



Afrinic

The Internet Numbers Registry for Africa



Annual Report 2010

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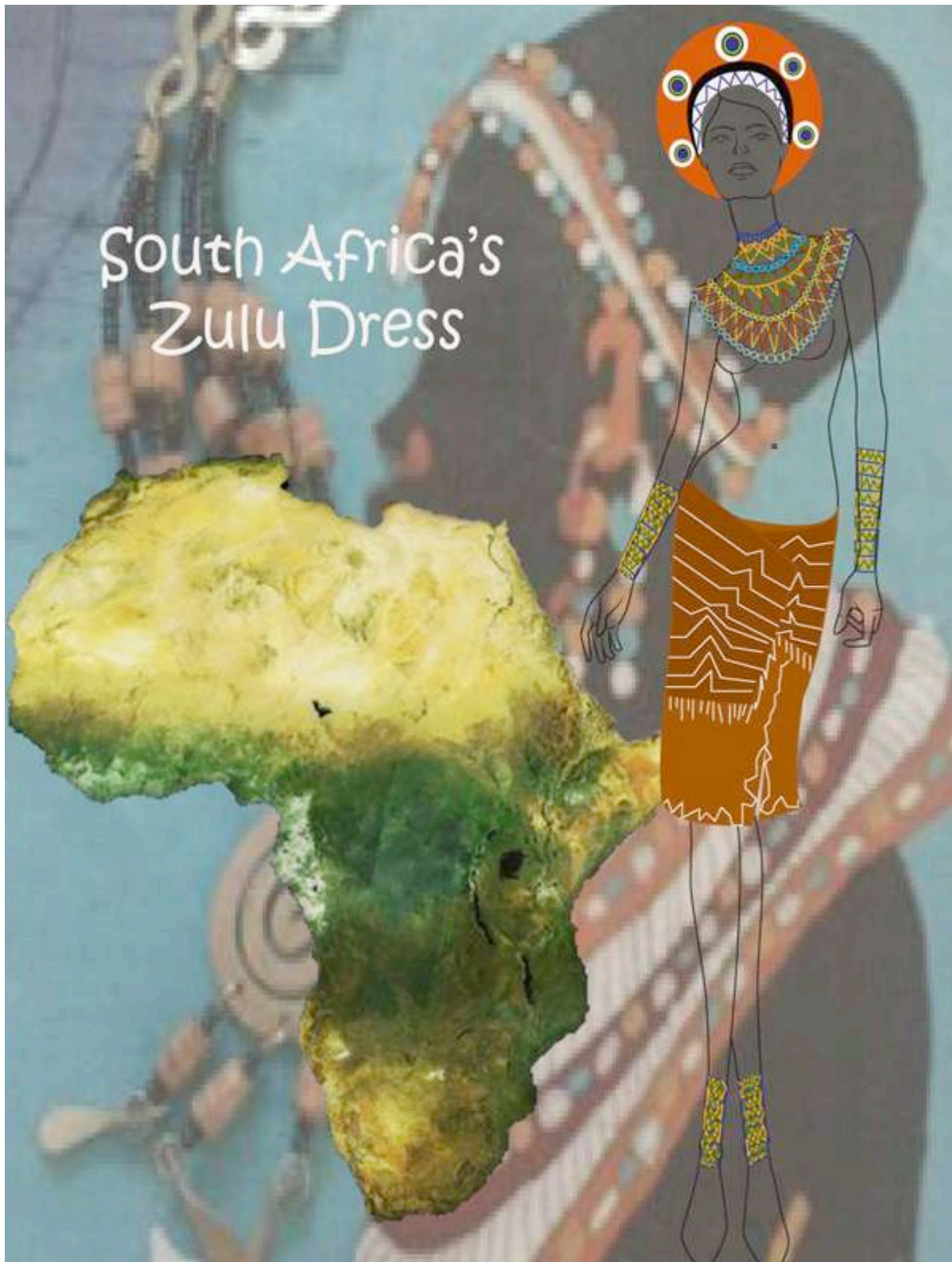
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Glossary

AAU	Association of African Universities
AfNOG	African Network Operators Group
AfriNIC	African Network Information Centre
AFTLD	Africa Country Code Top Level Domains
ARTP	Agence de Regulations des Télécommunications et des Postes
ASN	Autonomous System Number
ASO	Address Supporting Organisation
CCG	Communication Coordination Group
DNS	Domain Name Service
EAIGF	East Africa Internet Governance Forum
ECCG	Engineering Coordination Group
IANA	Internet Assigned Numbers Authority
ICANN	Internet Corporation for Assigned Names and Numbers
IETF	Internet Engineering Task Force
IGF	Internet Governance Forum
IP	Internet Protocol
IPv4	Internet Protocol version 4
IPv6	Internet Protocol version 6
ISOC	Internet Society
ISP	Internet Service Provider
ITU	International Telecommunication Union
IXP	Internet Exchange Point
LIR	Local Internet Registry
NRO	Number Resource Organization
NSRC	Network Startup Resource Center
OIF	Organisation Internationale de la francophonie
ONCF	Office National des Chemins de fer
PDP	Policy Development Process
PKI	Public Key Infrastructure
RIR	Regional Internet Registry
RPKI	Resource Public Key Infrastructure
RR	Routing Registry



Message





From the Chairman



Dr. Viv Padayatchy
Chairman

Chairman's Foreword – 2010

Fellow community members,

It is my pleasure, as Chairman of AfriNIC, to address you in our 2010 annual report.

AfriNIC has had an excellent year with membership growth keeping its upward trend as well as IP resource allocation. This is encouraging for both AfriNIC and Africa as it means that the internet network fabric in the continent is consolidating.

Internally, a major event that took place in 2010 was AfriNIC's relocation to a brand new office block at the Ebene Cybercity in Mauritius. As you will find out later in this report, the new office is in line with AfriNIC's intent on projecting an image of an organisation that has come of age and provides for the functional requirements of the organisation. AfriNIC also went through an accelerated phase of capacity building in Human Resources with certain key positions successfully filled in 2010.

Financially, AfriNIC reached a total membership income level in excess of US\$ 2.2 million. However, in view of the expenses on Human Resources and the office relocation project, our operating costs also grew significantly from US\$ 1,767,902 to US\$ 2,321,408. After taking into account the various sponsorship received, as a net result, our reserves only grew marginally. However, our priority in 2010 was to endow AfriNIC with the necessary resources to fulfill its role as an RIR facing a growing and more demanding community.

On the technical side, AfriNIC continued to progress on two key projects: RPKI and DNSSEC. This is on top of the ongoing consolidation of technical operations and our MyAfriNIC portal. AfriNIC continued to be present within the international Internet ecosystem attending such meetings as ICANN, RIR, IGF, and IETF amongst others. Of course, our two key events within Africa were our two public policy meetings in Rwanda and South Africa where a number of policies were discussed or introduced in face-to-face debates among community members.

Finally, I should mention that, with the exhaustion of IPV4 looming over the horizon, AfriNIC will be shifting gear in to accelerate its IPV6 programmes and sensitise the community on the urgency of IPV6 adoption.

As I am in the last year of my mandate, I take this opportunity to thank the community for their support and wish the board and the management all the best.

Thank you

Dr. Viv Padayatchy
Chairman

From the Chief Executive Officer



*Adiel A. Akplogan
Chief Executive Officer*

Dear colleagues,

What a pleasure it is for me to write this foreword at the end of our fifth year of operations. Commitment, determination and overall support from our community have allowed us to reach where we are today. AfriNIC has demonstrated that in our region significant progress can be achieved with limited resources.

I am proud today to see the 20 dedicated staff actively working to support our activities compared to the half a dozen that we were three years ago. During the past five years, we have organised 11 public policy meetings, discussed and adopted 15 policies, trained over 1000 individuals on IP planning and IPv6 transition. IPv4 and IPv6 allocations have grown by more than 100% compared to the number resource usage prior to AfriNIC's setup in 2005. Our budget has grown from about US\$ 200,000 to more than US\$ 2,000,000 in 2010. We have engaged in many projects and activities in line with our mission to "spearhead Internet technology development" in the region.

