



AfriNIC-14 Meeting Report,
Dar es Salaam, Tanzania,
4-10 June 2011

Executive summary

The AfriNIC-14 Public Policy Meeting was held jointly with AfNOG-12 from the 29th of May to the 10th of June 2011 in Dar es Salaam, Tanzania. The AFNOG/AfriNIC trainings were held at the White Sands Hotel from the 29th May to the 6th June 2011, while the AfNOG plenary session took place on the 7th of June 2011. The AfriNIC plenary sessions was held on the 8th and 9th June 2011 at the Kunduchi Beach Hotel.

The event was co-hosted by both the Tanzanian Communications Regulatory Authority (TCRA) and the .tz registry (tzNIC) and sponsored by Internet Society (ISOC), the Tanzanian Ministry of Communications, Science & Technology (MCST), Tanzania Revenue Authority (TRA), the National Micro-finance Bank (NMB), CRDB Bank, Simbanet, WIA and Zantel. It was attended by over 200 participants from 51 countries (39 from African countries), with 53% being first time participants. The majority of the attendees were from the Education, Internet Services and Government sectors.

During this meeting, there were three (3) days of technical training attended by over 40 participants, two days of plenary sessions and a single day of close government working group discussions. Six (6) policy proposals were discussed with two (2) reaching consensus and four (4) not reaching consensus.

Elections were held for four (4) open board positions and two (2) policy development working group co-chairs.

The main themes of the AfriNIC-14 plenary sessions were: IPv6 deployment; Interconnecting Africa and Cyber Security.

The meeting was followed by a one-day closed governmental meeting, the African Governmental Working Group (10th of June), where governmental officials met and discussed on the role they can play to address issues which were raised during the meeting.

1.0 Training sessions

Prior to the plenary, three (3) days of training were held, with a one-day of Internet Resource Management (IRM) and a two-day IPv6 hands-on workshop which were attended by over 40 participants.

The Internet Resources Management training is aimed at potential and new members and covers the following topics:

- Understanding Internet number resources and how they are managed.
- Introduction to AfrinIC and its services/activities.
- Number resource policies in Africa and the AfrinIC Policy Development Process.
- IPv4 depletion - facts, timelines and implications.
- IP address planning.
- Interacting with AfrinIC and the Whois Database.

The IPv6 workshop is aimed towards network engineers and system administrators who can already build and run IPv4 networks. The workshop built upon this knowledge to introduce concepts and practices in planning and building IPv6 networks. The two-day workshop covered the following topics:

- IPv4 exhaustion and the case for IPv6 ["Why a new IP?"].
- Why NAT is not a sustainable solution to IPv4 exhaustion.
- Understanding IPv6 addressing.
- IPv6 address planning.
- Fundamentals of routing in IPv6.
- Transition mechanisms.

It was also accompanied by hands on practice on live routing equipment.

2.0 Plenary sessions

2.1 Opening address

Dr. Viv Padayatchy, Chairman of AfrinIC's Board of Directors and Alain Aina, Acting CEO of AfrinIC welcomed the Director General of the TCRA, Professor John Nkoma and the Permanent Secretary, Ministry of Communications, Science and Technology Dr. Florens Turuka who delivered the keynote address.

Professor John Nkoma expressed the support of the Tanzanian government to AfrinIC's continuous efforts to best serve the interests of the African Community especially with regards to IPv6 deployment and encouraged the community to start taking measures to accomplish better African accessibility and building more secure and resilient networks.

Dr. Florens Turuka conveyed his personal satisfaction with respect to the issues that would be debated during the meeting and stated their benefits for the region.

AfrinIC's Acting CEO, Alain Aina then gave a briefing on AfrinIC's structure, its role in the community and a quick update on the accomplishments of the various areas in the organisation since AfrinIC-13.

Following Alain Aina's presentation, AfrinIC's Registration Service Manager Ernest Byaruhanga gave a presentation on the consumption rates of Internet resources (IPv4, IPv6 and ASNs) in Africa.

2.2 IPv6 panel

Day one of AfriNIC's plenary meeting coincided with the global IPv6 Day, the meeting network was IPv6-enabled and the meeting attendees were given a chance to participate and test reachability to the participating content providers.

A panel of experts, that have been working on several major networks all over Africa and the world, came together to share their experience, best practices, key hurdles and know-how in an open discussion that was moderated by Hisham Ibrahim, AfriNIC's IPv6 program manager. The panel consisted of Michuki Mwangi of Internet Society (ISOC), Andrew Alston from South Africa's Tertiary Education and research Network (TENET), Frank Habicht of Simbanet, Tanzania, Phil Smith from Cisco and Mark Tinka from Global Transit International.

At the end of the session, a show of hands by the attendees acknowledged the importance of adopting and deploying IPv6 rapidly. However few of the attendees had actually enabled IPv6 on their networks.

2.3 Interconnecting Africa panel

Chaired by Professor Nii Quaynor, the purpose of this panel was to give an overview of Interconnection in Africa and how well the region's connections are being improved. This panel consisted of Nishal Goburdhan of AfriNIC, Bill Woodcock of Packet Clearing House and Daren Bedford of Gateway Communications.

