West Africa (PIWA), on *“Legal and policy frameworks for the information society in West Africa”* from 11 to 13 March 2009, in Saly, Senegal, with the support of the Open Society Initiative for West Africa (OSIWA), a one day consultative forum was held to discuss West African participation in the Internet governance Forum (IGF) on 13 March 2009.

The aim was to inform stakeholders on the IGF processes, its implementation, the current on-going review, and to further discuss its interests and impacts for West Africa, on the road to the fourth annual IGF Meeting will be held from 15-18 November in Sharm El Sheikh, Egypt.

While the fourth annual meeting of the Forum is being prepared to take place in Africa this year, and the review of the international process has been launched by the United Nations, it is important that West Africa also launches its assessment and devise strategies that can help the region maximize interests from it.

Four sessions were organized for this discussion. During the first one *“Towards an assessment of the IGF in West Africa: How did West Africa participate and what did it gain?”* The international process of IGF (since its inception to the 3<sup>rd</sup> annual meeting in India) and an insight of how Africa and West African participation appear so far were presented and discussed. The second session (*Better Understanding Internet Governance Forum themes*) contributed to demystifying the IGF process and its themes.

It was notably indicated that West African and African intellectual participation have been less dynamic compared to that of Northern countries and that the official involvement from governments seems to have lessened from 2006. But West Africa do participate in the process, notably in annual meetings (even though limited by funding issues), in the Multistakeholder Advisory Group (MAG) of the IGF and organized or contributed to the implementation of some activities in relation to the international process. Beside African governments declarations early in the process and the organization of meetings by organizations such as the Senegalese telecoms regulator (ARTP - Agence de Régulation des Postes et Télécommunications), most known West African involvement came from institutions such as the Nigerian Information Technology Development Agency (NITDA), the Panos Institute West Africa (CIPACO project) and from Pan African institutions involving the region's stakeholders such as AfriNIC (the African IP Registry), the African Civil Society on the Information Society (ACSIS). However in general, it seems that a great number of people involved in ICT4D hardly understand the international process and, in particular, were expecting more concrete outcomes from IGF. The second session also contributed to identification of some key priorities for West Africa.

The next session highlighted some national and regional initiatives. The Kenyan and East-African national IGFs, led by the Kenyan multistakeholder network Kic-tanet, were first presented and appeared as a model of national and regional awareness-raising and advocacy mechanism; this experience was warmly appreciated by participants. The IGF meeting organized by NITDA in Nigeria, and plans for a national IGF in Senegal (by the Senegalese Ministry in charge of ICTs, were also shared with participants. The final session examined the way forward, how to enhance West African participation and how to face some of the constraints identified, notably in the perspective of the forthcoming forth annual IGF meeting in Egypt.

A final declaration was adopted, highlighting some key priority related, in particular, to the crucial access issue, open standards and transparency in governance, the need to further develop awareness and capacity building on internet governance and its processes, the need for more dedicated funding, the development of a regional Top Level Domain Name; it also recommended that *“ECOWAS and other key stakeholders organise a wider, higher level platform involving more West African stakeholders, as well as national and African wide discussions, prior to the Sharm-El-Cheikh IGF to better prepare African and West African responses”*. After the meeting, participants are kept in contact through a dedicated mailing list.

For further information on the whole workshop see <http://blogs.haayo.org/westafict>. It was attended by about 45 people from about 15 countries (mainly West African), representing governments, civil society, private sector, regional public institutions (ECOWAS – Economic Commission for West African States -, WATRA – West African Telecommunications Regulators' Assembly) and international organisations (Diplo Foundation, Electronic Frontier Foundation).

It has to be noted that this meeting appeared as a follow-up to a first workshop organized by the CIPACO project of PIWA in Saly in 2006, following which an Appeal for the establishment of an African Forum on IG was launched, some months before the organization of the first IGF annual meeting in Athens.



*“The aim was to inform stakeholders on the IGF processes, its implementation, the current on-going review, and to further discuss its interests and impacts for West Africa...”*

**For additional information on IGF 2009, please visit the website at**

**<http://igf2009.org/>**

## Board Corner

### Primary Board Members

Rachida Jouhari (Northern Africa), Pierre Dandjinoum (Western Africa), Didier R. Kasole (Central Africa), Badru Ntege (East Africa), Alan Barrett (Southern Africa), Viv Padayatchy (Indian Ocean -Chair), Adiel Akplogan (CEO)

### Alternate Board Members

Jean Philemon Kissangou (Central Africa), Lala Andriamampianina (Indian Ocean), Mokthar Hamidi (Northern Africa), Sunday Folayan (Western Africa), Brian Longwe (Eastern Africa), Silvio C. Almada (Southern Africa)

### New Chairmanship

Dr. Viv Padayatchy has been elected Chairman of AfriNIC Board in last November, during AfriNIC-9 in Mauritius.

### Board meeting Schedule 2009

Month	Date	Comment
January	14/01/2009	** Teleconference (Canceled)
March	11/03/2009	** Teleconference
May	13/05/2009	Face to face Meeting
July	08/07/2009	** Teleconference
September	09/09/2009	** Teleconference
November	11/11/2009	Face to face meeting
December	20/12/2009	** Budget Meeting

#### Resolution [2008011-49]

The Board wishes to express its gratitude to the outgoing Chairman, Mr Pierre Dandjinou, for the commitment and dedication that he has shown in serving AfriNIC and the wider community since 2004.

