

A close-up photograph of a smiling man with dark skin and a mustache, wearing a blue and white checkered shirt. He is holding a map of the African continent, which is intricately woven from numerous strips of bright orange fabric. The map is held in front of his chest with both hands. The background is a solid, warm orange color.

AFRINIC



annual report
2011





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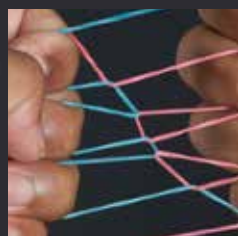
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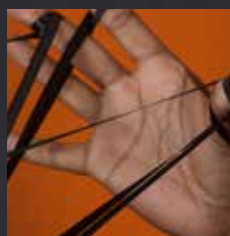
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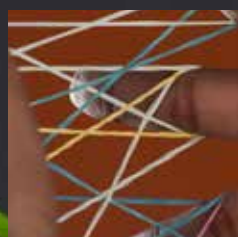
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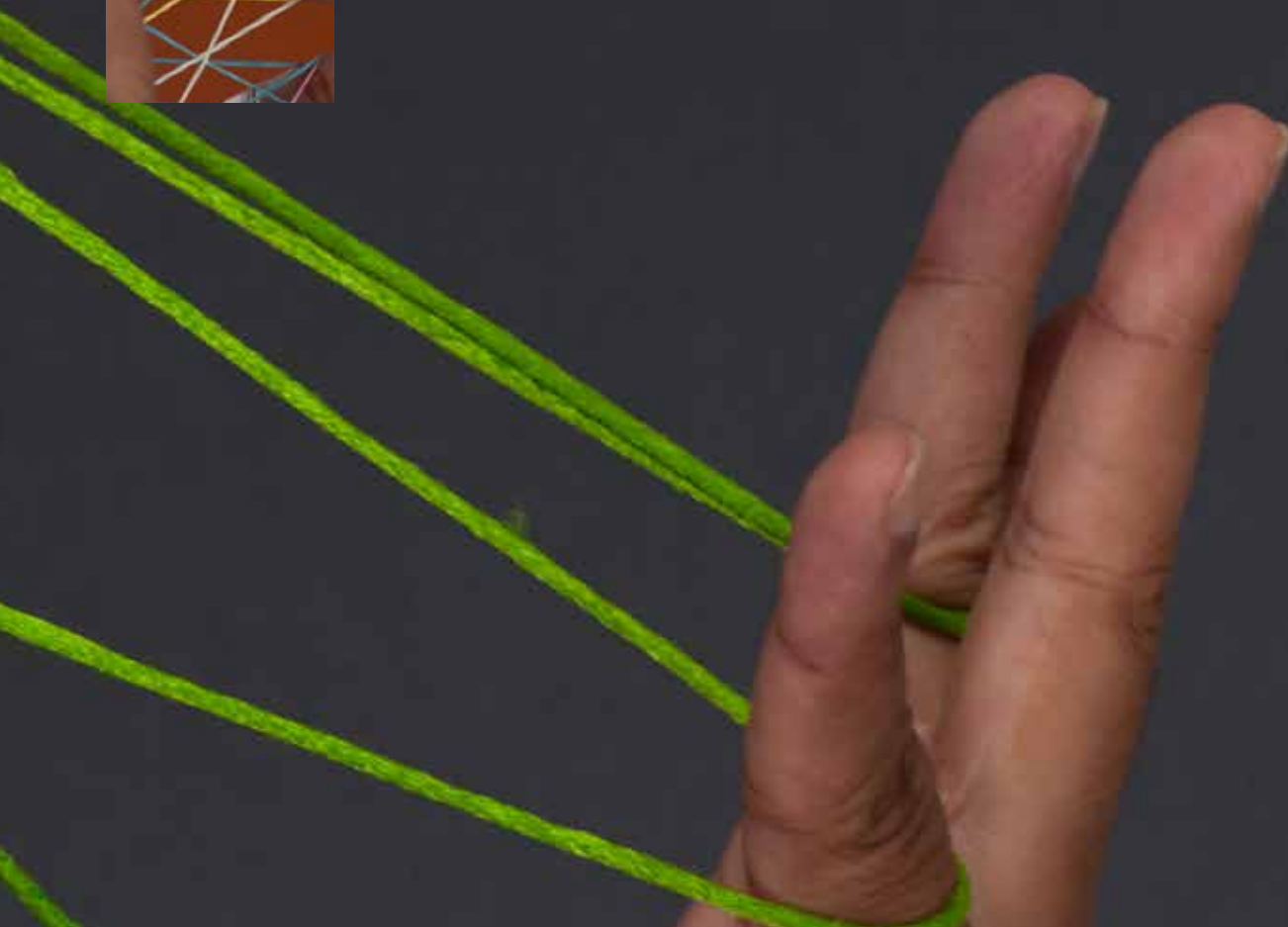
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Word from the Chair

The year 2011 has been remarkable for AFRINIC. This is a year when the organisation achieved significant growth despite working in a challenging environment occasioned by numerous challenges facing not only the continent but also the world.

I am proud to say that we achieved our strategic plans, and goals for the year. We managed to grow membership, revenue, and distributed millions of IP addresses. This is a remarkable feat. We must, however, not rest on our laurels. Recent Internet developments and access opportunities and challenges mean we must work hard to satisfy the demands of both our members and the community we serve. But our service delivery has improved, and we continue to serve our members and our continent with great dedication. We have this year grown the AFRINIC staff as part of the restructuring process that we initiated. Working with the whole Board of Directors, we have achieved the goal we set out for ourselves which was to assemble what is, no doubt, one of the best and most efficient teams. This is a highly qualified and experienced team ready to offer the highest quality of service to members and the community. It is thus hugely gratifying to see quality, efficiency, and professionalism exhibited by the team. This is a team that is highly committed to the fulfillment of AFRINIC's vision and mission.

We held two very successful public policy meetings in Dar es Salaam, Tanzania (AFRINIC 14), and Yaounde, Cameroon (AFRINIC 15). These were attended by hundreds of delegates. It is at these meetings that we can engage more actively with the community in developing and discussing appropriate policies necessary for further development of the Internet in the continent. We set up the AFRINIC Government Working Group (AfGWG) to bring together governments, regulatory agencies and other such actors in what we believe is a multistakeholder approach to resolving Internet-related issues and challenges facing our region. We believe governments and government agencies play and should be more involved in Internet development in Africa and we are delighted to provide a platform through which we can all articulate and resolve issues facing us. We actively participated in numerous other African and international meetings. Such participation gives us an opportunity to engage at the global level as we are an



important actor in Internet development.

We obviously look forward to having another successful year in 2012. Meanwhile, I take this opportunity to thank the AFRINIC community, staff and supporters who have worked with us to make this a very successful year.

A handwritten signature in blue ink, which appears to read 'Maimouna'.

Maimouna Diop Diagne Ndeye

Dear Members and Colleagues,

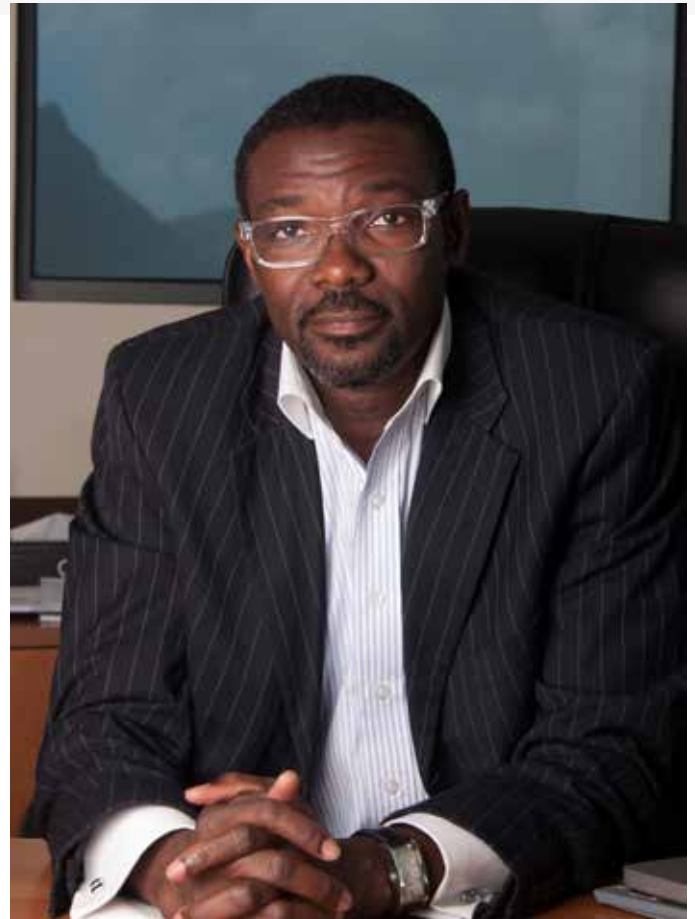
It is a great honour for me to present to you this seventh Corporate Report that covers our activities for the year 2011. Seven years down the road, we can proudly say that we have achieved and surpassed our plans and expectations laid down in 2004. We close the year with a lot of positive achievements in spite of working in a fast changing environment with numerous challenges facing our organisation and region.

Our technical community will remember 2011 as the year when the central IPv4 pool was completely exhausted. It is a year when we all, as RIRs, have had to watch as the clock ticks towards total exhaustion of this version (v4) of the protocol. AFRINIC received its last /8 from IANA (102/8) on 3 February 2011. Before that, our community contributed in devising and discussing appropriate policies defining how the very last /8 will be used to ensure a smooth transition to IPv6 for newcomers while mitigating address hoarding by existing operators.

We have also gone through profound structural changes, from the operational structure to the legal association framework (bylaws). These processes started in 2011 and will be carried over into 2012 for their completion and implementation. These changes are critical to the future of AFRINIC as we prepare the organisation to efficiently and effectively tackle anticipated changes in the region and in the industry.