The task to cover, in a unified manner, the whole region with all its diversity was seen as a huge challenge at the beginning but we have managed during these five years to keep the balance and promote the Number Resource Management understanding. This will not have been possible without a continuous and firm commitment to a multistakeholder bottom-up approach while dealing with related issues.

The years ahead are full of new challenges but also new opportunities for our region. We at AfriNIC believe that the most prosperous years are still ahead of us. IPv6 and the new Internetworking era are new opportunities for our region to firmly embrace an alternate e-business culture based on mobile and wireless technologies.

We are ending 2010 with a lot of perplexity and anxiousness about the exhaustion of the IPv4 pool. AfriNIC has been allocated a /8 toward the end of the year and we are expecting to receive another /8 in application of the end of IANA central pool global policy. These will put us in a relatively safe position while we are still working to increase IPv6 uptake within our community. We are planning to provide an open information tool on the Number Resource usage data in our region. We believe this is critical for infrastructure and technology planning.

This year we have focused a lot of effort in raising our cooperation level with our non-conventional stakeholders, mainly governments and policy makers. We have also moved to a new office in order to provide a more conducive working environment to our team. The move of our office location also opens the avenue for enhancing our network infrastructure both in Mauritius and South Africa. We are moving from the small infrastructure that we have set up to start running the registry to something more resilient and strong enough to handle our future development plans while ensuring a reliable service to the community.

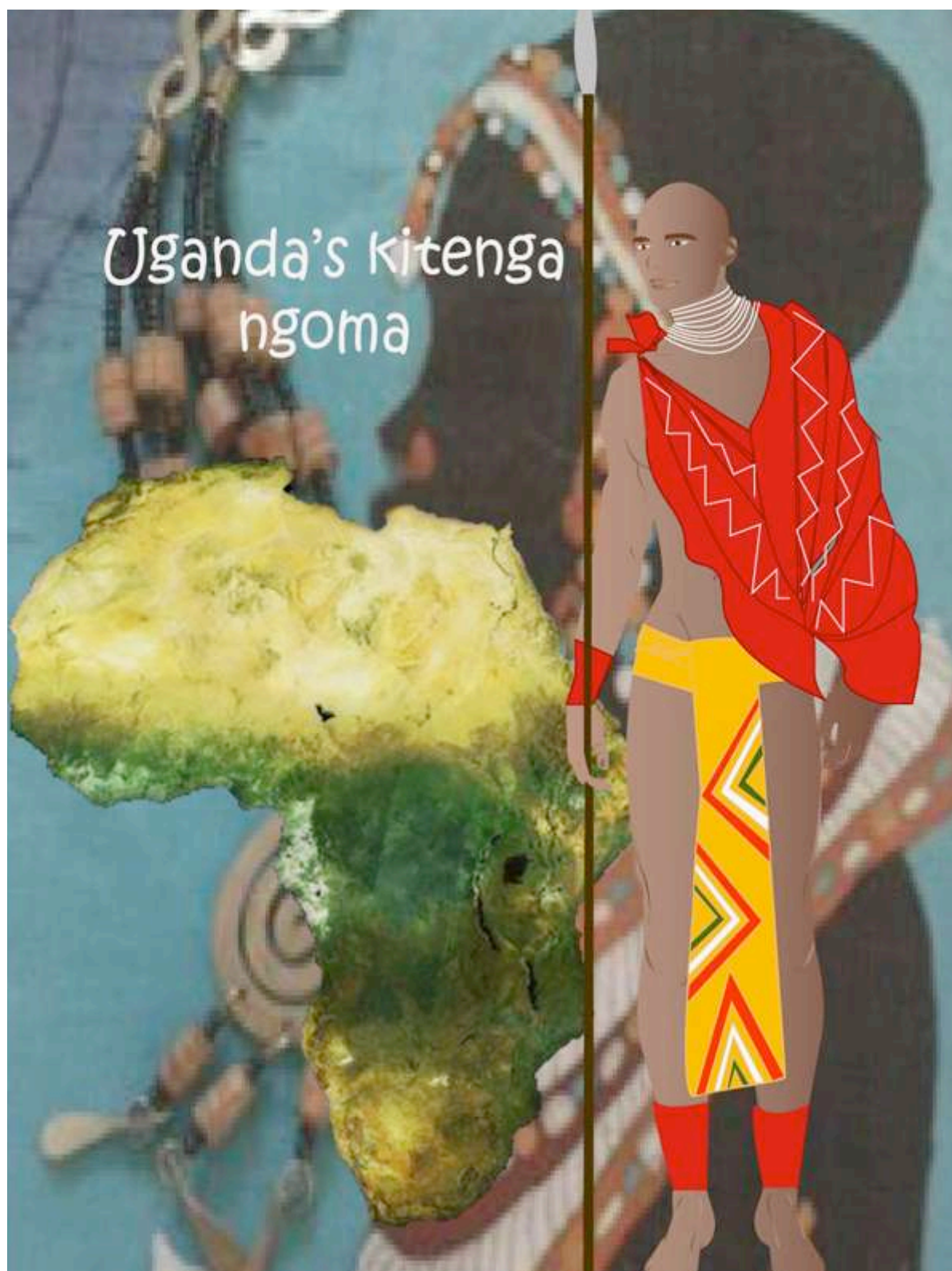
As a member-based organisation, we are planning in 2011 to improve our feedback channels from our members and launch a global survey on our activities after five years of operations. We will count on your support to provide us with your feedback and better serve you.

To conclude, I would like to thank our partners, staff, and the community for their support throughout this first five years of our existence.

Enjoy reading this report and be assured of our continuous support!

Adiel A. Akplogan

Adiel A. Akplogan
CEO



Role, Vision, Mission

AfriNIC is a non-government, not-for-profit, membership-based organisation, headquartered in Mauritius. As the African Regional Internet Registry (RIR), AfriNIC's role is to promote the fair distribution and responsible management of Internet Protocol (IP) addresses and Autonomous System Numbers (ASN).

These resources are required for the operation of the global Internet. We do this according to policies developed by our community, in an open, transparent, and bottom-up policy development process. The allocation and registration of Internet number resources are AfriNIC's core activities. We provide training and education services, develop and promote basic technical and business practice standards related to Internet service provision for members, and collaborate with other regional and international organisations.

Vision

Spearheading Internet Technology and Policy Development in the African Region.

Mission

To serve the African community by providing professional and efficient management of Internet number resources, supporting Internet technology usage and development, and promoting Internet self governance.