#### Resolution [200903-50]

The Board, after reviewing the budget proposed by the staff, adopts AfriNIC's 2009 operational budget at One Million, Eight hundred and Twenty Five Thousand, and Three Hundred and Thirty Nine US dollars (US\$1,825,339) against an income of One Million, Eight Hundred and Twenty Six Thousand, and Nine Hundred and Eight US dollars (US\$1,826,908)

### 2009 Board Elections

This year the Board election will take place in Cairo, Egypt at the occasion of AfriNIC-10. The elections are planned for the 22<sup>nd</sup> May at The InterContinental Cairo Citystars Hotel.

The AfriNIC Board of Directors will have the following vacant seats:

Seat 3: The Southern African Region (Primary and Alternate) Mandate: 2009 to 2012

Seat 4: The East Africa Region (Primary and Alternate) Mandate: 2009 to 2012

To see the nominees for AfriNIC Board Elections 2009 goto this link :

<http://meeting.afrinic.net/afrinic-10/nominees09.htm>

### Nominees for the 2009 AfriNIC Board Elections :

Mr. Timothy Kasolo Kasonde, Zambia (Self nominated)

Mr. Mark James ELKINS, South Africa (Nominated by Mr William Francis Stucke)

Mr. Silvio Cabral Almada, Angola (Self nominated)

Mr. Vika William Mpisane

Dr. Paulos Nyirenda, Malawi (Nominated by Mr. Vika William Mpisane, Mohammed El Bashir and Mr. Souleymane Outmtanaga)

Mr. John Walubengo, Kenya (Self nominated)

Mrs. Lillian Wambui Karanja, Kenya (Nominated by Mr John K. Nyorge)

To post or read comments about these nominees, please visit: <http://www.afrinic.net/elections/comments/>

## TRAINING CORNER

During the month of March, IPv6 and LIR training was conducted in Accra, Ghana and Lagos, Nigeria. Training was provided by AfriNIC and Consulintel (under the 6Deploy Project) trainers. IPv6 and DNSSEC training was conducted in Tunis, Tunisia and Algiers, Algeria during the month of April by AfriNIC and trainers under the 6Deploy Project. There were close to 150 participants in total for all events. Surveys were conducted and the responses were very positive with request being made for more hands-on activities and time allotted for the IPv6 workshop. AfriNIC appreciates your feedback and we are assessing how to accommodate both requests.

AfriNIC would like to give special acknowledgement and thanks to the following organizations for hosting, training, providing venues for the workshops and participating in the training workshops during the months of March and April:

### Accra, Ghana

Local Hosts, KACE-AITI, Ecoband Networks Contact: Alexander Sulzberger, CEO, and GISPA Contact: Eric M.K Osiakwan  
Venue: Kofi Annan Centre  
Trainers: Cesar Olvera, Consulintel and Ernest , AfriNIC

### Lagos, Nigeria

Local Host: Nigeria Network Operators Group (Nigerian ICT Forum) Contact: Aminu Ibrahim  
Venue: Centre for Information Technology & Systems (CITS), University of Lagos,  
Trainers: Cesar.Olvera, Consulintel and Ernest, AfriNIC

### Algiers, Algeria

Local Host: CERIST (Algeria) Contact: Ms. A. El-Maouham  
Venue: CERIST  
Trainers: Adiel A. Akplogan and Radha Ramphul, AfriNIC

### Tunis, Tunisia

Local Host : Agence Tunisienne d'Internet (Tunisia) Contact: Mohamed BEN YAHIA  
Venue: Pôle Elgazala des Technologies de la Communication  
Trainers: Bruno Stevant, TELECOM Bretagne - Rennes and Alain Aina, AfriNIC

For those workshops with the status of TBC, we are still accepting participation from a local host. If you are interested in hosting one of these training events, please contact [training@afriNIC.net](mailto:training@afriNIC.net).

To register for one of these trainings sessions or to obtain additional information, please visit :

<http://www.afriNIC.net/training/index.htm>

Date	Location	Type	Language	Status
23-24 March	Accra, Ghana	LIR+IPv6	English	Completed
26-27 March	Lagos, Nigeria	LIR+IPv6	English	Completed
20-23 April	Tunis, Tunisia	DNS sec + IPV6	French	Completed
25-26 April	Algiers, Algeria	LIR+IPv6	French	Completed
16-18 May	Cairo, Egypt	LIR+IPv6	English	Confirmed
June	Mali	LIR+IPv6	French	TBC
4-5 June	Libreville, Gabon	LIR+IPv6	French	Confirmed
June	Djibouti	LIR+IPv6	French	TBC
2-3 July	Bujumbura, Burundi	LIR+IPv6	French	Confirmed
July	Cairo, Egypt	IPv6	English	Confirmed
August	Equatorial Guinea	LIR+IPv6	French	TBC
September	Gambia	LIR+IPv6	English	TBC
28 Nov - 04 Dec	AfriNIC-11	LIR+IPv6	English	TBC

## AfriNIC Policy Development Process - What, Why and How by Vincent Ngundi, AfriNIC PDP-MG Moderator



*“...it's the onus of members to present their views/needs in line with the PDP if these views/needs are to be incorporated into the resultant policies.”*

About the AfriNIC Policy Development Process Internet policies define how Internet number resources are to be managed. The AfriNIC organizational structure is set to encourage a bottom-up self governance management model where policies and other organisational functions are determined by the community in general.

AfriNIC policies are developed through an open Policy Development Process (PDP). There are no requirements to participate in the process and anybody can propose and discuss policy matters related to Internet resource management in the.

Internet resource management policy discussions are conducted via both e-mail discussion lists and through public meetings. Further, AfriNIC has a General Assembly which meets once a year. Public Policy Meetings are held twice a year with one being held back-to-back with the General Assembly. These forums present members with an opportunity to contribute to the management of Internet number resources and to discuss issues that pertain to Internet development. The public meetings also seek to institute a consensus building process especially on global Internet matters, including inter alia, global Internet policy proposals.