We have closed the year with an operational budget of US\$ 2,389,663. Our membership has grown by 20%, an exceptional achievement considering the challenges we face. This growth has been continuously supported by our training and capacity building programmes which we expect will take us to new heights in 2012 with the expansion of the team to include French speaking trainers. This year over 400 people attended our face-to-face meetings where we discussed important policies relating to the management of Internet number resources. In 2011 we adopted the Soft Landing Policy for the last /8 IPv4 block.

We have spent a significant amount of time and resources not only in engaging governments and policy-makers in our processes, but also as a way of creating a common framework for mutual support in Internet infrastructure development



in the region. This effort will be continued and intensified in 2012 with the preparation for the revision of the International Telecommunications Regulations (ITRs). AFRINIC will work hard to ensure that the proposed amendments do not negatively impact future developments of the Internet. This will ensure that we do not lose the current momentum, drive and energy applied to the Internet. We want to ensure that the ingredients for its success are left intact for laggards and future generations.

I would like to conclude by thanking all our stakeholders in general and particularly our members, sponsors and speakers at our various events who have supported us throughout the year. We would not have achieved the above successes without them. Let us continue to work together for the success of the Internet in our region.

A handwritten signature in blue ink, which appears to read 'Adiel Akplogan'. The signature is stylized with a large loop at the beginning and a trailing flourish.

Adiel Akplogan

AFRINIC
The Internet Hub for Africa



AFRINIC at a Glance

Introduction

AFRINIC was established in 2005 as a non-governmental, 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 Internet. We do this according to policies developed by our community in an open, transparent, and bottom-up policy development process. The allocation and management 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. AFRINIC's activities and region of coverage span across the whole of the African region. It is administered by a Board of Directors and managed by an appointed Chief Executive Officer.

The AFRINIC organisational structure reflects a bottom-up self governance management model. Our community and elected Board members define the various policies as well as organisational functions. 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 in the meetings. 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).

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 a participatory and multistakeholder approach to 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.

Board Composition

The year 2011 saw new Primary and Alternate Board members elected for the Central Africa and Indian Ocean regions: Mr Janvier Ngoulaye and Mr Lala Adrianamampianina for the Primary positions and Mr Christian Bope and Mr Krishna Seeburn for the Alternate position respectively.

During AFRINIC-15 in Dar es Salaam, AFRINIC's members renewed the terms of Central and Indian Ocean representatives on the Board: Mr Janvier Ngoulaye (Central Africa) and Mr Lala Andrianamampianina (Indian Ocean) were elected. Mr Christian Bope and Mr Krishna Seeburn were elected respectively as Alternates

Primary

Name	Region	Terms	
Nezar N. Sami	Northern Africa	07/2010	06/2013
Ndeye Maimouna Diop Diagne	Western Africa (Chair)	07/2010	06/2013
Janvier Ngoulaye	Central Africa	07/2008	06/2011
John Walubengo Nyongesa	Eastern Africa	07/2009	06/2012
Mark J. Elkins	Southern Africa	07/2009	06/2012
Lala Andrianamampianina	Indian Ocean	07/2011	06/2014
Adiel Akplogan	CEO	Appointed	

Alternate

Name	Region	Terms	
Khaled Koubaa	Northern Africa	06/2011	05/2014
Alioune B. Traore	Western Africa	07/2010	06/2013
Christian Bope	Central Africa	06/2009	06/2012
Lillian Wambui Karanja	Eastern Africa	07/2009	06/2012
Silvio Cabral Almada	Southern Africa	07/2009	06/2012
Krishna Seeburn	Indian Ocean	06/2011	07/2014

Internet Number Resource Management

IP Addresses allocation

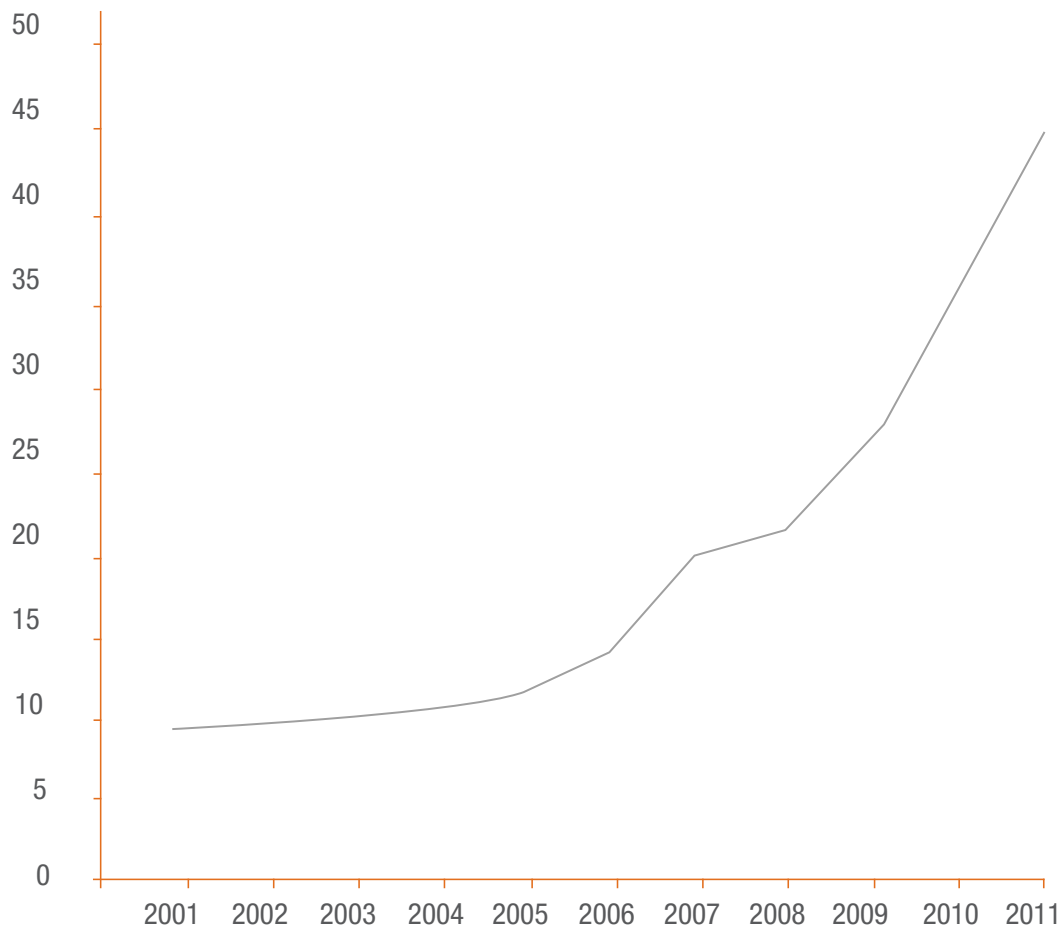
AFRINIC's core activity is the allocation of Internet Protocol (IP) addresses and Autonomous System Numbers (ASN) to its service region. The year 2011 saw a rise in the allocation of IPv4, IPv6 addresses and ASN.

Details of these allocations are highlighted below.

IPv4

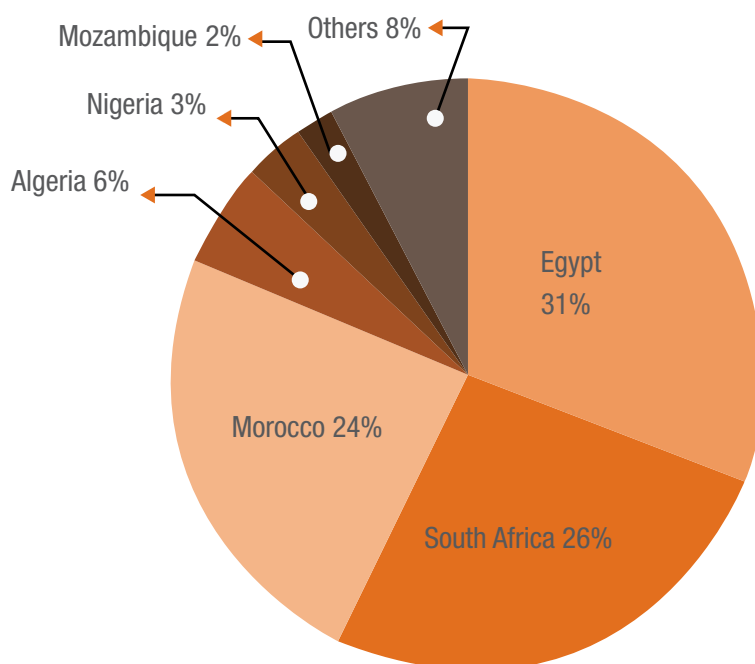
The demand for and eventual consumption of IPv4 address space rose again in 2011. More than half a million addresses were issued in 2011. A total of 9,037,824 addresses were allocated to members. This represents a 7% increase over the 8,457,216 addresses issued in 2010. As at the end of 2011, a total of 44.6 million IPv4 addresses (an equivalent of approximately 2.7 /8s) had been issued in the AFRINIC service region, up from 10 million 10 years ago.

Total IPv4 Addresses Issued in the region: 2001 – 2011



Internet Number Resource Management

The distribution of address space issued in 2011 per economy approximately follows the usual global trend, with Egypt taking the largest share at 31%. South Africa, the largest consumer, received 26% of the total. More than 80% of the space was issued to economies in North and Southern Africa. The rest of the region took about 20%.