Core Values

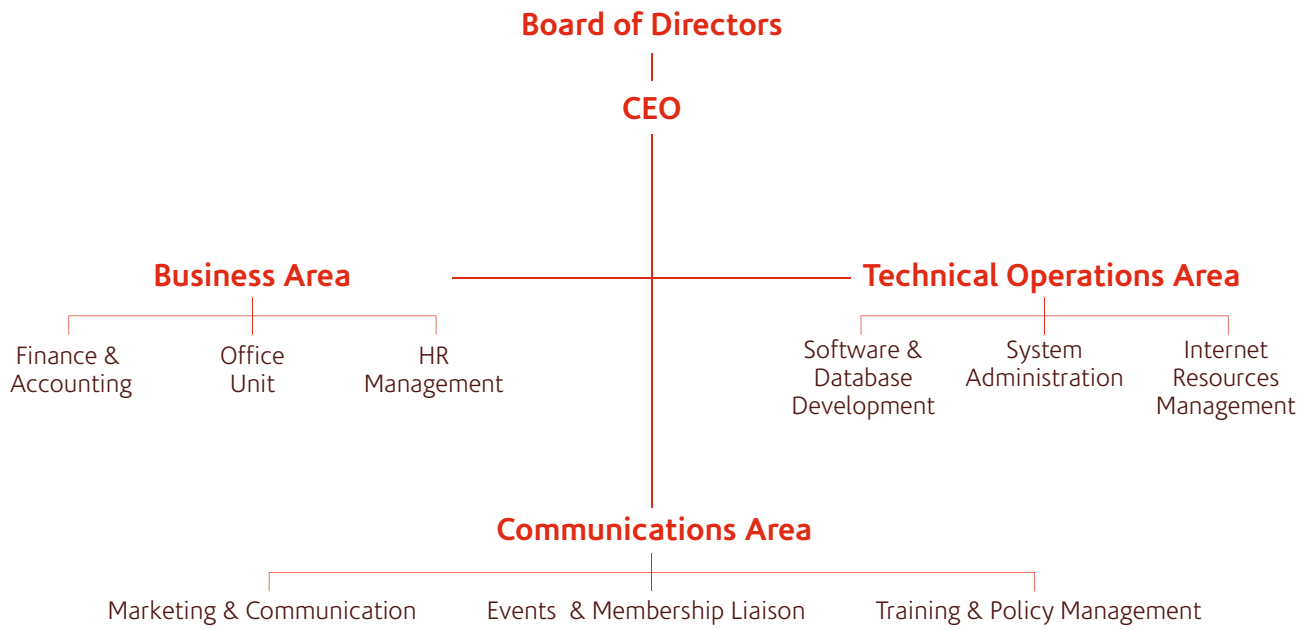
- We operate with transparency, professionalism and efficiency.
- We are committed to integrity in all that we do, always and everywhere.
- We recognise and value individual contribution and teamwork.
- We recognise cultural and language diversity in our region.
- We are a technology-driven organisation that encourages continuous learning and innovation.
- We value collaboration and cooperation with related organisations.

Established in 2004, AfriNIC's headquarters is in Mauritius but its activities and region of coverage span across the whole African region. It is administered by a Board of Directors and managed by an appointed Chief Executive Officer.

The AfriNIC organisational 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 and by members who elect representatives that sit on the Board of Directors. The discussions are conducted via both public meetings and email discussion lists. There are no requirements or prerequisites for any person or entity to participate. AfriNIC has a General Assembly which meets once a year whereas Public Policy Meetings are organised twice a year (one back-to-back with the General Assembly).

Organisational Structure

AfriNIC Organisational Structure



Board Composition

We would like to thank all our board members for their commitment, leadership and direction toward the success of the Organisation. A special note of thanks to our outgoing Board members namely Mrs Rachida Jouhari, Mr Pierre Dandjinou, Mr Sunday Folayan and Mr Mokthar Hamidi for their valuable contribution towards AfriNIC's growth.

In 2010, the Board of Directors was composed of:

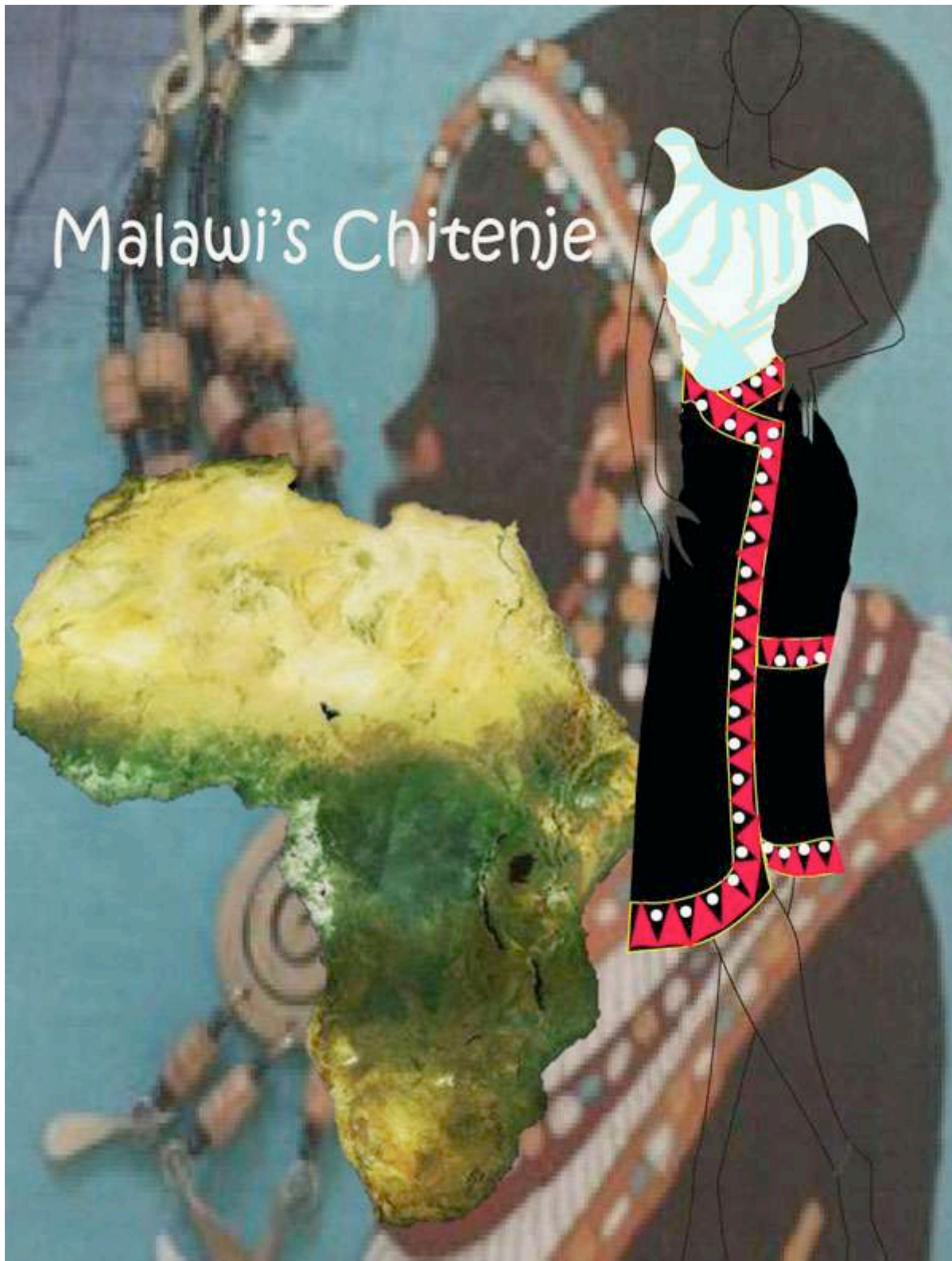
Primary

Name	Region	Terms
Nezar N. Sami	Northern Africa	07/2010 to 06/2013
Ndeye Maimouna Diop Diagne	Western Africa	07/2010 to 06/2013
Didier R. Kasole	Central Africa	07/2008 to 06/2011
John Walubengo Nyongesa	East Africa	07/2009 to 06/2012
Mark J. Elkins	Southern Africa	07/2009 to 06/2012
Viv Padayatchy	Indian Ocean (chair)	07/2008 to 06/2011
Adiel Akplogan	CEO	Appointed

Alternate

Name	Region	Terms
Jean Philemon Kissangou	Central Africa	07/2008 to 06/2011
Lala Andriamampianina	Indian Ocean	07/2008 to 06/2011
Khaled Koubaa	Northern Africa	07/2010 to 06/2013
Alioune B. Traore	Western Africa	07/2010 to 06/2013
Lillian Wambui Karanja	Eastern Africa	07/2009 to 06/2012
Silvio Cabral Almada	Southern Africa	07/2009 to 06/2012





Malawi's Chitenje

About the Area

The Business Area is one of the three main components of the AfriNIC organisation structure. It has, as core responsibilities the management of the general administration, Finance and Human Resources sections of the company. Its functions include:

- The maintenance of all accounting records of the company.
- Billing which essentially is responsible for the invoicing and membership fees collection.
- The production of monthly financials and the preparation of the annual financial statements
- The Human Resources activities which include, the recruitment, training of staff and the general staff welfare activities
- The front office service and all the Company travel arrangements.