Recently, and in order to enhance both the Policy Development Process and the participation of members, the AfriNIC region revised its Policy Development Process policy. This saw the formation of a Policy Development Process Moderator Group (PDP MG) to moderate and coordinate the policy development

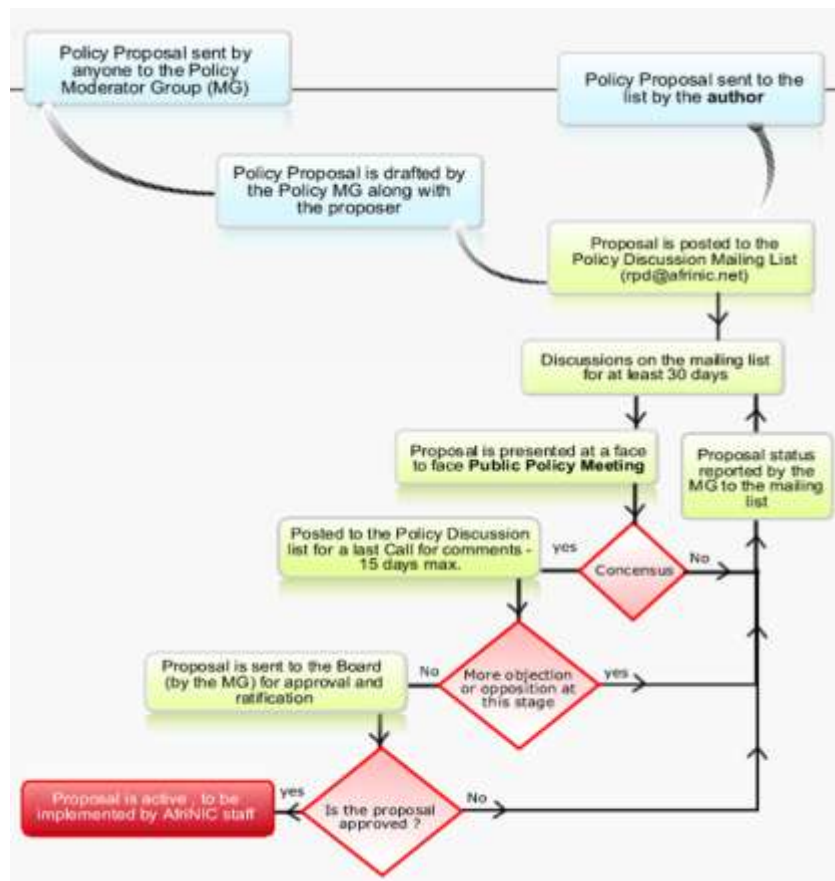
process and discussions. Members of the PDP MG are drawn from the African region and are elected by the AfriNIC community.

### Why Participate?

The development of regional and international Internet polices should be an all-inclusive process if the Internet is to address the needs of all its users. Since Internet policies are developed following a bottom-up approach, and given the diverse needs of various Internet users, it's the onus of members to present their views/needs in line with the PDP if these views/needs are to be incorporated into the resultant policies. Lack of member involvement in the PDP means that policies that are developed may not exhaustively address the concerns of all those that they serve. As a result, the community is encouraged to actively engage in the PDP. Sound Internet policies enhance the effective and efficient utilisation of Internet number resources!

### How to Participate

Members can participate in the PDP through the online public mailing list or through Public Policy Meetings. Policy proposals are submitted on the public resource policy discuss mailing list where they are discussed for a minimum of 30 days before being presented at a public policy meeting for further discussion before consensus is sought. If consensus is reached, then the policy is sent to the AfriNIC Board of Trustees for ratification, otherwise the policy proposal is sent back to the mailing list for further deliberation by members. Policy proposals that are ratified are implemented by AfriNIC staff members.



## Public Policy Update Corner

by Ernest Byaruhana, Manager, Resource Services, AfriNIC

At the time of writing this article, there were three policy proposals in active discussion on the "rpd" mailing list that will be discussed at AfriNIC-10. The three proposals currently under discussion are:

### 1. Policy proposal: IPv4 Soft Landing Policy

Proposal Date : 05 Jan 2009, Scope : Regional proposal afpol-v4200901. This policy proposal outlines a process through which AfriNIC shall manage the last /8 addresses that will be assigned to the region by the IANA under the "Global Policy for the Allocation of the Remaining IPv4 Address space."

2. Policy proposal: IPv6 Allocations to Non-Profit Networks Proposal Date : 13 Jan 2009, Scope : Regional proposal afpol-v6200901. Internet Registries: All the 5 RIR communities ratified this policy, and it was consequently approved by the ICANN Board in September 2008. Internet Registries: All the 5 RIR communities ratified this policy, and it was consequently approved by the ICANN Board in September 2008.

Global Policy for the Allocation of the Remaining IPv4 Address Space: The AfriNIC Board ratified this policy in February 2008. As it is a global policy, the global community would have to ratify a similar version before the ICANN Board can approve it.

This policy seeks to make it as easy as possible for non-profit entities to obtain a /48 PI IPv6 addressing resources from AfriNIC and drive the deployment of and demand for IPv6 services through this in Africa.

Additionally the policy seeks to limit the way in which these addressing resources for non-profit entities will be used to avoid abuse by LIRs, Internet Service Providers and other commercial users of Internet addressing resources.

3. Policy Proposal : Global Policy Proposal for the Allocation of IPv4 Blocks to Regional Internet Registries Proposal Date : 09 Mar 2009. Scope: Global proposal afpol-v4gb200903. This global policy is aiming intended to solve the problem of transferring IPv4 address space between RIRs, that may exist at the depletion of IANA free pool. The authors of this policy proposal provide a mechanism for the RIRs.