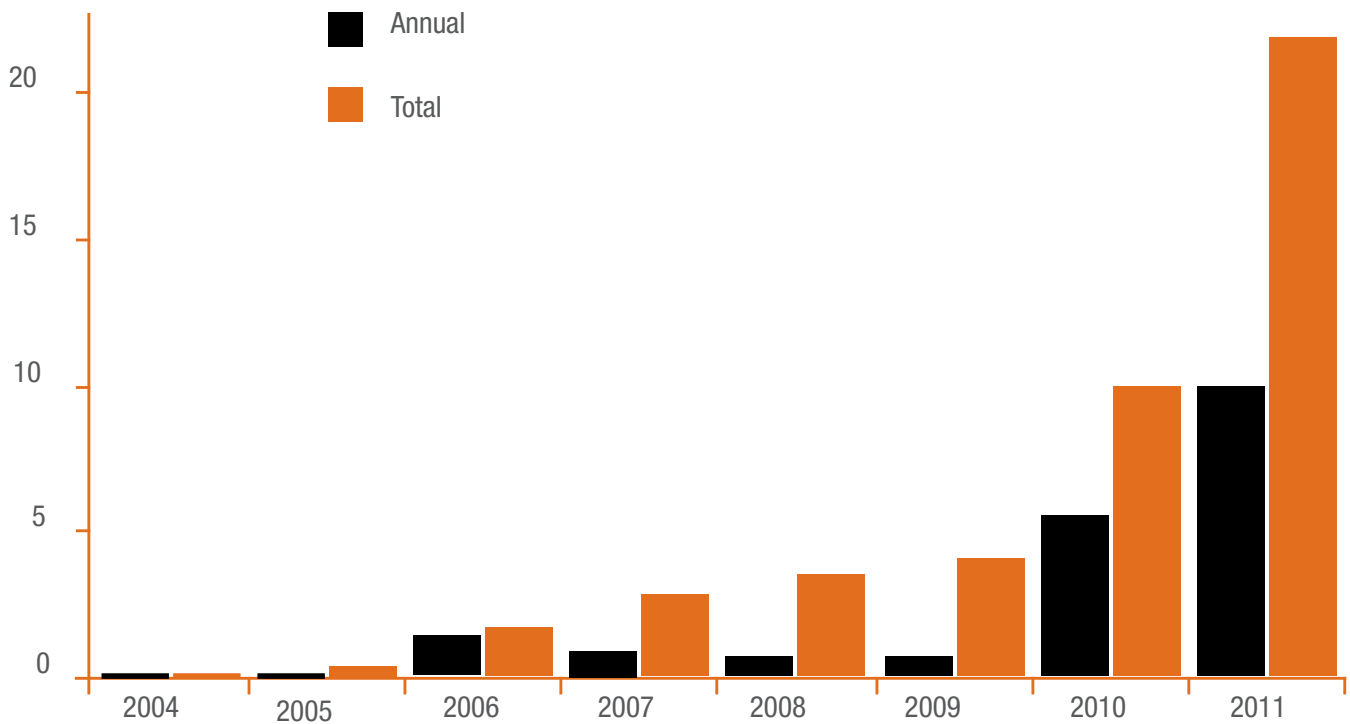
IPv4 addresses issued in 2011, by country

IPv6

The exhaustion of the IANA IPv4 address pool in February 2011 saw an immediate interest in and increase of IPv6 address space issuance in the region. Looking at the IPv6 growth rates over a 3-year period (2009 - 2012), consumption increased tenfold (1000%) from 2009 to 2010. We issued about 10 million /48s in 2011, more than 50% over the 6.8 million /48s that were issued in 2010.

Equally important, the number of African economies where an IPv6 prefix has been allocated (to an ISP or end-user) rose to 38 (from 31 in 2010). This translates to a 70% IPv6 footprint in Africa by country, a big leap from 50% in 2009.

IPv6 Address Consumption Trend: 2004 - 2011



AS Numbers

We assigned 127 ASNs, seven of which were 32-bit. Starting 2011, we removed the option for specifying a 16 or 32 bit ASN in the ASN request forms, and started issuing all AS numbers from a common 32-bit ASN pool. However, we are aware of the incompatibility of some equipment with the higher bit order 32-bit ASNs, and would consider, on a case-by-case basis, members that would like to swap higher bit with lower bit order 32-bit ASNs.

IANA IPv4 global pool depletion

The year 2011 saw IANA's global IPv4 pool depletion. AFRINIC CEO Adiel Akplogan held a press conference at the AFRINIC's headquarters to explain the implications of the depletion. This landmark and anticipated date further amplifies the need for the adoption of IPv6 as the new Internet protocol at the global level.

Membership Briefs

The Member Services Unit primarily handles the IP Resource Management function. The key roles are to manage the AFRINIC membership process through which all organisations wishing to receive Internet number resources must pass. Prospective members are assisted through the procedure of applying for AFRINIC membership online.

The other function is to manage the distribution of these number resources to new and existing members. This involves receiving and processing of requests for IP addresses and AS Numbers (ASNs) and ensuring, during request evaluation, that these requests are compliant with existing policy. The other function of the unit is to provide support to members and the community at large around technical matters related to the RIR function, such as rDNS and help with the whois database.

Achievements

Processes were proposed and documents that would enable effective follow-up of outstanding requests, as well as a detailed procedure for escalation of issues to management were drawn.

The membership application process was also reviewed and suggestions to automate some aspects of the application were proposed and implemented. Although this is still work in progress, fewer complaints were received in general after these enhancements were implemented.

We also set out to wikitise the entire unit’s processes, procedures, manuals and all reference material.

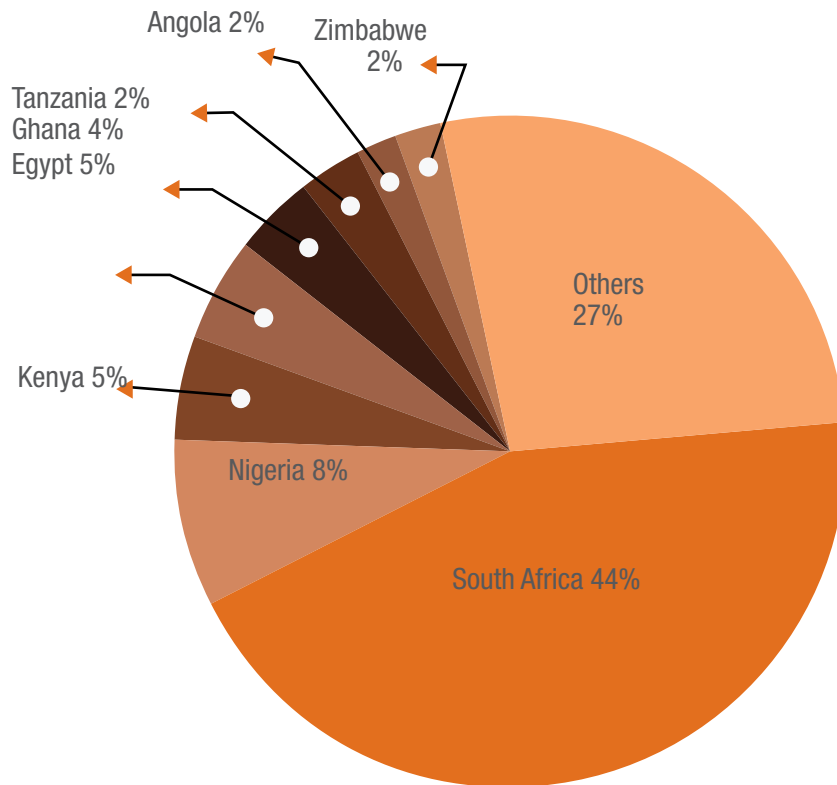
Hostmasters and staff at large have a repository of useful information for ease of reference as far as all IP number resource management matters are concerned.

Membership

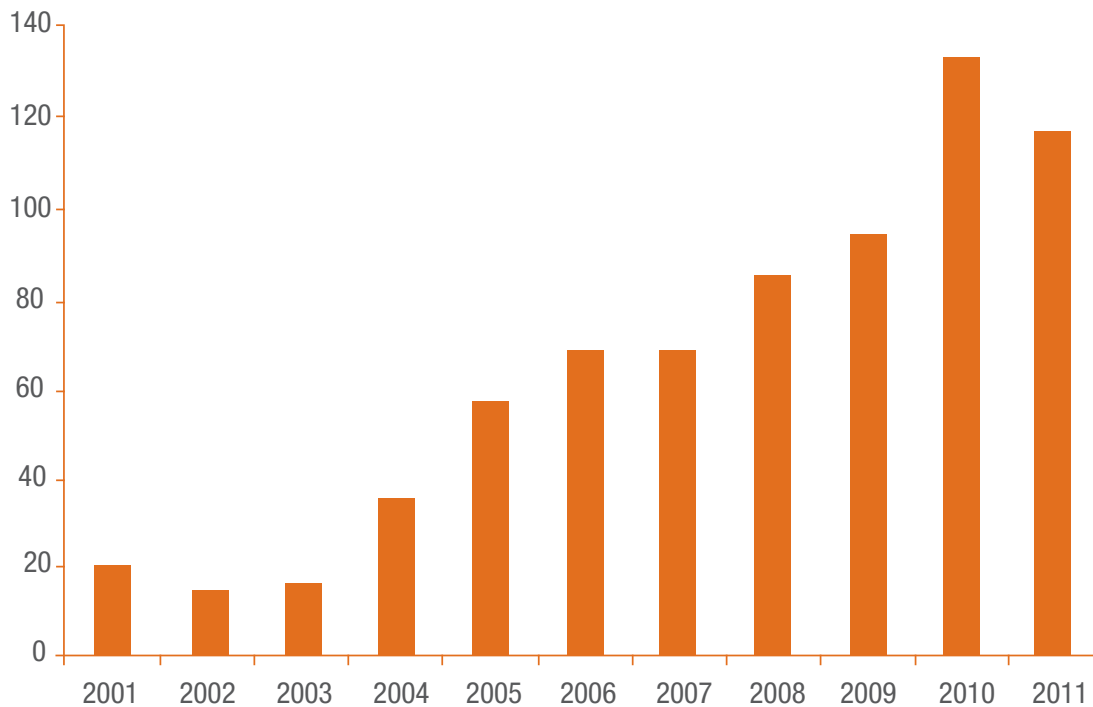
One hundred and twenty (120) new members were signed up in 2011, down from 134 members in 2010. Although this was a downward trend, there were more membership application requests received and processed, most of which were not approved due to several factors, key among them being inadequate information justifying their IPv4 address requests.