The major activity during the year under review was the relocation of our operations to new spacious premises in June 2010. We now have all the functions under the same roof. It is expected that this new environment will add to the already existing team efforts in providing the very high level of professional services that our members are anticipating. The staff is composed of:

Name	Position
Razi Muslun	Business Area Manager
Nathacha Rennel	Front Desk Assistant and Travel Coordinator
Kiran Cunniah	Office Unit Manager
Nursiah Lokamah	Accounting Officer
Christelle Rennel	Front Office Assistant
Gavish Soobarah	Accountant



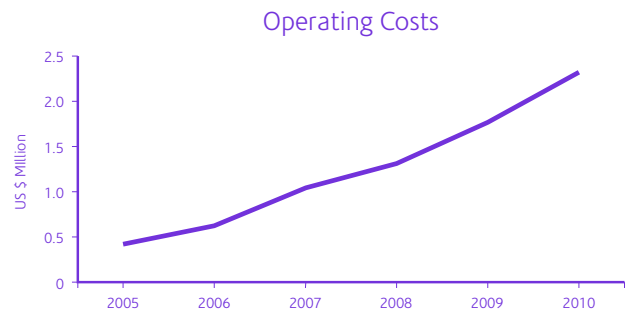
Financial Report and analysis

Membership Fees Income

Membership fees income crossed the US\$ 2 million mark for the first time recording an increase of 28.7%. The growth trend exhibited in 2009 continued throughout 2010 resulting in an increase in fees income from US\$ 1,754,902 to US\$ 2,258,867. This rise can be attributed to an increase in new members coupled with the fact that as the exhaustion draws nearer, existing members are increasing their resource holdings. Membership grew by 20% from last period.

Operating Costs

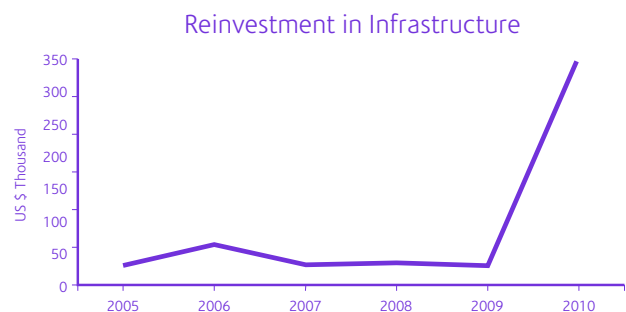
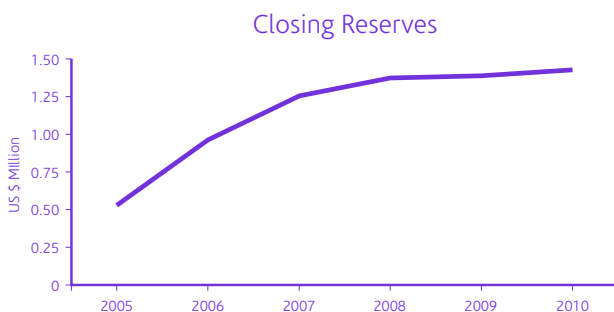
Operating Costs increased by 31.3% from last year, from US\$ 1,767,902 to US\$ 2,321,408. The highlight of this year's activities was the relocation of the operations to new offices. This was reflected in the increase in our depreciation charge for the year from US\$35,258 to US\$ 74,161. In addition, the expiry of the agreement with CSIR with regards to the subsidising of the SA Operations expenses, meant that AfriNIC had to fund the full costs related to the technical operations in Pretoria, South Africa for the first time.



The Bottom line

Surplus for the year increased from US\$ 14,157 to US\$ 39,348, correcting the downturn experienced in 2009. Consequently, Total Reserves grew marginally from US\$ 1,387,942 in 2009 to US\$ 1,427,290 in 2010.

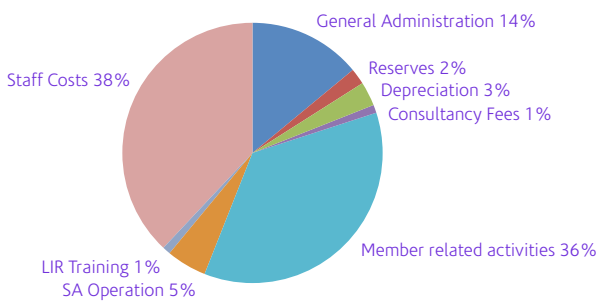
During the year under review, US\$ 346,203 (2009 \$ 29,827) was spent on infrastructure. However, 73.4% (US\$ 254,148) relates to improving for the new office space. Capital investment is anticipated to continue at similar levels for the coming year as phased projects to improve service delivery are implemented.



Prospects

The year 2010 was a busy year for AfriNIC most specifically with regards to relocating to a larger office space. With this larger space, the consolidation of the human resources, which started in 2008, can now be finalised. The relocation represents a critical stage in the evolution of AfriNIC which will impact positively on service level delivery and subsequently on future financial performance in the years ahead. Effective cost control shall continue to be the focus in the coming year without compromising service quality.

Utilisation of Members fees



Financial Report and analysis

Surplus And Loss Statement Year Ended 31 December 2010

Annex (USD comparatives)

	Year Ended 31 December 2010		Year Ended 31 December 2009	
	Mur	Us\$	Mur	Us\$
Income				
Membership Fees	67,766,020	2,258,867	52,647,061	1,754,902
Grants	3,881,652	129,388	4,559,671	151,989
	71,647,672	2,388,256	57,206,732	1,906,891
Administrative Expenses				
Human Resources	-27,187,879	-906,263	-21,446,178	-714,873
Telephone and Communications	-2,138,358	-71,279	-1,505,313	-50,177
Computer Expenses	-133,649	-4,455	-60,833	-2,028
Office Expenses	-4,706,114	-156,870	-4,018,184	-133,939
Motor Vehicles Expenses	-276,785	-9,226	-137,623	-4,587
Insurances	-158,268	-5,276	-165,069	-5,502
Printing, Postage and Stationery	-782,832	-26,094	-585,558	-19,519
Bank Charges	-769,424	-25,647	-536,845	-17,895
Audit Fees	-120,000	-4,000	-120,000	-4,000
Depreciation	-2,224,819	-74,161	-1,057,725	-35,258
Legal and Consulting Fees	-852,636	-28,421	-554,360	-18,479
Sponsorship	-635,613	-21,187	-443,782	-14,793
SA Operations	-3,803,534	-126,784	0	0
LIR Training	-949,760	-31,659	-255,969	-8,532
Total Administration Expenses	-44,739,671	-1,491,322	-30,887,439	-1,029,582
Distribution Expenses				
Advertising Expenses	-1,081,149	-36,038	-838,150	-27,938
Bad Debts	-1,947,529	-64,918	0	0
Meeting and Seminars Expenses	-5,672,197	-189,073	-8,786,967	-292,899
Contribution	-973,107	-32,437	-492,248	-16,408
Traveling and Accommodation Expenses	-15,228,576	-507,619	-11,797,268	-393,242
Entertaining Expenses	0	0	-75,634	-2,521
Car Rental	0	0	-144,960	-4,832
Total Distribution Expenses	-24,902,558	-830,085	-22,135,227	-737,840
Total Operating Expenses	-69,642,229	-2,321,408	-53,022,666	-1,767,422
Other Income/Expenses				
Interest Income	246,825	8,228	447,232	14,906
Exchange (Loss)/Gain	-1,071,839	-35,728	-4,206,580	-140,218
Total Other Income/Expenses	-825,014	-27,500	-3,759,348	-125,312
Surplus for the Period	1,180,429	39,348	424,718	14,157