You can find out more about the AfriNIC Policy Development Process at:  
<http://www.afrinic.net/policy.htm>

*In 2008, the following policies reached consensus.*

Date Proposed	Proposed By	Authors	Proposal
16-02-2008	R.Gagliano , F. Obispo, H. EL Nakhal, D. A. Kla, JPNIC IPv4 countdown policy team	R.Gagliano , F. Obispo, H. EL Nakhal, D. A. Kla, JPNIC IPv4 countdown policy team	Global Policy for the Allocation of the Remaining IPv4 Address Space.

*Policies Withdrawn:*

Date Proposed	Proposed By	Authors	Proposal
04-07-2006	Jordi Palet Martinez	Jordi Palet Martinez	IPv6 Address Allocation and Assignment Policy
01-04-2007	Jordi Palet Martinez	Jordi Palet Martinez	Policy for IPv6 ULA

*Policies currently under discussion:*

Currently, there are three proposals under discussion that will be presented during AfriNIC-10 (Cairo, Egypt) in May 2009 for discussions and possible consensus from the Community:

Date Proposed	Proposed By	Authors:	Proposal
05-01-2009	Douglas Onyango	Douglas Onyango	IPv4 Soft Landing Policy
13-01-2009	Graham Beneke	Graham Beneke	IPv6 Allocations to Non-Profit Networks
10-03-2009	Adiel A. Akplogan	Adiel A. Akplogan (AfriNIC), Raul Echeberria (LACNIC), Maemura Akinori (APNIC), Geoff Huston (APNIC), Axel Pawlik (RIPE NCC) Ray Plzak (ARIN), Oscar A. Robles-Garay (LACNIC), Nigel Titley (RIPE NCC), Paul Wilson (APNIC)	Global Policy Proposal for the Allocation of IPv4 Blocks to Regional Internet Registries

*"APNIC 28 will be held from August 24-28 in Beijing, China. It promises to be an exciting, important, and interesting event ..."*

## RIPE NCC UPDATE

**WWW.RIPE.NET**

### RIPE NCC Online Services Now IPv6 Enabled

Since the end of 2008, all of the RIPE NCC's major online services have been accessible via IPv6. These services include the web servers, FTP servers, DNS, the LIR Portal and mail system as well as the RIPE Database and all of the RIPE NCC's Information Services - Test Traffic Measurement (TTM) service, the Routing Information Service (RIS), DNS Monitoring (DNSMON) service and Host count.

### RIPE NCC Roundtable Meeting February 2009

A RIPE NCC Roundtable Meeting for Governments and Regulators took place on Monday, 16 February 2009 in Amsterdam, the Netherlands. Attended by 60 key delegates from 18 countries, the event saw a senior advisor to the European Commission (EC) highlight the important role of governments in planning for the transition to IPv6. For more information about this topic, see:

<http://www.ripe.net/news/20090217-roundtable-ipv6-eu.html>

RIPE NCC Roundtable Meetings are one-day events designed specifically to keep governments and regulators informed on current issues surrounding the governance and operation of the Internet. They also provide guidance as to how governments and regulators can participate in the development of policies around these issues.

At these meetings, participants discuss Internet number resource management. These meetings also foster dialogue between the public and private sector to ensure the future stability of the Internet.

More information about the meeting is available at: <http://www.ripe.net/meetings/roundtable/feb2009/index.html>

### RIPE NCC Holds Law Enforcement Meeting

In February 2009, the RIPE NCC held a one-day meeting with an agenda specifically devoted to law enforcement agencies (LEAs). Presentations included case studies and experiences from several LEA representatives, with the afternoon focused more on what the RIPE NCC (and the RIPE community) can do to assist the LEA community. This was the first time the RIPE NCC has held such a meeting and its success was marked by attendees expressing an interest in further interaction and cooperation with RIPE and the RIPE NCC.

### RIPE 58

RIPE 58 will take place at the Krasnapolsky Hotel, Amsterdam, the Netherlands from 4-8 May 2009. More information is available at:

<http://www.ripe.net/ripe/meetings/ripe-58/index.html>

**AfriNIC supports the RIR sister organizations and encourages participation from its members and colleagues in other RIR events!**

## NEWS

*The Five Regional Internet Registries*



## APNIC Update May 2008 - May 2009

WWW.APNIC.NET

### APNIC Update May 2008 - May 2009 for AfriNIC

Since our last update, APNIC has continued to work on the complete redevelopment of its website. The new site is scheduled for release in the very near future, and we anticipate visitors will be impressed by the improved look, feel, and user experience.

APNIC also recently launched a new initiative called the 'IPv6 program', with Miwa Fujii as Program Manager. The objective is to support the community during the adoption of IPv6 by disseminating practical information customized for a variety of stakeholders.

In addition, the IPv6 program will create alliances with other IPv6-related organizations to represent APNIC's current position on IPv6 adoption and to support each other's activities through information exchange.

There has been significant work on APNIC's Resource Certification service [WINDOWS-1252?]- a robust security framework for verifying the association between resource holders and their Internet resources. Certification will improve the security of inter-domain routing and augment the information published in the APNIC Whois Database with a verifiable form of a holder's current 'right-of-use' over an Internet resource.

We successfully held our 27th meeting in February 2009, in conjunction with APRICOT. Staged in Manila, the event attracted 473 delegates who represented 40 economies. The number of delegates was even higher as attendees were joined by online participants, including 32 who attended our direct-link videoconferencing events in Fiji and Sri Lanka.