3-Year highlight of key services

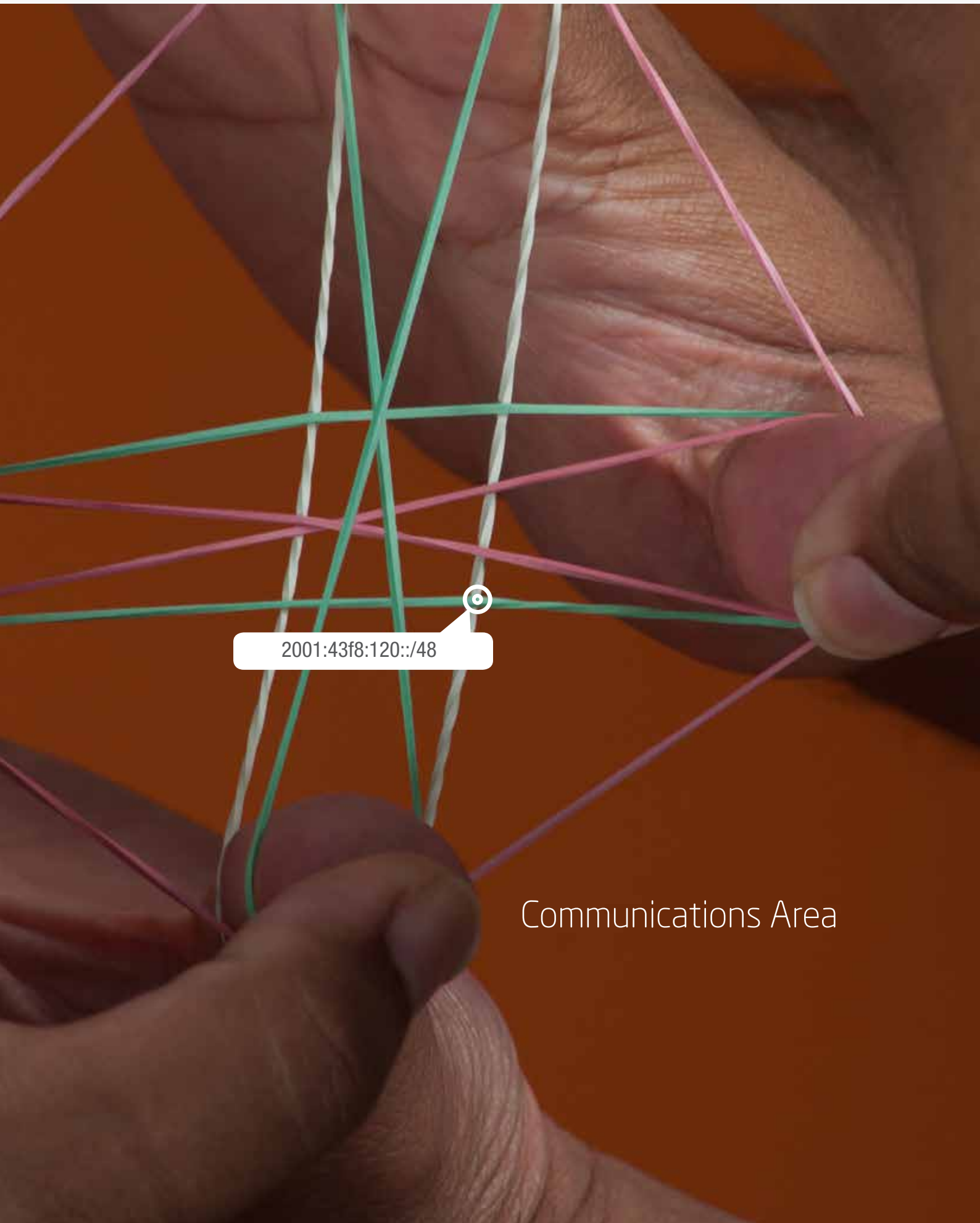
	2009	2010	2011
New Members:	99	134	120
IPv4 Addresses Issued:	5,923,840	8,519,936	9,161,728
IPv6 /48 prefixes Issued:	589,828	6,750,222	10,158,379
Countries with IPv6 footprint:	27	31	38



Total membership distribution by economy



Overview of New Members per Annum: 2001 - 2011



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Communications Area

About the Area

The Communications team is driven by its mission: to provide timely and efficient communication services to achieve AFRINIC's mission. The Communications team seeks to use available channels to provide information that can help the community, staff and its customers understand the role AFRINIC plays in the development and use of Internet in Africa

The team consists of:



Hisham Ibrahim

Acting Head of Communications
and PR



Vymala Thuron

Marketing & PR Manager



Ashil Oogarah

Technical Communications Editor/
Writer



Babusha Radhakisson

PR & Marketing Assistant



Mukom Tamon

Member Training Manager



Diane Nuteau

Events Coordinator

AFRINIC Meetings

AFRINIC holds two meetings a year. These meetings bring together AFRINIC Members and the Internet community to discuss policies on managing Internet number resources. Participants also benefit from technical trainings and presentations pertinent to Internet development in Africa.

In 2011, AFRINIC 14 was held in Dar es Salaam with over 260 participants from 51 countries, mostly from the education and telecommunications sectors, in attendance.

AFRINIC 15 was held in Yaoundé, Cameroon, with over 170 participants. A new theme for this conference was: Internet Governance.

IPv6 Day

The IPv6 Day was the occasion where major Internet content providers worldwide turned to IPv6 for testing. AFRINIC encouraged content providers to switch to IPv6 on IPv6 Day which was held at the same time with AFRINIC 14. A report of IPv6 related activities for this day was presented by Donn Lee of Facebook.

International events

AFRINIC participated in the following Internet related events:

1. v6 World Congress held in Paris, France
2. APNIC 31 Meeting held in Hong Kong
3. ICANN 40 Meeting held in San Francisco, USA
4. IETF 80 Meeting held in Prague, Czech Republic
5. ARIN XVII Meeting held in San Juan, Puerto Rico
6. RIPE 62 Meeting held in Amsterdam, The Netherlands
7. IST Africa-2011 held in Gaborone, Botswana
8. ICANN 41 Meeting held in Singapore
9. IETF 81 Meeting held in Quebec, Canada

AFRINIC participated in several fora in 2011 as a key and strategic partner for the advancement of Internet and its governance.

Internet Governance Forum 2011

The sixth Internet Governance Forum meeting was held from 27 to 30 September 2011 in Nairobi, Kenya.

The Internet Governance Forum is an annual platform for multi-stakeholder consultation for the global Internet fraternity to explore, discuss and solve crucial Internet-related issues. The event was attended by over 2,000 onsite attendees and more than 800 remote participants.

AFRINIC organised three workshops on Interconnecting Africa, SWOT analysis of the impact of mobile Internet on Internet governance, and cyber security. During the IGF, AFRINIC worked with the Number Resources Organization (NRO) on two IPv6 and transparency workshops. AFRINIC was also represented at a booth for disseminating essential information about the NRO.

ICANN-42 Meeting

AFRINIC organised a multi-stakeholder panel during the ICANN meeting in Dakar, Senegal. The panel consisted of Government, Regulatory, ccTLD and Private sector representatives, discussing the uptake of IPv6 at a national and regional level.

The panel focused on three areas:

1. IPv6 deployment plans and initiatives.
2. IPv6 training available to the African Internet community.
3. Public policy.

The session was attended by over 140 participants. AFRINIC had a booth disseminating essential information on services offered.



IGF Internet
Governance
Forum

AfricaCom 2011

AFRINIC participated in the AfricaCom Exhibition 2011, the largest communications conference and exhibition in the continent in Cape Town, South Africa.

AFRINIC was nominated for a pan-African award for the work it does to encourage ICT uptake in the region. AFRINIC had a booth at the event.

During the event, CEO Adiel Akplogan, in his presentation, talked about mobile operators playing an important role in the uptake of IPv6 in Africa. AFRINIC was also represented at a booth targeting participants and visitors seeking more information about its activities.

The AFRINIC Government Working Group

In the wake of the growing importance of Internet governance issues, the AFRINIC Government Working Group (AfGWG) was set up as an AFRINIC initiative to work with African governments and regulators to address general Internet governance challenges in Africa.

The main objectives of the AfGWG are:

- To strengthen collaboration between AFRINIC and African Governments and Regulators;
- To create a dynamic framework to address;
- To address general Internet governance challenges faced within the region, specifically those Internet governance issues related to Internet Number Resources.

This year, two meetings of the AfGWG were held, back-to-back with the bi-annual Public Policy meetings.

AfGWG 4 was held on 10 June in Dar es Salaam, Tanzania, while the fifth AFRINIC Government Working Group was held on 25 November in Yaoundé, Cameroon. AfGWG 4 was attended by 25 participants from 10 different countries. The agenda of the meeting comprised of, amongst others, discussions on Africa post IPv4 global depletion, the transition to IPv6 and its challenges in Africa and the way forward.

AfGWG 5 was attended by 36 representatives from 12 countries. The fifth AfGWG was conducted in a round table format instead of the usual presentations. This new format was a big success and generated vibrant discussions from participants. The meeting focused on various issues of interest specific to governments and regulators, namely the role of the AfGWG, the outcomes of the ministerial meeting in Dakar during ICANN 42, the AfricaCERT project and Africa's transition to IPv6. The meetings were also an opportunity for governments and regulators to share their thoughts, as well as setting up structures to aid the deployment of IPv6 in their respective countries.



**AFRINIC Government
Working Group**

Seed Alliance Project

AFRINIC joined hands with two other Regional Internet Registries (RIRs) - APNIC and LACNIC - on a joint proposal to the International Development Research Centre (IDRC) to launch a global research and development fund called the Seed Alliance. The global alliance was granted 1.3 million dollars over three years.