Financial Report and analysis

Statement Of Assets And Liabilities Year Ended 31 December 2010

Financial Summary

	Year Ended 31 December 2010		Year Ended 31 December 2009	
	MUR	US\$	MUR	US\$
Assets				
Non-current Assets				
Plant and Equipment	10,271,310	342,377	2,226,931	74,231
Intangible Assets	115,053	3,835	89,910	2,997
	10,386,363	346,212	2,316,841	77,228
Current Assets				
Trade and Other Receivables	6,179,008	205,967	9,512,630	317,088
Bank Deposits	18,283,500	609,450	0	0
Cash and Cash Equivalents	22,085,572	736,186	38,119,090	1,270,636
	46,548,080	1,551,603	47,631,720	1,587,724
Total Assets	56,934,443	1,897,815	49,948,561	1,664,952
Reserves and Liabilities				
Revenue Reserves	3,124,943	104,165	1,944,514	64,817
Other Reserves	39,693,750	1,323,125	39,693,750	1,323,125
Grant	593,708	19,790	1,484,268	49,476
Total Assets Attributable to Members	43,412,401	1,447,080	43,122,532	1,437,418
Current Liabilities				
Trade and Other Payables	13,522,042	450,735	6,826,029	227,534
Total Liabilities	13,522,042	450,735	6,826,029	227,534
Total Reserves and Liabilities	56,934,443	1,897,815	49,948,561	1,664,952

Key Features - Four Year Review

	2009 US \$	2009 US \$	2008 US \$	2007 US \$
Fee Income	2,258,867	1,754,902	1,365,891	1,346,027
Grants & Sponsorships	129,388	151,989	63,971	111,516
Total Operating Expenses	2,321,408	1,767,422	1,311,707	1,042,925
Finance (Income) and Other Costs	27,500	125,312	(174,271)	140,757
Surplus/ (Deficit) for the year	39,348	14,157	292,426	273,861
Total Reserves as at end of year	1,427,290	1,387,942	1,373,345	1,254,802
Closing cash at bank	1,345,636	1,270,636	1,343,229	1,254,878
Reinvestment in infrastructure	346,203	29,827	34,230	31,195



INDEPENDENT AUDITORS' REPORT TO THE MEMBERS OF AFRICAN NETWORK INFORMATION CENTRE (AfrinIC) LTD

Report on the Financial Statements

We have audited the financial statements of African Network Information Centre (AfrinIC) Ltd on pages 5 to 22 which comprise the statement of financial position as at December 31, 2010 and the statement of comprehensive income, statement of changes in equity and statement of cash flows for the year then ended and a summary of significant accounting policies and other explanatory notes.

Directors' Responsibility for the Financial Statements

The directors are responsible for the preparation and fair presentation of these financial statements in accordance with International Financial Reporting Standards and in compliance with the requirements of the Companies Act 2001, and for such internal control as the directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those Standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the Company's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the directors, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements on pages 5 to 22 give a true and fair view of the financial position of the Company as at December 31, 2010 and of its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards and comply with the Companies Act 2001.



INDEPENDENT AUDITORS' REPORT TO THE MEMBERS OF
AFRICAN NETWORK INFORMATION CENTRE (AfrINIC) LTD (CONTINUED)

Report on the Financial Statements (Continued)

Other matter

This report, including the opinion, has been prepared for and only for the Company's members, as a body, in accordance with Section 205 of the Companies Act 2001 and for no other purpose. We do not, in giving this opinion, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

Report on Other Legal and Regulatory Requirements

Companies Act 2001

We have no relationship with or interest in the Company other than in our capacity as auditors and dealings with the Company in the ordinary course of business.

We have obtained all the information and explanations we have required.

In our opinion, proper accounting records have been kept by the Company as far as it appears from our examination of those records.


ERNST & YOUNG
Ebène, Mauritius


ANDRE LAI WAN LOONG, A.C.A.

27 MAY 2011
Date:

Overview of Human Resources

AfriNIC strongly believes that one of the key elements of the success of the organisation is its human resources.

During 2010, major strides have been made to consolidate the human resources aspects of the organisation. This effort has been strengthened following the relocation of the operations to a more spacious office space. The investment has further enabled the provision of a more pleasant and professional working environment. Consequently, it became possible to fill in positions in line with the mid to long term human resources strategy which AfriNIC had embarked on since 2009. The year closed with a staff complement of 18.

In order to reposition the organisation to better face the challenges ahead and to deliver an improved service level to the community, several positions were created and filled during the course of the year. Among others, the following new recruitments were undertaken.

An Accountant, an IPv6 Program Manager, a PR & Marketing specialist, a Senior IP Analyst, an Event Coordinator and a Membership Liaison Officer.

A considerable amount of time and effort was devoted to reviewing existing staff conditions of service with particular emphasis on staff benefits with a view to foster an environment conducive to attract and retain high calibre professionals.

A great deal of commendable work was also accomplished on the documentation of most HR processes and policies and an employee handbook is now available. A well defined recruiting guidelines and induction programme coupled with a set of fair disciplinary codes have also been designed and implemented.

During the year under review, AfriNIC continued to focus on improved efficiencies and operational improvements through the provision of in house and external training, language training and staff exchange with the other RIR. Regular team building activities were also included as part of our staff welfare calendar.

Overall, 2010 was a very successful year from an HR perspective. We acknowledge that the challenges ahead are numerous. However, with the solid foundation laid down in the past years and most particularly in 2010, AfriNIC is well prepared to embrace them in the coming years.





About the Area

The Communications Area at AfriNIC was created in 2008 to consolidate Public Relation and Marketing, Members Training, Policy engagement, Events Coordination and IPv6 program functions. In 2010, the Communications Area benefited from 3.5 FTE. The staff who contributed to our activities in the year are:

Name	Position
Lillian Sharpley	Communication Area Manager
Diane Nuteau	Event and Sponsorship Coordinator
Titilayo Akinsanmy Olujumoke	Public Relations and Community Engagement Officer
Mukom Tamon	Training Manager and Policy Liaison
Kheeran Raye Bahadhor	Marketing and Communication Officer
Hisham Ibrahim	IPv6 Program Manager

During the year 2010, the Communications Area was engaged in various activities with the first AfriNIC Government Working Group workshop held in Mauritius. Based on Internet governance and law enforcement, the workshop was a platform for us to set up the framework of the newly created working group in our region and the first action towards AfriNIC's formal engagement with Governments and policy makers. This allowed us to successfully hold further meetings of the Working group back to back with our Public Policy meetings in Kigali and Johannesburg during the year.



Cooperation and collaboration

AfriNIC continued throughout 2010 to reinforce its cooperation and collaboration with regional and global partners.

Cooperation with Af* {AfStar} sister organisations

AfriNIC continued to provide support to other Af* organisations. We provided funding and logistic support to AfNOG, AFTLD, AfREN and the new working group on cyber security. We organised joint events with most of these organisations in order to raise awareness on issues pertaining to the development of Internet in the region.

In 2010, our cooperation agreement with AAU led to the provision of Number Resources to 13 academic organisations and two free training sessions to campus Network administrators on IP address planning and IPv6 transition.

Public Policy Meetings

Our biannual Public Policy meetings are the most important aspect of our support to the bottom up policy development process. These are landmark events for the community to gather to network and get informed about recent evolutions of networking technology. In 2010, AfrinIC-12 was organised in Kigali which also coincided with the fifth anniversary of our operations and AfrinIC-13 in Johannesburg. The agenda of the two meetings were designed to provide insight to the community on a variety of topics going from IPv6 deployment to Cyber-security and Legal Aspect of Internet number resources.

Three new policies were introduced and discussed during the year. Two of them reached consensus and were implemented. We have also dedicated a section to Policy Development in this Annual Report.

African Union Summit

As part of our outreach programmes to governments and inter-governmental institutions AfriNIC ran a booth during the 20th African Union summit dedicated to ICT, in Addis Ababa. The booth attracted more than 500 people. Our presence at the event also allowed us to start bilateral cooperation talks with few other organisations present, such as NEPAD, CTO, ISOC and few regional regulators associations. It was an opportunity for us to meet Government representatives, specially those in charge of ICT and reinforce our cooperation with them.

We plan to continue reinforcing our relationship with such stakeholders in the coming years in line with our overall strategy.