Prop-50 (IPv4 address transfers) and prop-069 (Global policy proposal for the allocation of IPv4 blocks to Regional Internet Registries) reached consensus in Manila and were subsequently ratified at the APNIC Member Meeting. These proposals conclude their final 'call for comments' stage on 1 May 2009 and if successful will be submitted to the APNIC Executive Council for endorsement.

We also signed MoUs with NSP (the Networkers' Society of Pakistan), and two organizations from the Philippines, ASTI (the Advanced Science and Technology Institute), and PHNOG (the Philippine Network Operators' Group).

APNIC 28 will be held from August 24-28 in Beijing, China. It promises to be an exciting, important, and interesting event with more Transfer policy changes already proposed by the community. We encourage you all to attend.

For more information about APNIC 28 and Beijing, see <http://meetings.apnic.net>.

## ARIN Update

WWW.ARIN.NET

### Don't Miss Future ARIN Public Policy Meetings: Take Advantage of Expanded Participation Options

ARIN has expanded our remote meeting participation options to allow all participants to fully experience the Public Policy and Members meeting. We have continued to build on the options that were added for ARIN XXII in Los Angeles, California. At ARIN XXIII in San Antonio, TX you could get a meeting packet onsite at the ARIN registration desk or you could click on the ARIN website and print out your own meeting packet.

While waiting for the presentations and discussion to begin, attendees could browse in the ARIN Information Center and read the third adventure of Team ARIN (comic book), or sit and watch the About ARIN and The ARIN Policy Development Process flash presentations. These resources were also available to individuals watching from their computers. Throughout the meeting we offered daily surveys to gather feedback about the service needs of the ARIN community. Remote and onsite attendees were able to submit their responses online, and all completed responses submitted by the stated deadline were entered in a random drawing held at the opening of the meeting the following day.

The Open Policy Hour (OPH) featured a lively discussion where new policy ideas could be introduced prior to proposal submission and ARIN staff shared their experience with current policies.

The proceedings were webcast, and participants who registered their jabber handle were able to submit questions or comments via a newly designed jabber room. ARIN offered these features for the entire Sunday agenda, which allowed remote participants to follow along with a series of IPv6 tutorial sessions as well.

ARIN continued to offer the webcast and chat features during the remainder of the Public Policy and Members meeting. The remote participation page provided details on how to connect to the webcast, the open jabber chat room where they could share ideas and comments with other deskbound colleagues, a room where registered participants entered comments and questions to be incorporated into the onsite discussion, and most importantly a jabber room where registered viewers were able to **"raise their hand" to answer the questions posed by the Chair during policy proposal discussions.**

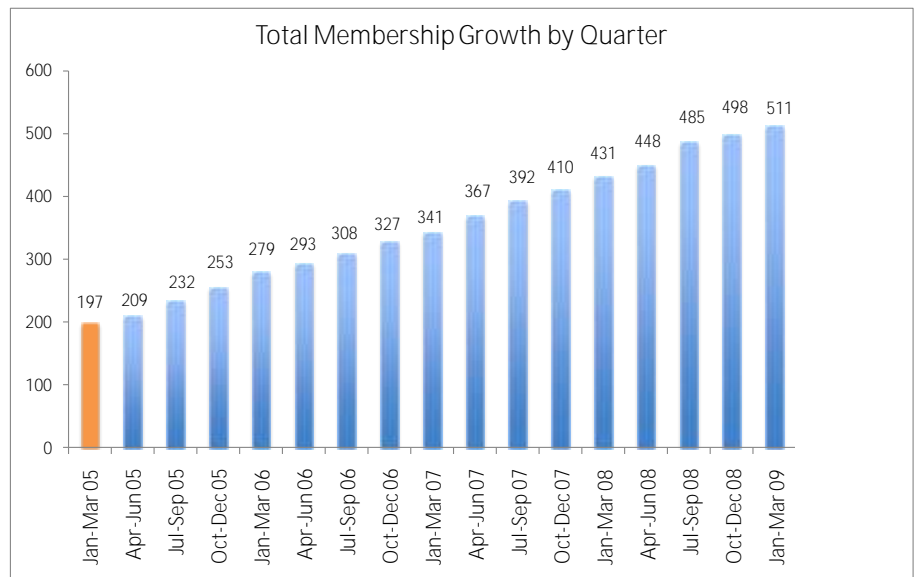
**If you weren't able to be with us for ARIN XXIII, we hope you can join us for ARIN XXIV, 21-23 October 2009.** It is important that you let your voice be heard both on the ARIN PPML and at an ARIN meeting. Remember you now have a choice of how you attend an ARIN meeting - either online or in person. For those of you that will be attending in person, the meeting will be conducted in Dearborn, Michigan. Regardless of how you choose to attend -- **we look forward to "seeing" you then.**