Each region will run a grants and awards programme designed to encourage and support the development of solutions to information and communication needs within that region.

In the AFRINIC region, the programme is known as 'FIRE', the Fund for Internet Research and Education.

IPv6 programmes

AFRINIC continues to promote IPv6 uptake in the region through its IPv6 programmes and trainings. In 2011, the percentage of networks enabling IPv6 in the African region jumped from 6% the previous year to 12% in the year under review.





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Training

Training network engineers on how to manage IP number resources and building competence in IPv6 is critical to Internet technology development in Africa. The year 2011 marked the second year in which the training plan that was developed and presented to the community was executed. This was done during AFRINIC 11 in Dakar, Senegal. The focus in 2011 was:

- Re-instatement of Internet Number Resources Management (formerly LIR) as a key part of our training.
- Three-day workshops with more time for practicals.
- Resumption of training in non-Anglophone countries (three French and one Portuguese).
- Increased focus and use of practical sessions using real live equipment in our IPv6 workshops.
- Automated the feedback collection process during workshops.

We continued strong collaboration in the European Commission 6Deploy project. 6Deploy-2 is a Specific Support Action in the Seventh Framework Programme of the European Union.

The purpose of the 6Deploy-2 project is to support the deploy-

ment of IPv6 in:

- e-Infrastructure environments.
- FP7 projects.
- Developing countries (Africa, Latin America, Asia and Eastern Europe).
- Industrial environments in Europe.

Partners offer basic training to organisations in Europe and developing countries, and support real IPv6 deployments.

Case studies of installations will be used to gain valuable practical experience which will help the 6Deploy-2 team to become the centre of European expertise regarding IPv6 deployment.

IPv6 training labs are being installed worldwide. These are built to a common specification, which allows the 6Deploy-2 training course material to be used on them all. It has been shown that these have developed naturally into centres of IPv6 expertise in the countries where they are situated.

Trainings across Africa



12
Number of
countries

700+
Number of
registrants

500+
Number of
participants

40%
Percentage
of practical
trainings

2011 Training Statistics

Location		Date			Local host
Accra	Ghana	6	8	April	National Information Tech. Agency
Lome	Togo	11	13	April	I-Services Togo
Lusaka	Zambia	27	29	April	ISP Association of Zambia
Niamey	Niger	18	20	May	AN3L Niger
Dar es Salaam	Tanzania	4	6	June	AFRINIC 14 meeting
Bulawayo	Zimbabwe	24	25	August	National University of Science & Technology
Nairobi	Kenya	14	16	September	TESPOK
Gaborone	Botswana	26	28	September	Botswana Post and BITS
Luanda	Angola	11	13	October	AAPSI
Djibouti	Djibouti	17	20	October	Djibouti Telecom
Bamako	Mali	7	9	November	AGETIC Mali
Yaoundé	Cameroon	19	27	November	AFRINIC 15 meeting

One of our key activities is providing support for the bottom process by which policies that guide the way AFRINIC manages Internet number resources are developed by the community. The primary mechanism for this policy development is the Resources Policy Development (RPD) mailing list which was very active in 2011 with 750 messages posted to the list (compared to 370 in 2010). As part of the process, our annual meetings also feature a policy day in which consensus is sought on proposals that have been under discussion on the mailing list. The year 2011 saw the following occurrences:

Four new policy proposals

- Limited out of Region Allocation of IPv4 Resources
- Transfer of IPv4 Addresses to Any Entity
- Reclamation of Allocated but Un-routed IPv4 Addresses
- Global Policy for Post Exhaustion IPv4 Allocation Mechanisms by the IANA

Three proposals gained consensus during face-to-face meetings

- Abuse Contact Information in Whois Database
- IPv4 Soft Landing Policy
- Global Policy for Post Exhaustion IPv4 Allocation Mechanisms by the IANA

Two policy proposals expired after 1 year of inactivity

- Addition of Real Contact Email into ASN Whois Bulk Data
- Global Policy for IPv4 Allocations by the IANA Post-exhaustion

As part of the implementation of the new policy development process, the Interim policy development working group chairs that were appointed by the Board in Johannesburg (AFRINIC 13) handed over to co-chairs that were elected during AFRINIC 14 in Dar es Salaam (Tanzania) namely Paulos Nyirenda (2 years) and Timothy McGinnis (1 year).

The practice of providing “Staff comments and implementation analyses” for all policy proposals was initiated. These reports are produced by AFRINIC staff who give an analysis of potential impact of the proposal to other existing policies, the Whois database, financial and legal implications as well as timeframes for staff implementation. Starting in 2011, these reports were also presented to the community prior to policy debates. This gives the attendees a better context for discussing policy proposals.



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At the AFRINIC Meeting in Yaounde, Cameroon, we presented issues that were still outstanding or needed clarification. Some of the issues and staff proposal were as follows:

The issues focused on the following: mechanisms for elections for choosing co-chairs, mechanism for the replacement of an incapacitated co-chair. For the mechanism for the Appeals and Recall Committee, the following process was developed:

- The complainant shall send their appeal in the form of an email to policy-submission [at] afrinic.net.
- The email must mention the names and email addresses of three people who support it.
- The AFRINIC policy liaison shall contact the supporters to verify their support for the appeal, and then send the appeal to the Board. The Board will appoint an Appeals Committee and give them the task of resolving the issue.

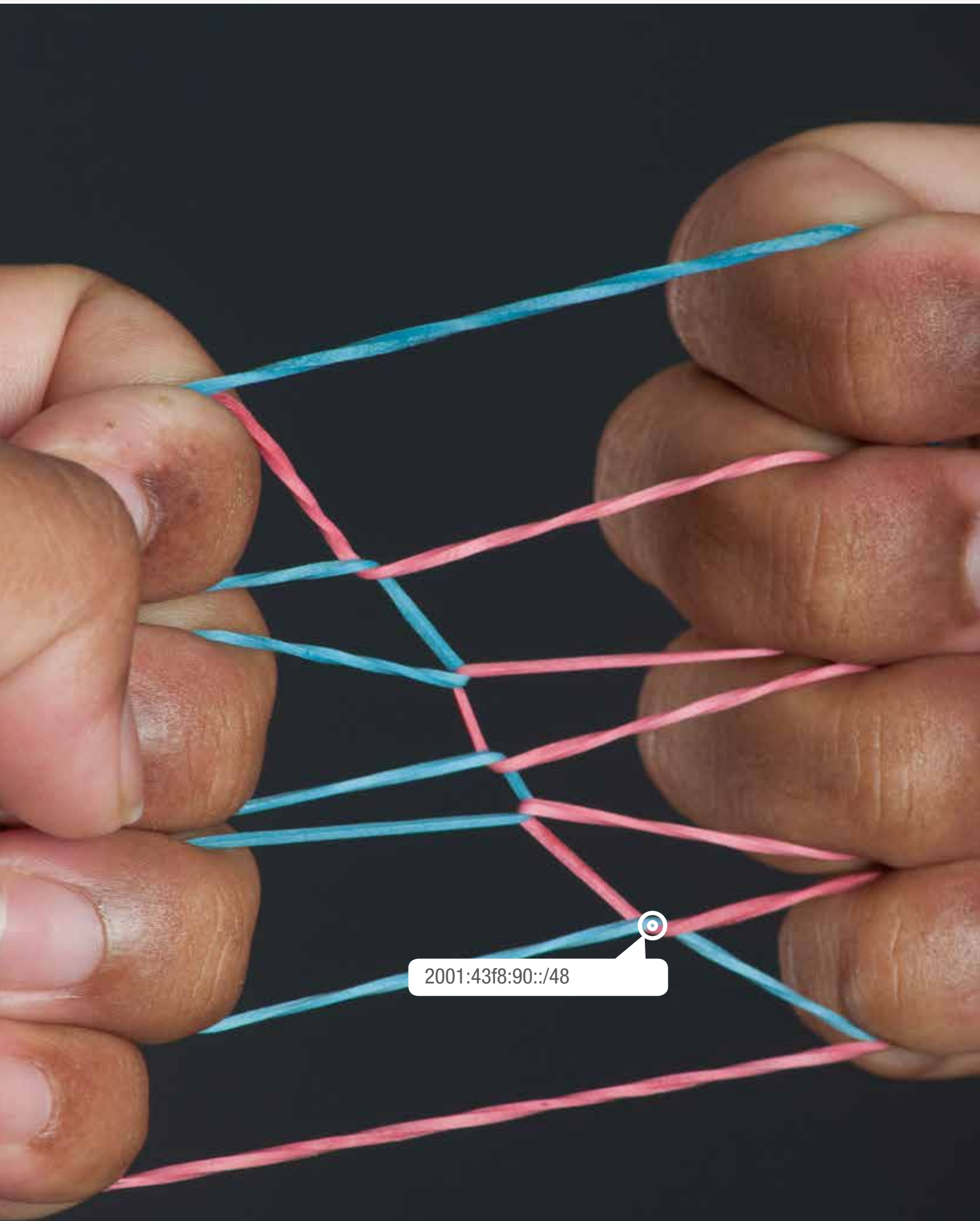
The term of the committee shall end once the issue has been resolved. They shall submit their final findings (including the proposal for a resolution) and the decision to the Board which is then published on the RPD mailing list.

On the issues of an even number of chairs and

effectiveness of consensus declaration for policy proposals, a set of guidelines was established to clarify how the current co-chairs carry out the work of the PDP.

A list of all policy discussion in 2011 can be accessed at:

<https://lists.AFRINIC.net/pipermail/rpd/2011/date.html>



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Technical Briefs

The Technical Operation Area is responsible for providing support through the management and maintenance of the key technical resources. It also offers overall support to the infrastructure of AFRINIC. In 2011, AFRINIC engaged in a number of technical projects with the aim of improving its services. AFRINIC was also involved in various projects aimed at improving the Internet infrastructure in Africa.