Number Resource Organization

As a member of the Number Resource Organization, we actively participated to join projects with our peers Regional Internet Registries in various areas (Communications, Engineering, Public Affair and Number resource management). The NRO CCG (Communications Coordination Group) in which the Communications Area is directly involved has collaborated to publish several documents and review the NRO website. Our team has also supported the NRO booth during the IGF meeting in Vilnius along with the workshops organised under the NRO. AfriNIC also contributed to the CGG face-to-face coordination meeting in Montevideo where its activity plan was discussed and brainstorming sessions took place to see how to raise the NRO profile with the global community. The Engineering Coordination Group and Registration service Hadoc Cooperation Groups worked together on several projects that are specifically covered in other sections of this report.

International Telecommunication Union

AfriNIC continued in 2010 to follow ITU activities in the region and globally. We participated and contributed to the ITU IPv6 Working Group where AfriNIC's CEO lead the NRO delegation. As a Registry, we presented the global scope of the Internet community from a realistic perspective for developing countries. It also allowed us to clarify some misconception related to Internet Number Resource usage in developing countries in general and in Africa region in particular.

We also represented the African Internet Technical community at the WTDC (the World Telecommunications Development Conference) held in Hyderabad, India where we contributed to discussions related to Internet governance in developing countries and provided our view on how to improve participation and involvement of our region in the global debate. Our input was utilised in various resolutions and recommendations that were meant to be discussed at the Plenipotentiary meeting.

Cooperation and collaboration

Our outreach activity with the ITU community took us to the 2010 Plenipotentiary meeting held in Guadalajara, Mexico. AfriNIC's participation was beneficial for participants who had direct access to technical information to better frame their position on Internet Governance issues. On site, we provided relevant analysis on Internet Governance in Africa and this activity on the whole was very positive in terms of creating awareness about AfriNIC activities.

Internet Governance Forum

AfriNIC continued to support the Internet Governance Forum initiative locally and globally. We ran and supported two workshops during the IGF event in Vilnius. One on Internet and FOSS: Applications and Challenges for Africa and a second on the Impact of Internet Governance on Internet development in Africa.

We provided logistic and financial support to Regional IGF (West and East Africa) initiatives. It is very encouraging for us to see that, after initiating and fully supporting the West Africa Regional IGF since 2008, in 2010 we have seen many other organisations join the effort to build a stronger partnership for the sustainability of the process. We will continue to encourage and promote these regional multi-stakeholders dialogue forum and work to push them further down to country level in the region.

AfriNIC Government Working Group

The AfriNIC Government Working Group (AFGWG) is closed and dedicated platform for Governments and Regulators for increasing inter-governmental and global collaboration and cooperation for capacity building through the sharing of information, experience and ideas.

The main objectives of the AfGWG are:

- To strengthen the collaboration between AfriNIC and African governments and regulators.
- To create a dynamic framework to address general Internet governance challenges faced within the region specifically those internet governance issues related to Internet number resources.

In 2010, the first three AfGWG meetings were organised in Mauritius, Kigali and Johannesburg respectively. They have been attended by 77 delegates composed mainly of government officials of various ministries and regulatory bodies from the ICT sector.

AfriNIC fellowship program

The AfriNIC fellowship program is reserved in priority for individuals representing small organisations, universities, and media who are actively involved in Internet operations and development or ICT policy in their countries and respective communities. The fellow is expected to positively and actively contribute to IP address management awareness in the AfriNIC service region. In 2010, eight individuals from the African region have benefited from our program whereby they were invited to attend and participate in our Public Policy meetings.

Network Information & Infrastructure Service Award

The Network Information & Infrastructure (NI&I) Service Award has been set up to reward individuals and organisations involved in providing Internet networking services and Infrastructure in Africa. The NI&I Service Award pays tribute to the actors of this sector in Africa and the Indian Ocean. In 2010, Anne Rachel Inne was the recipient of the NI&I Award and Michuki Mwangi received the Young professional Award. Previous recipients of this award are Adiel Akplogan, legacy recipient of the NI&I Service Award 2009 and Mark Tinker who won the Young Professional Award.

European Union 6Deploy Project

Since 2008, AfriNIC is part of the 6Deploy consortium, which is an European Union's initiative to promote IPv6 deployment. "In 2010, we continued our cooperation on the project by organising more free IPv6 training workshops. We also continued to host and manage an IPv6 testbed in our datacenter, making it available free of charge for testing IPv6 to network engineers within our region and globally.



a.

AfriNIC-12

23 May - 4 June 2010

- a. & b. AfriNIC-12
- c. Anne Rachel Inne Winner of the 2010 NI&I Service Award
- d. & e. AfriNIC 5th anniversary



b.



c.



d.



e.



AfrinIC-13

Johannesburg, South Africa
20 - 26 November 2010



Policy Update and Analysis

Introduction

One of our key activities is providing support for a bottom up process where policies which guide the way AfriNIC manages Internet number resources are developed by the community. Year 2010 was a busy year in the following:

- Improved documentation of all policies documents to give their event histories and links to previous versions.
- Introduction of a printed “Policy Discussion Manual” at AfriNIC face-to-face meetings to increase participation for first time participants and those without Internet access at the meeting.
- Election of new seats for the PDP-MG as well as one AfriNIC seat for the NRO-NC/ASO-AC.
- A new policy development process proposal was ratified by the board and came into effect

2010 Policy Statistics

	2010	2009	Increase
Total number of mailing list messages	370	169	+218.93%
Number of new policies proposed	3	1	+300%
Number of proposals accepted by community	1	2	-200%
Number of proposals implemented by AfriNIC Ltd	1	1	0%

Proposals that were implemented

“Policy Development Process in the AfriNIC service region” - S. Moonesamy , (Implemented 2012-11-24)

Proposals that reached consensus

“Policy Development Process in the AfriNIC service region” - S. Moonesamy

New policy proposals

1. Abuse Contact Information in the AfriNIC Service region
2. Global Policy for IPv4 Allocations by the IANA Post Exhaustion
3. Addition of Real Contact Email into ASN Whois Bulk Data

Policy Development Process changes in 2010

During AfriNIC-12, which took place in June in Kigali - Rwanda, elections were held for two (2) seats of the PDP-MG that had become vacant as a result of the terms of Paulos Nyirenda and Hytham El Naktal expiring. Paulos Nyirenda and S. Moonesamy stood and won the three-year and two-year terms respectively.

During AfriNIC-13 in Johannesburg, the new policy development process policy that reached consensus during AfriNIC-12 was ratified by the board and implementation initiated by appointment of S. Moonesamy and Alan Barrett as interim policy development working group (PDWG) co-chairs. They were given the mandate to serve until proper elections for the PDWG co-chairs were organised.

In order to more clearly document the policy development process, we started the following improvements:

- Addition of a “History” section to each proposal that states the dates of key events in the evolution of that proposal.
- Addition of a “Previous Versions” section that listed previous versions of a proposal for reference.

Training Update

Introduction

In line with AfriNIC's 2010 – 2012 training plan and its commitment to capacity development, a number of training sessions targeting regional network engineers in IP number resources management have been organised. The highlights of the plan are the following:

- Review of AfriNIC's IPv6 training curriculum.
- Three hundred and fifty-two (352) network engineers in ten (10) countries were trained during eleven (11) training workshops, a 37.5% increase in number of workshops over 2009.
- Creation and testing of new training content for the IPv6 training workshop.