# IP Resource Management Statistics in the AfriNIC Service Region

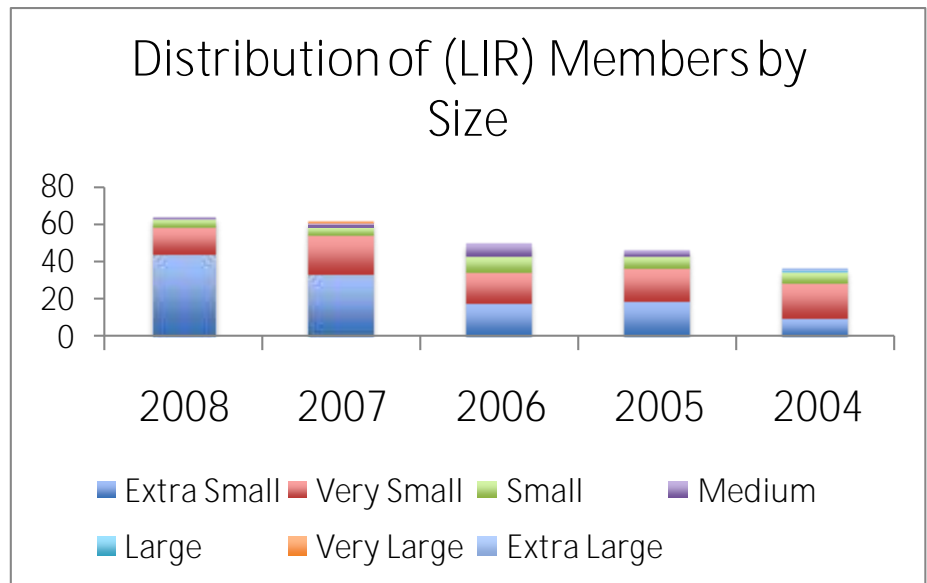
## Membership

We approved 88 new membership requests in 2008 – making a total of 498 members. (See diagram below, left) There were 64 LIRs and 24 End-Users. There were more than 150 requests for AfriNIC membership, most of which were not fully processed due to non-satisfaction of the appropriate resource policy requirements. A breakdown of the LIR members by category for 2008 follows, along with a comparison of similar numbers from 2004. (See 2nd diagram below)

Membership by Quarter - Starting Q1 2005

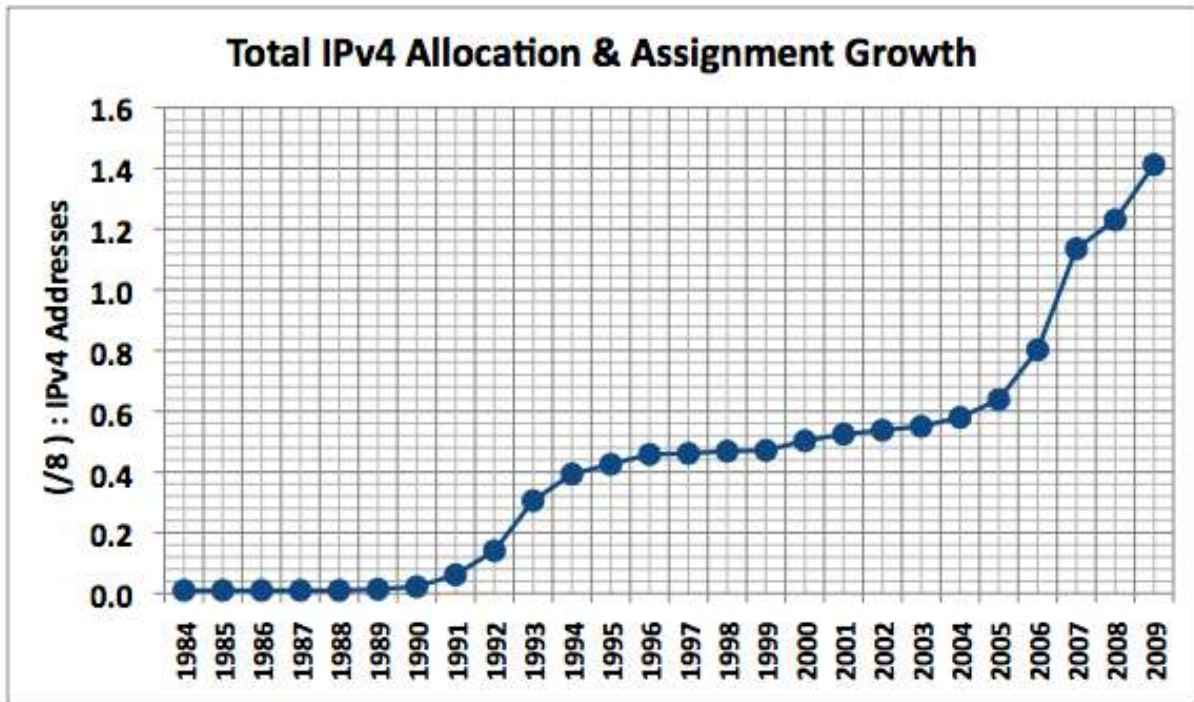


Distribution of LIR Members by Size Chart

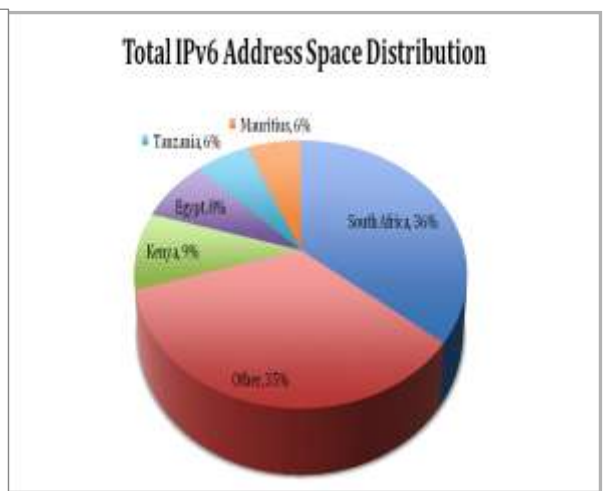
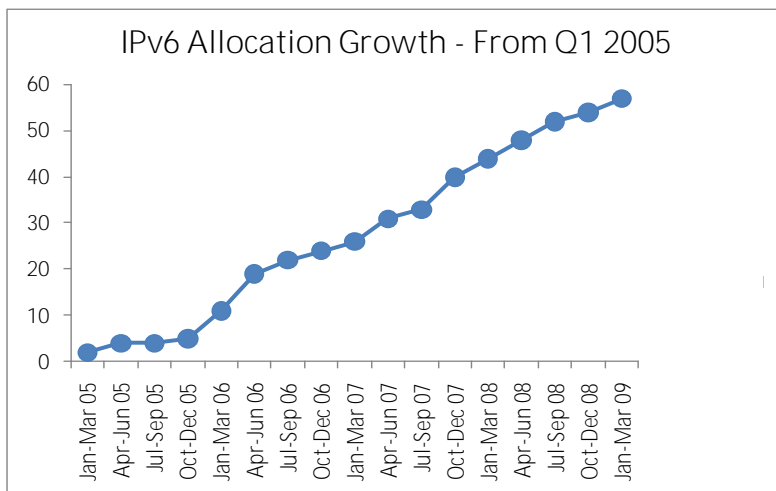