The members of the team are:



Nishal Goburdhan
Technical Operation Area Manager



Yogesh Chadee
Software Engineer



Ernest Byaruhanga
Registration Services Manager



Avinash Gokhool
Software Developer



Amreesh Phokeer
Software Engineer



Madhvi Gokhool
Senior IP Analyst



Duksh Koonjoobeeharry
Webmaster



Davina Armon
Member Service Liason Officer

RPKI project

AFRINIC launched and offered a RPKI system with basic features to be expanded over time in a phased deployment plan. Certification is offered through a hosted environment via the MyAFRINIC portal. Members will be able to sign Origin Authorizations (ROA) and view their certificates.

The system takes care of all the crypto operations such as certificate requests and renewals, re-keys and objects publication in the repository (rsync://rpki.afrinic.net).

Members require identity certificates issued through our Business Public Key Infrastructure (BPki) to access the resources certification sub-section.

In 2011, AFRINIC approved BKPI certificate requests from administrative contact (admin-c) who in return approved requests for other contacts of their organisation.

We focused our energies to the provision of high level services including maintaining our repository, fixing bugs and providing assistance to members.

Eighteen RPKI certificates were issued to members with twenty ROAs.

The RPKI services were presented to members at AFRINIC 14 and AFRINIC 15 meetings.

For more information on AFRINIC RPKI visit <http://www.afrinic.net/en/initiatives/resource-certification>

A large, abstract geometric graphic composed of various overlapping triangles in shades of green, teal, and yellow. The letters 'RPKI' are prominently displayed in a bold, dark grey font on a yellow triangular background in the lower-left quadrant.

RPKI

DNSSEC

DNSSEC

AFRINIC manages and publishes Reverse DNS (RDNS) zone data for the IP space we allocate or assign to members.

DNSSEC deployment at AFRINIC aims to:

- Sign these zones.
- Publish DS record in parent zones.
- Accept DS records from our members.

The technology allows the community to validate authoritative DNS data from AFRINIC's RDNS zones and members to publish DS records to build the chain of trust for their RDNS zones.

The plan in 2011 focused on evaluating and selection a proper platform to sign the AFRINIC reverse zones. In order to make DNSSEC operational, AFRINIC has to send the relevant Delegation Signer (DS) records to in-addr.arpa and ip6.arpa zones and at the same time publish DS records for the domain objects managed by our members. This will involve changes to the Reverse DNS provisioning system to enable members to their send DS records to AFRINIC for integration in the signed zones.

The focus of our activities has been to update the Whois database, MyAFRINIC portal and the RDNS provision system to support DS records on the domain object.

For more information visit:

<http://www.afrinic.net/en/initiatives/dnssec>

IETF Activities

AFRINIC is involved in IETF activities, mainly through the working groups which affect its role.

AFRINIC was represented at IETF 80 and IETF 81 this year. The meetings focus on, among other working groups, the 6man, v6ops, sidr, dnsex, dnsop and more.

During this reporting period, the following projects were undertaken:

- The architecture and deployment of the RPKI.
- The architecture and deployment of the DNSSEC.

AFRINIC DNS Programme

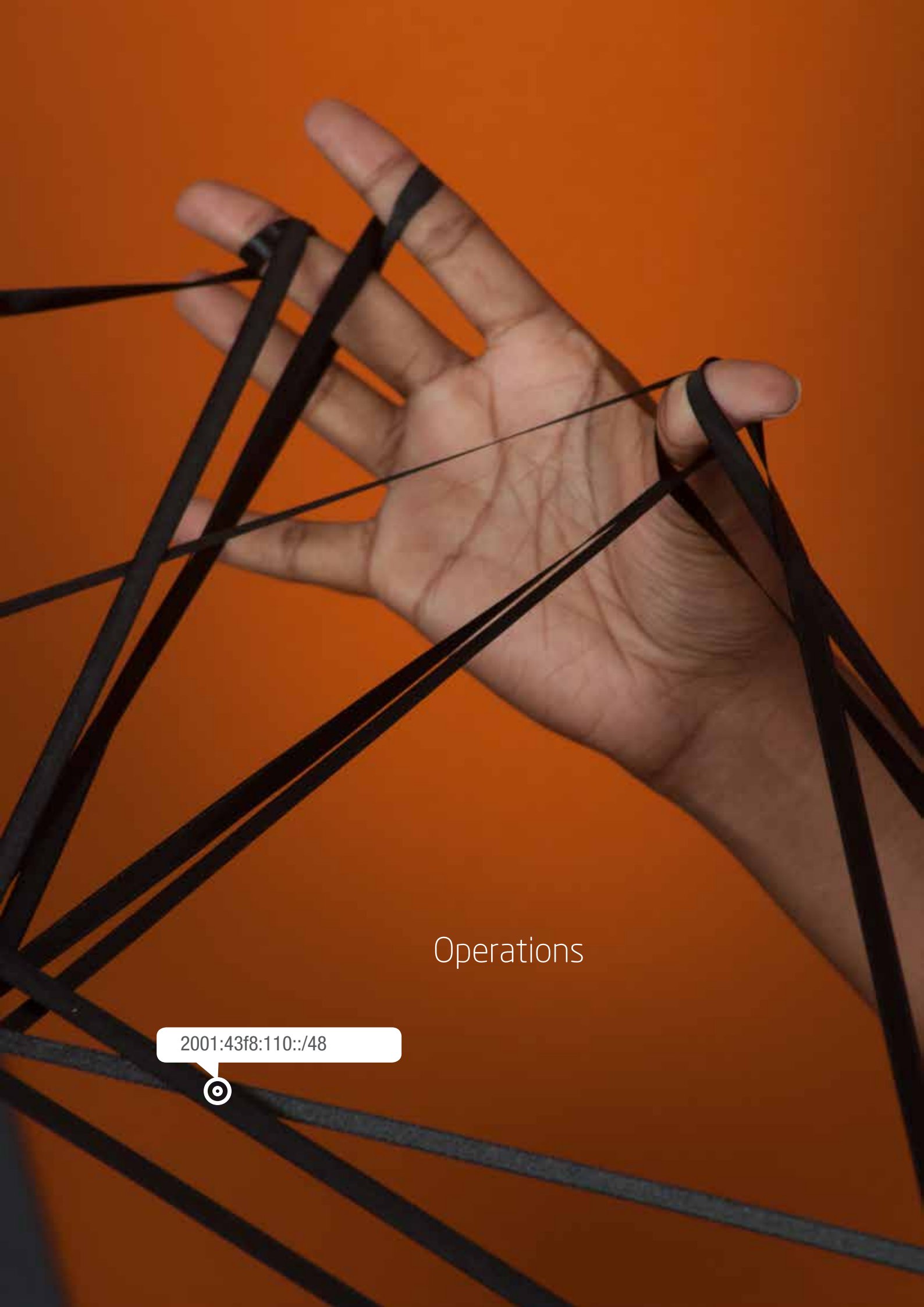
In 2011, AFRINIC operated three distinct DNS programmes for the African region as part of its commitment to improving Internet infrastructure. These are the African Root Server Copy (AfRSCP); the AFRINIC supported RFC5855 servers; and the African Critical Infrastructure DNS Support Programme (AfDSP)

The AfRSCP aims to support local Internet communities by facilitating Root Server Copies within local communities. In 2011, AFRINIC took a long term approach to this project, and spent a significant amount of time with its partners to help redefine the programme, and to build IXPs.

RFC5855 describes stable naming scheme for the nameservers that serve the IN-ADDR.ARPA and IP6.ARPA zones. AFRINIC supports the Internet community

by managing the “c” servers for this critical Internet service. Initially run out of our primary operating node in Johannesburg, the service is anycast enabled from day one, and immediately provides the African region with quick access to reverse DNS resolution. More important is the potential that AFRINIC has to extend this into our service region, which we aim to start doing in 2012.

The DNS Support programme is available to holders of Critical Internet Resources, and ccTLDs, to help bolster their infrastructure by providing free secondary/slave DNS services across our infrastructure. Started as an off-shoot of AFRINIC building its own resilient infrastructure, the project is targeted at helping African operators operate more resilient infrastructure, while, being able to bring more African infrastructure closer to Africans.



Operations

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Business Area

The Business Area is an important component 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, invoicing and membership fees collection.
- The production of monthly financial report, and the preparation of the annual financial statements.
- The Human Resources activities which include recruitment, training and general staff welfare activities.
- The front office service and all the Company travel arrangements.



Patrisse Deesse
Finance & Account Director



Clarel Seerungen
Accounting Assistant



Gavish Soobarah
Accountant



Verena Saydraouten
Travel Coordinator



Christelle Robette
Front Desk Assistant

Human Resources

The year 2011 saw the restructuring of AFRINIC. Solid foundations have been laid, key people recruited and the objectives for the coming year drawn.

However, in the midst of continuous change, AFRINIC is constantly improving in a bid to offer quality service to the African community. The Human Resources Department was created this year to consolidate the human resources required to advance AFRINIC's vision and mission. The department will be charged with responsibility of hiring, training, and retaining the workforce necessary to manage the affairs of the company.

The Human Resources Department caters for the corporate, departmental and individual needs of the company.

In 2011, emphasis was laid on the setting up a strong foundation to cater for the needs of our members. In addition, a new organisational structure better suited to address present and future needs of the members as well as the Company was designed. The team would also address issues relating to employee welfare besides creating a conducive environment to enhance team spirit, motivation and productivity. In 2011 a team building exercise was held in a bid to enhance AFRINIC team spirit. A training session on Emotional Intelligence for AFRINIC staff was also held.

We are in the process of actively planning for a new organisational structure better aligned to our members' needs. Several posts have been filled in this respect. In addition to a Human Resource and an Administrative Assistant, a Director of Human Resources and Administration was appointed.