2010 Training Statistics

Location	Date	Local host	Attendance
Durban – South Africa	22nd – 23rd April	Derivco	20
Reduit – Mauritius	28th – 29th April	National Computer Board	29
Kigali - Rwanda	20th – 29th May	AfriNIC-12 Meeting	50
Serekunda - Gambia	17th – 18th June	Public Utilities Regulatory Agency	60
Freetown – Sierra Leone	21st – 22nd June	ISOC Sierra Leone & AfCOM Ltd	39
Monrovia - Liberia	24th – 25th June	ISOC Liberia	15
Tripoli – Libya	21st – 22nd July	Libya Telephone and Telecom	24
Lagos – Nigeria	28th – 30th September	Internet Exchange Point of Nigeria	18
Abuja – Nigeria	4th – 6th October	Internet Exchange Point of Nigeria	39
Khartoum – Sudan	1st – 3rd November	National Telecom Company	38
Johannesburg – South Africa	20th – 22nd November	AfriNIC-13 meeting	20

Training Curriculum

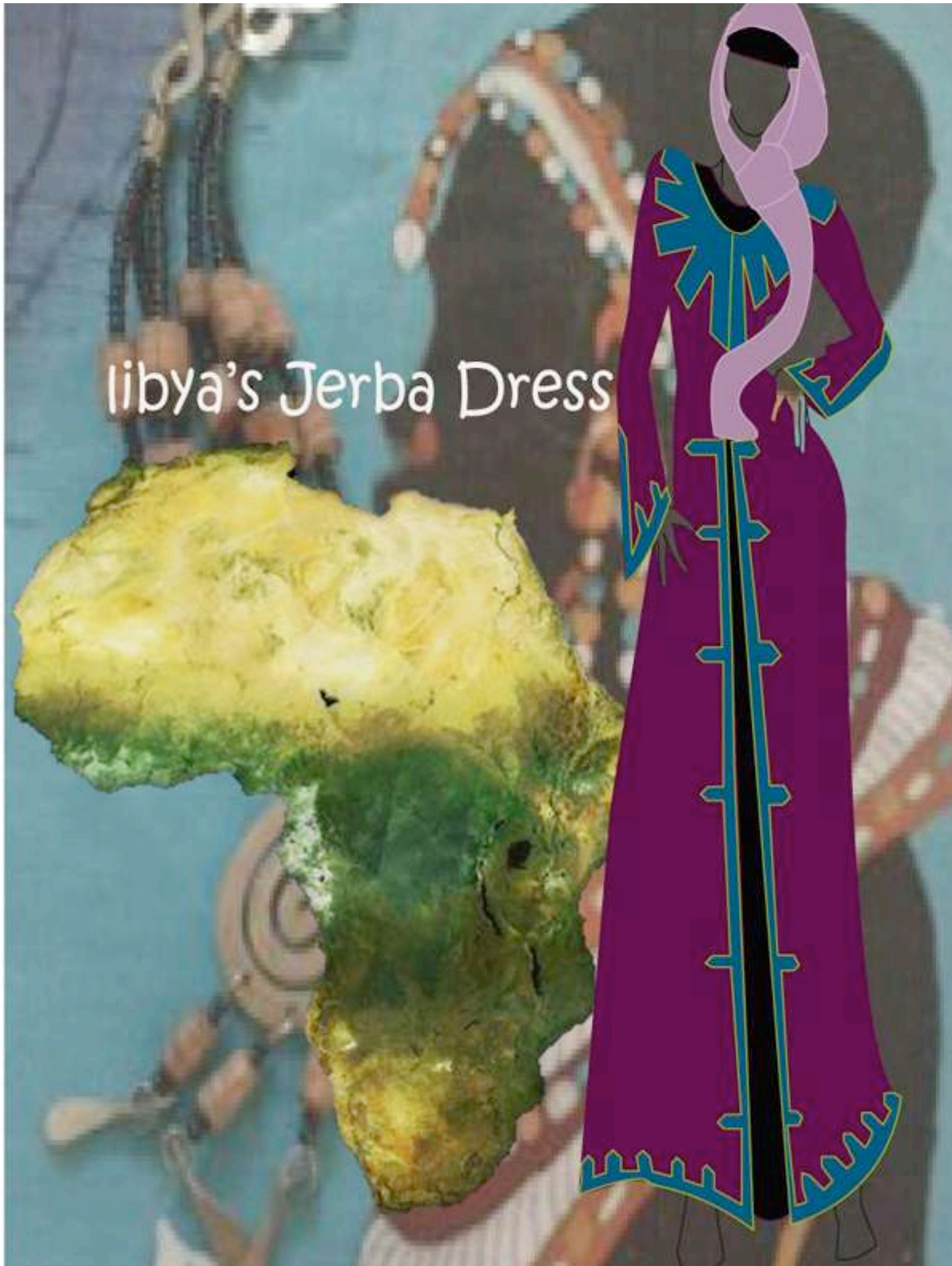
In line with the Training Plan, our training curriculum has been reviewed and updated. The objective of our IPv6 training workshop is to train network engineers and systems administrators who will build IPv6 networks that are transparent to end users. It has also been designed to be more interactive and hands-on leveraging on IPv6 virtual lab. As such the following now apply:

- Focus on router-based transition techniques and host-based IPv6 transition techniques (Teredo, ISATAP) are now de-emphasised.
- An IPv6 guided hands-on manual has been developed and made a core part of the training. This allows attendees build a functioning dual stack network on real equipment by the end of the workshop. The hands-on manuals are based on the IPv6 testbeds within the European Commission 6Deploy project of which AfriNIC is a partner.
- Extensive feedback capture and review which feeds back into developing the content. As an example, one of the priority modules we need to develop is IPv6 Security and IPv6 network planning as these were the most requested modules from the feedback.

The Local Internet Registry (LIR) training course has been renamed Internet Number Resources Management and divided into two parts: a basic part for very basic introduction to AfriNIC, our services, Internet number resources management and how to request resources. The advanced module is directed at technical staff within member organisations that manage IP resources and focuses on managing Whois database objects, MyAfriNIC and the routing registry.

Training Collaboration with ISOC

In June 2010, in collaboration with ISOC a five (5) day training workshop was organised for ISPs in Sierra Leone. This workshop was five days long and featured trainers from ISOC and AfriNIC who trained about thirty-nine (39) network engineers. The training concluded with the setup and launching of the Sierra Leone Internet Exchange Point.



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About the Area

The Technical Operation Area is responsible for providing support through the management and maintenance of the key technical resources and provide overall support to the infrastructure of AfriNIC. In 2010, the Technical Operations team played a vital role in ensuring that AfriNIC services are accessible at the new AfriNIC premises. For its external infrastructure, AfriNIC shifted to a more resilient base through the relocation of a new AfriNIC data centre facility in South Africa.

The members of the team are:

Name Position

Nishal Goburdhan	Technical Operations Area Manager
Alex Lawani	Software Engineer
Harikrishnan Kurup	System Administrator
Davina Armon	Member Services Liaison
Ernest Byarhuanga	Member Services Manager
Duksh Kumar Koonjoobehary	Webmaster and Multimedia Designer
Madhvi Gokhool	Senior IP Analyst
Laban Kimotho	Database Manager and Software Developer



In 2010 we have worked on the following project:

- The architecture and deployment of AfriNIC's Resource Public Key Infrastructure (RPKI) service
- The architecture and deployment of AfriNIC's Domain Name System Security Extensions (DNSSEC) service

RPKI project

Resource certification is a security framework for verifying the association between resource holders and their Internet resources.

Resource certificates can be used for various purposes:

- Sign route origin authorisations.
- Sign Internet routing objects.
- Prove ownership of Internet resources in the context of IPv4 transfer after the exhaustion of the IPv4 pool of the RIR.
- Help to secure the inter domain routing protocol by conveying the right-to-use of the resources and to validate routing information exchanged.

AfriNIC in coordination with the other RIR is working to deploy its Resource Public Key Infrastructure Engine (RPKIE) to certify resources allocated/assign to members and offer RPKI services to members and the community.

The coordinated milestones are as follows:

Phase 1	Pilot release	06/06/10
Phase 2	Production release	01/01/10
Phase 3	Global consistency	09/01/11
Phase 4	Single trust anchor	01/01/12

AfriNIC is on track to conclude the internal intensive and open the tests to the community. The team working on this project is composed of representatives from all the areas of the organisation.

DNSSEC project

AfriNIC is also working on the deployment of DNSSEC. The project aims:

1. To sign the reverse zones for IPv4 and IPv6.
2. To send the relevant DS records to in-addr.arpa and ip6.arpa zones.
3. To make changes to the Reverse DNS provisioning system to allow members to send DS records to AfriNIC for integration in the signed zones.