**Number Resources:**

**IPv4** Approximately 1.6 million IPv4 addresses were issued in 2008, much less than the 5.6 million issued in 2007, and a total of 1.3 /8s allocated (by AfriNIC) in our service region. Although more members were actually signed on and an approximate same number of IPv4 requests approved, most allocations and assignments in 2008 were towards small and extra small members. The smaller number is also be attributed to the implemented policy requiring us to allocate enough address space to last a member's 12 month-needs, as opposed to the previous 24-month planning window. We applied for and received one extra /8 from IANA in October 2008. The IANA free legacy address space redistribution exercise also allocated us the 154/8 that we shall start allocating from in due course. In total, there are approximately 2.2 free IPv4 /8s under our custodianship.



**IPv6** We approved 18 IPv6 requests in 2008, out of a total of 23 that were received. All IPv6 requests were from existing members, Kenya and South Africa taking the highest and equal share. All space was issued out of the 2001:4200::/23 block that was received in 2004 – which is currently 86% utilized. There were three assignments to critical infrastructure (mainly IXPs). We hope to start allocating from the block 2C00:0000::/12 in 2009. There a total of 54 IPv6 /32 allocations in our region.



## AfriNIC's Fellowship Program is Proving to Make a Difference



My name is Douglas Onyango from Uganda, I have a love for networking – particularly seeing packets traverse the globe and understanding how Autonomous systems interconnect together to form the Internet. This makes AfriNIC my forum of choice.

I participated in the AfriNIC-9 Fellowship Program (Mauritius), it was an eye opening event where I got to make conversation and debate with people who are building and maintaining critical Internet infrastructure all over the AfriNIC service region.

I was particularly impressed by the policy discussions which provided solid understanding on what developments are taking place with Critical internet infrastructure in my region, and helped me keep up with the discussion on the mailing lists.

The people and discussions I found at the meeting bolstered my understanding on the AfriNIC operations and helped me disseminate v6 and DNSSEC information among others to my community by answering questions and helping individuals that were interested in learning, especially the technical aspects of v6 deployment and DNSSEC.

Because of the way my understanding was enriched during the meetings, I have managed to write the "Soft Landing Policy." This is a proposed plan on how AfriNIC should handle the last v4 resources they will receive from IANA. This policy is now under discussion on the rpd mailing list and is also available on the AfriNIC Policy Section.



My name is ABBA Behou Brice; I was born in Abidjan (COTE d'IVOIRE) the 14 April, 1981. I am engineer in computer science. I'm currently at SAGEM SECURITY Cote D'Ivoire (*safran group*) as System Administrator. I'm also at Network Information Center (*nic.ci*) where I take care of the DNSSEC deployment project.

On this project, I have published a short paper in the IEEE journal (**Deployment of DNSSEC: Problems and outline**) and I'm also a member of the IPV6 deployment project team.

I am an instructor at the Linux club of Cote d'Ivoire ([www.ai3l.ci](http://www.ai3l.ci)) and assistant of Prof. Souleymane OUMTAGANA, Vice Chair of AFTLD.

The AFRINIC-9 Fellowship Program in Mauritius was the first one that I have participated in.

The IPV6 training shows us the technical side of IPV6. The way

to set up a 6to4 was very attractive for me because in our IPV6 project, some sites will be linked by 6to4 tunnel. The JAPAN IPV6 tutorial experience at AfriNIC-9 was very useful **because it could be used as a model for Africa's countries. The "layer 9" side (POLICIES) was a good experience for me by seeing how policies are adopted in the community.**

When I came back to my country the first point was to give the summary of this event to the members of NIC.CI and after to the Linux club. I have also presented the different slides that Alain AINA gave me in MAURITIUS. Now, we plan to organize an open IPV6 training for every ISP of Cote d'Ivoire. **After that, I always take occasions when I repeat courses to my students to present them what is AFRINIC and how we can benefit from this community.**



I am Sempa Henry from Uganda, East Africa, where I work for Warid Telecom in the Networks section of the IT department. My passion is in building and running IP networks. I am fascinated by the Internet, **how it's built, run and managed;** especially in light of the ever increasing demand for network resources.

Through AfriNIC's fellowship program I was able to participate in the AfriNIC 9 meeting in Mauritius. The ensuing tutorials and discussions revealed a great wealth of knowledge, in such topics as IPV6, IPV4 depletion and the proposed courses of action to roll over to IPV6. It was so interesting to interact and share ideas with fellow technocrats working within the AfriNIC service region.

I was particularly captivated by the IPV6 tutorials and discussions. These opened my eyes to a whole new IP addressing concept that I had only scantily heard of. I was also fascinated about how far some counterparts had progressed in their countries on that front.

The knowledge I gained out of the tutorials and discussions gave me a clear picture of the current situation regarding depletion of the IPV4 IP space. For the first time I got an in-depth understanding of IPV6, its necessity and current implementation techniques. As a decision maker in my department, I have been able to influence my company to procure only IPV6 –compatible hardware whenever new hardware is needed. I have also been able to disseminate IPV6 –related information to my colleagues, helping them to understand the technical aspects of its deployment and roll out..