Expatriates have now been offered contracts of indeterminate duration allowing them to obtain long

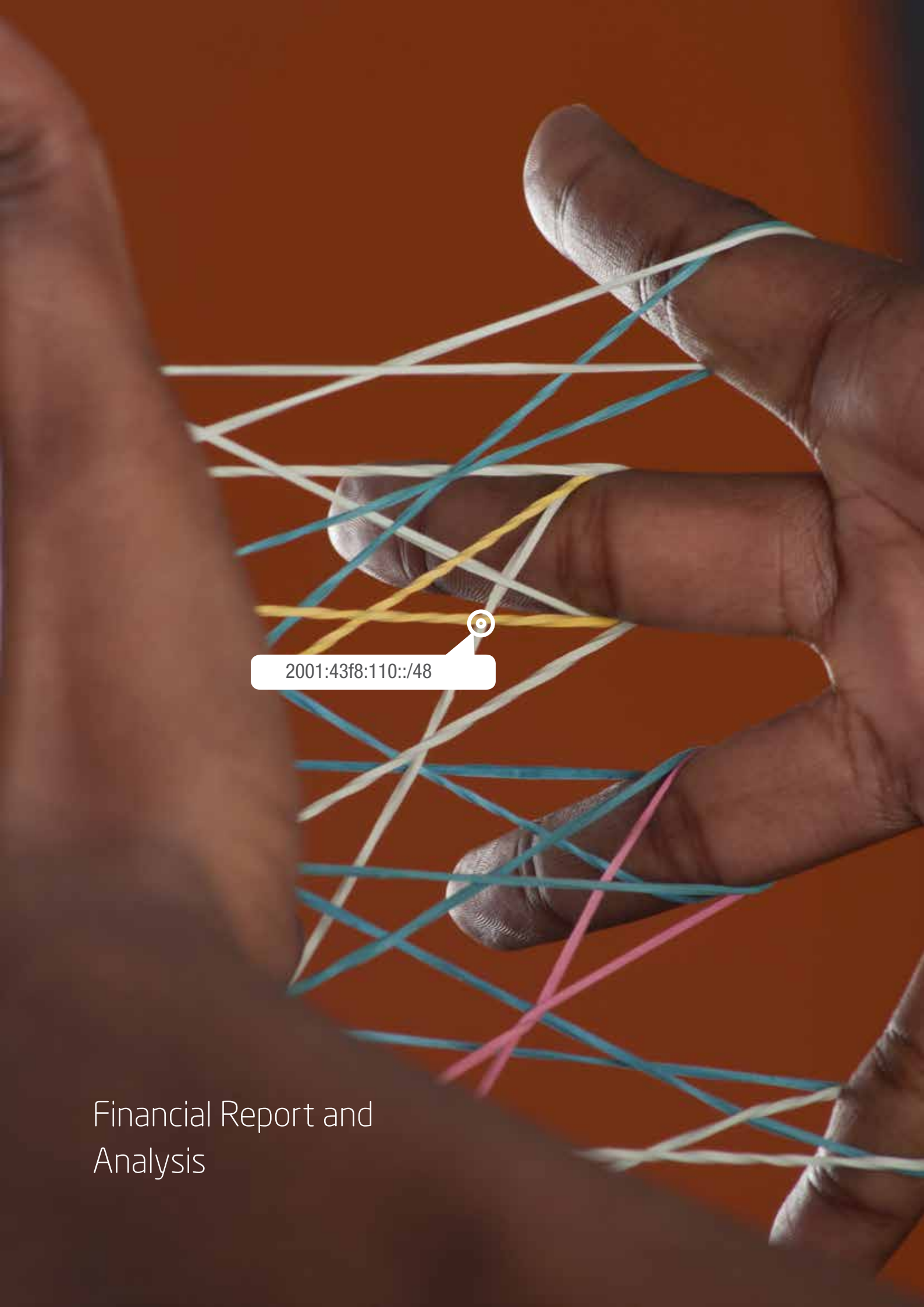
term contracts.

A comprehensive Travel Policy Manual was drawn to standardise the procedures pertaining to employees undertaking AFRINIC missions.

The following tasks have been identified as priority for 2012:

- To implement a performance management system
- To carry out a training needs assessment, plan and programme
- To carry out ISO Certification

The activities above will ensure that we continue developing a proper environment that will allow AFRINIC to better serve its members.



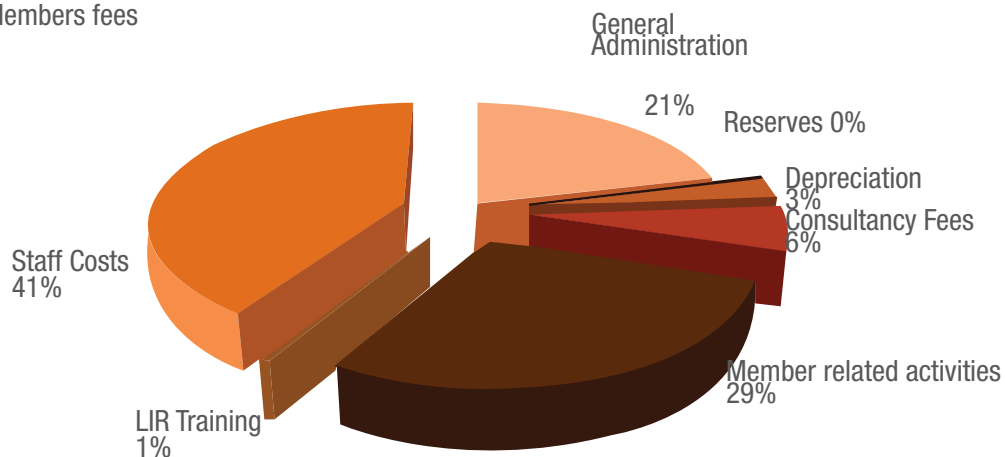
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Financial Report and
Analysis

Membership Fees Income

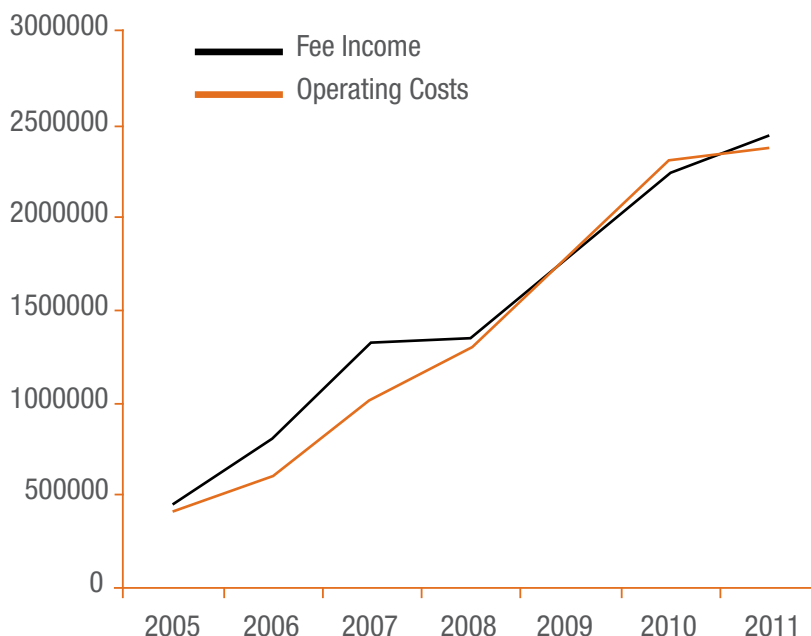
Membership fees income grew to US\$2,453,781 (from US\$2,258,867 in the year 2010) reflecting a modest growth of 9%. This growth trend is expected to be sustained well into the future as our region continues to adjust to the new world order triggered by international financial crises. In addition, 2011 was marked by a series of political and economic events across the continent. The approaching exhaustion of IPv4 will play a vital role in the growth of membership fees income in the coming years as existing members are increasing their resource holdings. Membership grew by 20%.

► Utilisation of Members fees



Operating Costs

Operating costs increased by 2.9% from last year, from US\$2,321,408 to US\$2,389,663. This marginal increase is a direct result of effective cost control and strict spending discipline, most specifically in areas like travelling and meeting expenses (down 16% over 2010). This cost control culture has been adopted and will continue to be applied in our operations in future years without compromising service and quality levels.



Financial Report and Analysis

The Bottom Line

Surplus for the year was US\$3,822 (2010 US\$ 39,348). Our bottom line result was negatively affected by the unfavourable exchange variance for the year due to the movement in the US Dollar vis-a-vis the Mauritian Rupee. Consequently, our reserves grew marginally from US\$1,427,290 in 2010 to US\$1,431,112 in 2011. During the year under review, US\$48,958 (2010 US\$346,203) was spent on infrastructure. However, Capital investment is expected to be accelerated in the coming years as we continue the ongoing tech refresh and improvements to our redundancy plan in addition to the delivery of projects to enhance our services to the community.

Prospects

Consolidation of our Human Resources was a priority in 2011. A revised organisational structure was approved and effected. Recruitments to fill new positions were started and are expected to be completed by the first half of 2012. The focus in the coming years will be to increase membership and further improve services which will have a positive impact on our financial position. In our pursuit of excellence, we are seeking to obtain an ISO 9001:2008 certification.