AfriNIC root server copy project

AfriNIC in collaboration with national and regional Internet Exchange Points (IXP) launched in 2009 its Anycast root server project which aims to increase the number of instances of root servers in the African region.

Root servers are responsible for directing domain name lookup request in the DNS to their respective name server with the aim to strengthen the DNS by handling growing Internet traffic. AfriNIC, through its root server project, namely the AFRSCP has taken a positive step to support the quality of Exchange Points, DNS and thus the overall Internet and DNS resiliency through increasing the number of root servers in the African region. Access to local servers will reduce dependability on external hosts for these critical services, and will lead to overall improved, cheaper, and faster Internet usage in Africa. This will have a long-term positive socio-economic impact in Africa.

AfriNIC has already successfully coordinated a project for the installation of the K root-server in Africa at the Tanzania Exchange Point. We are in the late stage discussion with African IXP operators in several areas to host additional root server copies.

Internet Engineering Task Force (IETF) activities

AfriNIC has been involved in IETF activities, particularly in the working groups which directly affect our operations and/or RIRs system in general. AfriNIC was present at IETF-77 and IETF-78 this year. The focus was around the following working groups: 6man, v6ops, sidr, dnsex, dnsop.

MyAfriNIC update

MyAfriNIC is the Web portal launched in 2007 from which users can manage their resources. In 2010, our technical team continued to improve the system and new features were introduced as follows:

- Integration of resource certification to enable members to perform various RPKI functions.
- New workflow that obviates the need for prospective members to create nic-hdls beforehand.
- Creation and embedding of an RT ticket number in the RSA.
- Ability to simultaneously request both membership and resources.

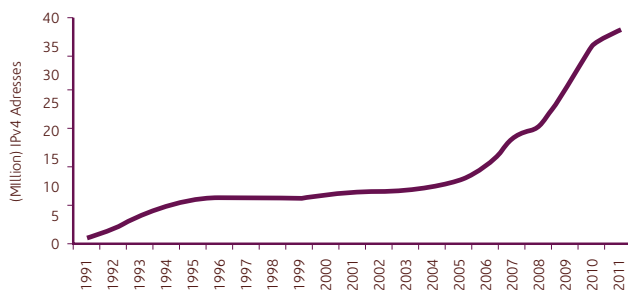
No. Resources Management Update

The number of resources distributed in 2010 increased significantly yet again with 8.5 million IPv4 addresses issued, about half a /8 (26% growth from 2009), 55 IPv6 requests approved (300% growth) and 146 AS Numbers assigned (46% growth). The total number of IPv4 addresses consumed in the region in fact grew by more than 400% from 2008.

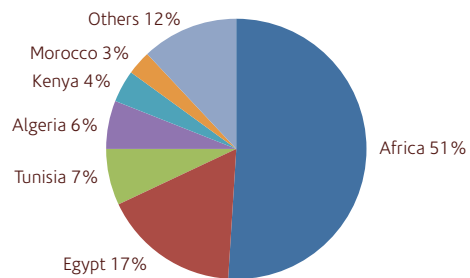
3-year resource allocation overview:

	2008	2009	2010
IPv4			
Number of addresses issued	1,591,040	5,991,424	8,520,960
Requests approved	136	182	236
IANA allocations received	1	0	1
IPv6			
Requests approved	18	13	55
Number of countries with IPv6 footprint	27	30	34
AS numbers assigned	84	100	146
Number of new members	88	97	134
Closed members	0	4	10
Number of tickets processed	1,543	2,082	4,198

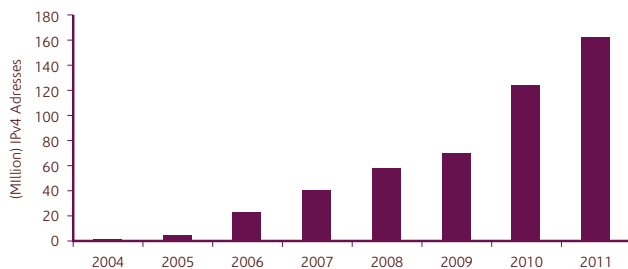
Total IPv4 Addresses Issued



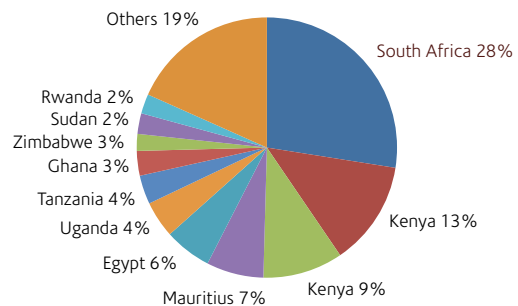
IPv4 Addresses Distribution by Country



IPv6 Allocation Growth



IPv6 Distribution by Country

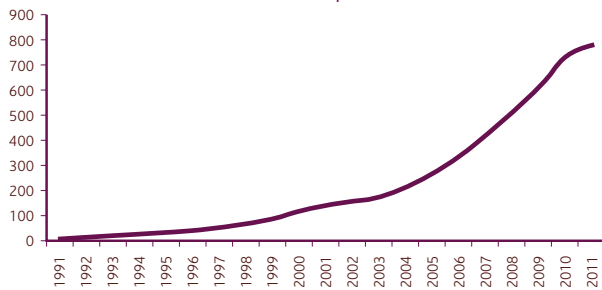


Membership update

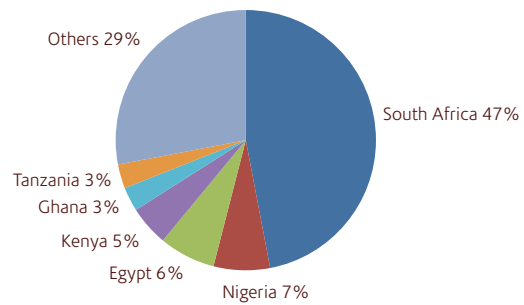
In terms of membership, 134 new members signed up in 2010, mostly from South Africa, Nigeria, Kenya, Ghana and Egypt. There were 5 IXPs signing up under the Critical infrastructure policy as well as 13 academic institutions benefiting from the discounted rate through the Memorandum of Understanding signed between AfriNIC and the Association of African Universities.

In 2011, we shall continue to monitor the IPv4 resource evaluation mechanism and processes in anticipation of the community's reaction to the exhaustion of the IANA IPv4 address pool. We expect larger than usual requests, those from outside the region (as other regions quickly exhaust their pools), reservation requests and other similar cases.

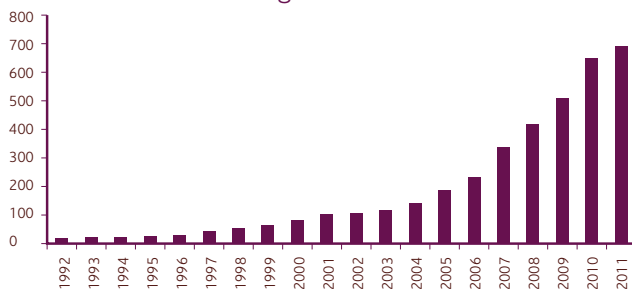
Membership Growth



Membership Distribution



ASN Assignment Growth



Message of thanks

AfriNIC wishes to express its sincere gratitude to organisations which supported and contributed as sponsors and local host to the success of our meetings in 2009. We want all our sponsors and partners to know that their support has been beneficial to us and that their contribution to the Internet development in the African region is highly recognised.

We also thank all our local hosts who supported the organisation of our free training workshops in year 2009. Some of our working partners are as follows: Cisco, ISOC, ICANN, ONCF, TANBERG, DCL, Mauritius Telecom, Méditel, Organisation International de la Francophonie, Centre National pour la Recherche Scientifique et Technique, Network Startup Resource Centre, Ecole Mohammadua d'Ingénieurs.

We hope to continue to have you and many other organisations with us in our mission throughout the region.



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