**"Because of the way my understanding was enriched during the meetings, I have managed to write the "Soft Landing Policy."**

*Fellowships are offered at all of AfriNIC Public Policy events. An announcement will be sent to the community for application to the Fellowship Program for AfriNIC-11 in the coming months.*

## AfriNIC Outreach Activities

### A ccTLD for Every Country in Africa

The Forum on 'A ccTLD for Every Country in Africa' was organised by the African Telecommunication Union (ATU) and Information and Communication Technologies Authority (ICTA) under the aegis of the Ministry of Information and Communication Technology, Mauritius and in collaboration with the Internet Corporation for Assigned Names and Numbers (ICANN), the African Network Information Centre (AfriNIC), the African Top Level Domains Association (AFTLDs) and the Internet Society (ISOC). The forum was held from 17-19 March 2009 at the Swami Vivekananda International Conference Centre in Pailles on the outskirts of the capital Port Louis.

Delegates from some 20 African countries including South Africa, Burundi, the Republic of the Congo and the Democratic Republic of the Congo, Ivory Coast, Egypt, the Gambia, Kenya and Malawi participated in the forum.

Apart from the ccTLD issue, the forum covered a host of concerns on how best to manage the Internet which is today considered as an engine of growth for the global economy and more particularly as an economic pillar for Mauritius and the rest of Africa. Those key issues range from the operational stability, reliability, security and global interoperability of the Internet. Beyond the implications of the technological and technical complexities, the African policy makers also addressed, the flow of information, intellectual property, multilingualism, accessibility, privacy, security and spam.

On that occasion Mr. Adiel A.Akplogan, the CEO of AfriNIC did a presentation on DNSSEC and Ms. Lillian O. Sharpley, the Communications Area Manager of AfriNIC participated in the preparation of Rapporteur General Report.

One of the main recommendations of the Declaration was that each country should set up an entity charged with managing the ccTLD and where necessary drive through the re-delegation process.

For additional information on this event or to access the Rapporteur General Report, please visit: <http://www.atu-uat.org>

### New Faces at AfriNIC



Alexander I.  
Lawani

Alex joined in March 2009 as Software Engineer in the Technical Operations Area. He is responsible for the full life cycle of software development supporting the functionality and mission of AfriNIC. Alex is from Nigeria.



Stephanie Moorghen-  
Bernon

Stephanie joined in April 2009 as Events Coordinator and Membership Liaison Officer in the Communications Area. She is primarily responsible for planning and coordinating events, developing the sponsorship program, and ensure that the services required and requested by



Lokamah NURSIAH (Veena)

Veena joined in April 2009 as Accounting Assistant in the Business Area. She is responsible accounting work involving the preparation, maintenance, and review of financial and related records, and/or timely research, data entry, reconciliation, and maintenance of AfriNIC accounts.

## AfriNIC-11

AfriNIC is hereby seeking potential organisations that would be willing to host the AfriNIC-11 Public Policy Meeting. The tentative dates for AfriNIC-11 are 28 November to 04 December 2009. The seven day programme will include three days of IPv6 workshop, one day Policy Maker & Internet Governance, one day IPv6 Conference and two days for the AfriNIC Plenary and Public Policies meetings.

Interested parties will find more information regarding the hosting requirements on the following link, where the Call for Proposal and Budget information are available: <http://www.afrinic.net/meeting/call-for-hosting-proposal.htm>

## AfriNIC participated in AFTLD-2009, TANZANIA

AfriNIC participated in the African Top Level Domains Association (AFTLD), the association of African ccTLDs, held in Arusha, Tanzania from 13 - 17 April 2009. The event was jointly organised and generously hosted by the Tanzania Communications Regulatory Authority (TCRA) and the Tanzania Network Information Centre (.tzNIC).

As per the theme chosen "Securing Africa's Internet Infrastructure", the event included a detailed training workshop on Attack/Disaster Contingency and Recovery Planning (A/DCRP).

For additional information about this event or to view the presentations, please visit : [www.aftld.org](http://www.aftld.org)



## Key email contacts:

General: [contact@afriNIC.net](mailto:contact@afriNIC.net)

IP Resource Management: [hostmaster@afriNIC.net](mailto:hostmaster@afriNIC.net)

Billing: [billing@afriNIC.net](mailto:billing@afriNIC.net)

Database help: [afriNIC-dbm@afriNIC.net](mailto:afriNIC-dbm@afriNIC.net)

Training: [training@afriNIC.net](mailto:training@afriNIC.net)

AfriNICnews: [afriNICnews@afriNIC.net](mailto:afriNICnews@afriNIC.net)

Mailing lists are the main discussion tools for the AfriNIC community.

Anybody can participate in our process by subscribing to one of the public mailing lists listed below.

To subscribe, you must send an empty email {name\_of\_the\_list-request}@afriNIC.net with the word “subscribe” in the subject line.

[announce@afriNIC.net](mailto:announce@afriNIC.net) – General Discussion and Announcements of AfriNIC activities.

[rpd@afriNIC.net](mailto:rpd@afriNIC.net) – Policy Discussion mailing list (All policy proposals must be made on this list)

[afripv6-discuss@afriNIC.net](mailto:afripv6-discuss@afriNIC.net) – IPv6 technical discussions

[training-discuss@afriNIC.net](mailto:training-discuss@afriNIC.net) – Discussions on training related issues and feedback

African Network Information Centre (AfriNIC)

Office 03B3, 3rd Floor, Cyber Tower, Cyber City, Ebene, Mauritius

Phone: +230 466 6616

Fax: +230 466 6758

Contact@afriNIC.net

[www.afriNIC.net](http://www.afriNIC.net)