	2011	2010	2009	2008
Fee Income	2,453,781	2,258,867	1,754,902	1,365,891
Grants & Sponsorships	56,653	129,388	151,989	63,971
Total Operating Expenses	2,389,663	2,321,408	1,767,422	1,311,707
Finance (Income) and Other Costs	116,949	27,500	125,312	-174,271
Surplus (Deficit) for the year	3,822	39,348	14,157	292,426
Total Reserves at end of year	1,431,112	1,427,290	1,387,942	1,373,345
Reinvestment in infrastructure	48,958	346,203	29,827	34,230

Note : Figures in US\$

Statement of Assets and Liabilities, Year Ended 31 December 2011

Financial Summary

	Year Ended 31 December 2011		Year Ended 31 December 2010	
<i>Assets</i>				
	MUR	US\$	MUR	US\$
NON-CURRENT ASSETS				
Plant and equipment	9,753,838	325,128	10,271,310	342,277
Intangible Assets	67,995	2,267	115,053	3,835
	9,821,833	327,394	10,386,363	346,212
CURRENT ASSETS				
Trade and other receivables	11,093,048	369,768	6,179,008	205,967
Bank Deposits	18,071,440	602,381	18,283,500	609,450
Cash and cash equivalents	14,678,626	489,288	22,085,572	736,186
	43,843,114	1,461,437	46,548,080	1,551,603
	53,664,947	1,788,832	56,934,443	1,897,815

Reserves and Liabilities

Revenue reserves	3,239,601	107,987	3,124,943	104,165
Other reserves	39,693,750	1,323,125	39,693,750	1,323,125
Grant	0	0	593,708	19,790
TOTAL ASSETS ATTRIBUTABLE TO MEMBERS	42,933,351	1,431,112	43,412,401	1,447,080
CURRENT LIABILITIES				
Trade and other payables	10,731,596	357,720	13,522,042	450,735
Total liabilities	10,731,596	357,720	13,522,042	450,735
TOTAL RESERVE AND LIABILITIES	53,664,947	1,788,832	56,934,443	1,897,815

Financial Report and Analysis

Surplus And Loss Statement - Year Ended 31 December 2011 - Annex (USD comparatives)

	Year Ended 31 December 2011		Year Ended 31 December 2010	
	MUR	US\$	MUR	US\$
INCOME				
Membership fees	76,613,420	2,453,781	67,766,020	2,258,867
Grants	1,699,604	56,653	3,881,652	129,388
	75,313,024	2,510,434	71,647,672	2,388,256
ADMINISTRATIVE EXPENSES				
Human Resources	(30,691,652)	(1,023,055)	(25,123,947)	(837,465)
Telephone & Communications	(2,251,744)	(75,058)	(2,138,358)	(71,279)
Computer expenses	(324,719)	(10,824)	(133,649)	(4,455)
Office expenses	(7,822,140)	(260,738)	(4,706,114)	(156,870)
Motor Vehicles expenses	(154,278)	(5,143)	(276,785)	(9,226)
Insurances	(165,119)	(5,504)	(158,268)	(5,276)
Printing, postage & stationery	(590,442)	(19,681)	(782,832)	(26,094)
Bank charges	(587,138)	(19,571)	(769,424)	(25,647)
Audit fees	(386,478)	(12,883)	(120,000)	(4,000)
Depreciation	(2,033,255)	(67,775)	(2,224,819)	(74,161)
Legal & Consulting fees	(4,421,402)	(147,380)	(2,916,568)	(97,219)
SA Operations			(3,803,524)	(126,784)
LIR Training	(504,086)	(16,803)	(949,760)	(31,659)
Total Administration Expenses	(49,932,454)	(1,664,415)	(44,104,058)	(1,470,135)
DISTRIBUTION EXPENSES				
Advertising expenses	(1,350,525)	(45,018)	(1,081,149)	(36,038)
Bad debts	(767,259)	(25,575)	(1,947,529)	(64,918)
Meeting and seminars expenses	(5,956,738)	(198,558)	(5,672,197)	(189,073)
Contribution & Sponsorship	(2,055,735)	(68,524)	(1,608,720)	(53,624)
Travelling expenses	(11,627,182)	(387,573)	(15,228,576)	(507,619)
Total Distribution Expenses	(21,757,438)	(725,248)	(25,538,171)	(851,272)
Total Operating expenses	(71,689,893)	(2,389,663)	(69,642,229)	(2,321,408)
OTHER INCOME/EXPENSES				
Interest income	(597,919)	(19,931)	(246,825)	(8,228)
Exchange (Loss)/Gain	(4,956,137)	(165,205)	(1,071,839)	(35,728)
Other (Costs)/income	(849,744)	(28,325)		
Total Other Income/Expenses	(3,508,474)	(116,949)	(825,014)	(27,500)
Surplus for the period	114,657	3,822	1,180,429	39,348



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 the African Network Information Centre (AFRINIC) Ltd (the "Company") on pages 5 to 21 which comprise the statement of financial position as at December 31, 2011 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 Standard 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 equipment and plan and perform the audit to obtain reasonable assurance whether the financial statement 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' judgment, 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 the 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 21 give a true and fair view of the financial position of the Company as at December 31, 2011 and of its financial performance and cash flows for the year then ended in accordance with International Financial Reporting Standards and comply with the Companies Act 2001.

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.



INDEPENDENT AUDITORS' REPORT TO THE MEMBERS OF AFRICAN NETWORK INFORMATION CENTRE (AFRINIC) Ltd. (CONTINUED)

Report on Other Legal and Regulatory Requirements

Companies Act 2001.

We have no relationship with or interests in the Company other than in our capacity as auditor and dealings 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.

A handwritten signature in blue ink, appearing to read 'Ernest & Young'.

ERNEST & YOUNG
Ebene, Mauritius

A handwritten signature in blue ink, appearing to read 'Li Kune Lan Pookim'.

LI KUNE LAN POOKIM, A.C.A, F.C.C.A
Licensed by FRC

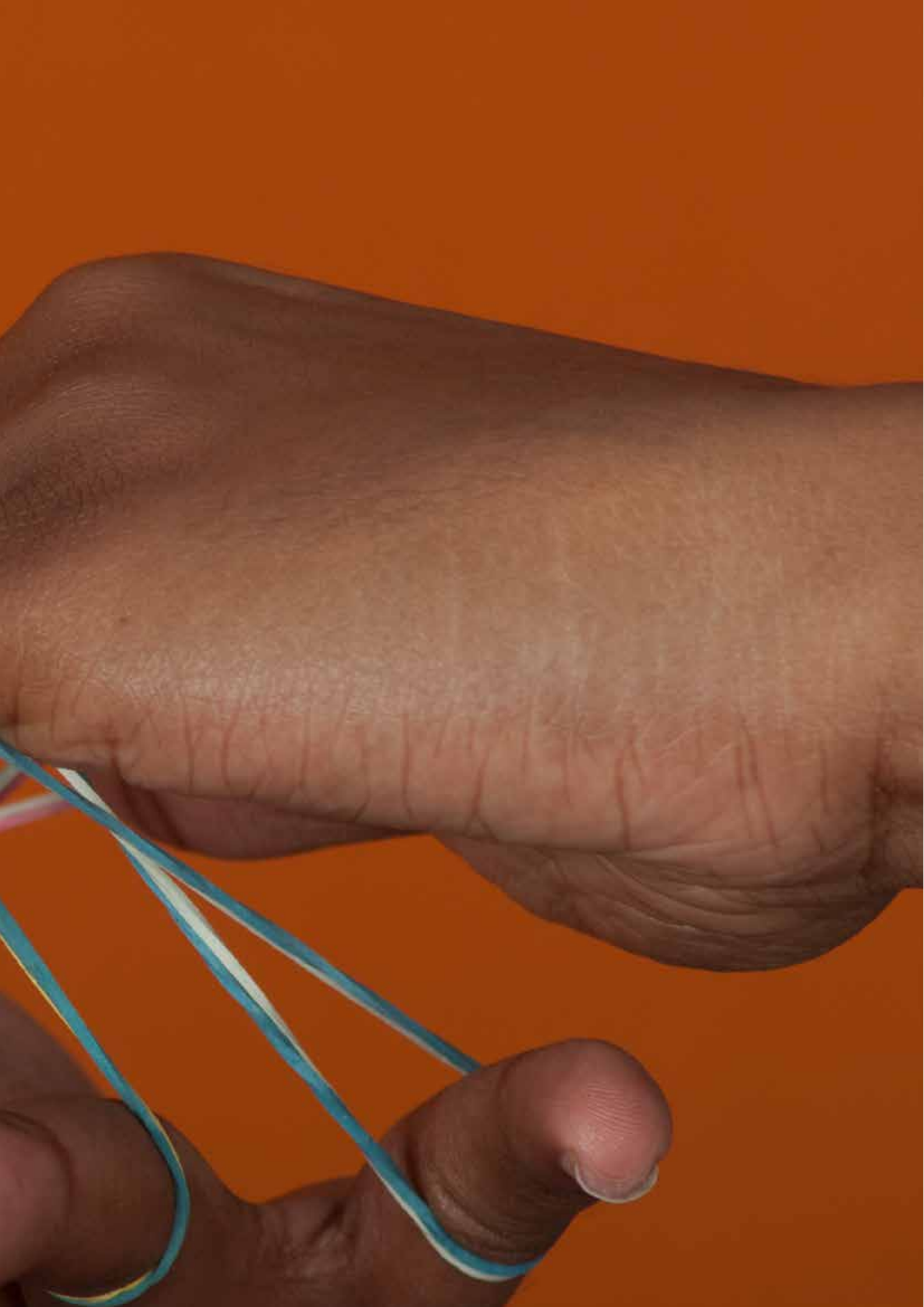
Date: 29 JUN 2012

Message of Thanks

AFRINIC wishes to sincerely thank organisations that contributed, as sponsors and local hosts, to the success of its meetings in 2011. We wish to recognise the following organisations for their invaluable support: Internet Society (ISOC), Cameroon Telecommunications (CAMTEL), MTN Cameroon, Ringo (Cameroon), National Microfinance Bank (NMB, Tanzania), Simbanet (Tanzania), Tanzanian Network Information Centre (.tznict), Tanzania Revenue Authority (TRA), Tanzania Telecommunications Regulatory Authority (TCRA), White Sands Hotel (Tanzania) and Zantel (Tanzania).



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Acronyms

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 Régulations 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
ECG	Engineering Coordination Group
IANA	Internet Assigned Number Authority
ICANN	Internet Corporation for Assigned Names and Numbers
IETF	Internet Engineering Task Force
IGF	Internet Governance Forum
IP	Internet Protocol
IPv6	Internet Protocol version 4
IPv4	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
OCF	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



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