Nishal Goburdhan, Technical Area Manager, AfriNIC gave an overview of all the critical Internet infrastructure that AfriNIC was involved with for the past year. He stressed that AfriNIC's technical team was available to help assist anyone in the community, to set up their networks and supporting critical infrastructure.

During his presentation three main points were raised:

1) African Root Server Copy Program: AfriNIC has partnered with three (3) root server operators so that any African Internet Exchange Point can contact AfriNIC for a copy of the DNS root in their country.

2) African ccTLD support: AfriNIC sent an open invitation to all African ccTLD operators to host a secondary service for their DNS, free of charge. This will improve the resilience of African ccTLDs.

3) AfDSP – RFC 5885: The third topic for discussion was AfriNIC's support for the in-addr.arpa and ip6.arpa zones. This improves access to local content as well as resiliency of the Internet infrastructure.

Bill Woodcock, Research Director, Packet Clearing House gave an overview of Internet Exchange Points and Internet growth, as well as statistics regarding interfaces, data from a peering survey carried out by Packet Clearing House. A 115% annual growth in the deployment of new interface speeds at Exchange Points around the world was noted starting from around 1970.

His presentation also revealed that worldwide, half of all countries still have no IXP while others have dozens, with more than 1/3 of all the IXP located in Europe.

Finally Darren Bedford, Product Manager, Gateway Communications in his presentation titled “A framework of interconnection” gave an overview on the difficulties of connecting fibre in the African region and two case studies where Gateway Communications set up fibre circuits and the challenges faced in doing so. These challenges were:

- The absence of policies for interconnecting land lock countries.
- A controversial business model especially regarding access and browsing.
- Governments operating in a monopolistic model.
- Non disclosure terms in consortium agreements in interconnects.
- No transparency in pricing.

2.4 Cyber security panel

This panel, chaired by Alan Barrett, consisted of Benoit Morel, Bill Woodcock, Mark Elkins and Alain Aina.

Benoit Morel, talked about recent forms of attacks namely Aurora, Stuxnet, Ghostnet, Conficker, each crossing a new threshold in attack capability which were turning web application security into a potential real nightmare. This was going to be exacerbated by the proliferation of wireless technologies, smartphones and tablets.

Alain Aina gave an overview of AfriNIC’s RPKI system, its benefits and a status of the deployment stages according to the NRO roadmap.

He stated that AfriNIC had completed Phases 1 (pilot implementation) and 2 (initial production). Phases 3 (global consistency) and 4 (single trust anchor) can be done simultaneously as recommended by IANA. Phase 3 will try to run an inter-RIR deployment with recommendations that all RIR should have an UP-DOWN protocol setup. As for Phase 4 which is the Single Trust Anchor, all RIR will need to trust one single anchor from IANA.

Bill Woodcock gave a presentation on DNSSEC Signing Platform for ccTLDs and Critical Infrastructure. In his presentation, he provided an overview of DNSSEC, with detailed technical and policy discussions of the root implementations, and the information users would need to begin becoming DNSSEC compliant themselves. This presentation was followed by another presentation on DNSSEC and Reverse DNS zones by Mark Elkins.

2.5 Policy development process

A. PDWG co-chair elections

Nomcom introduced the election process beginning with the open positions PDWG co-chairs positions and the terms. It was declared that only two nominations were received for the PDWG co-chair seats and these were:

- *Timothy McGinnis
- *Dr Paulos Nyirenda

Thereafter, one of the nominee's (Timothy McGinnis') recorded presentation was projected to the audience. In his video presentation, Timothy McGinnis expressed his hope that Paulos Nyirenda be chosen for the two-year seat.

In the absence of Dr Paulos Nyirenda, the Nomcom chair proceeded to announce the results of the election, with Dr Nyirenda for 2 year term and Timothy McGinnis serving the one (1)-year term.

However the community objected to the process and stated that elections must be held, even if it were just a show of hands.

The Nomcom asked whether the community had any objections to the two candidates and there was no objection (i.e. no show of hands). Then the Nomcom called for a show of hands to support Paulos Nyirenda for two (2) years and Timothy McGinnis for one (1) year. There was no opposition to this motion. As such the Nomcom declared the final outcome as follows:

Dr Paulos Nyirenda serves for two (2) years while Timothy McGinnis serves 1 year as co-chairs.

B. Report on recently approved policies

The policy discussions were co-chaired by Alan Barrett and S. Moonesamy

The Chairs declared that since AF-13, four proposals were discussed :

****Abuse Contact Information:** Reached consensus at the meeting and during the Last Call on mailing list. Currently waiting for Board ratification.

****Real Contact Information :** There was no consensus at AF-13 and there has been no mailing list discussion. While it is formally still open for discussion, the author has informally indicated that he would like to withdraw the proposal.

****IPv4 Soft Landing:** Reached consensus with a few changes at AF-13 but failed to reach consensus during the Last Call on the mailing lists.

****Global Policy for Allocation of IPv4 Space by IANA Post-Exhaustion:** Did not reach consensus at the AF-13 meeting. In the absence of the authors, Alan Barrett presented this proposal based on the presentation for this proposal that was done at AF-13.

2.51 Policy discussions

Policy Name	Outcome
1. Global Policy for Post Exhaustion IPv4 Allocation Mechanisms by the IANA (AFPUB-2011-v4-004-draft-01)	Consensus reached - to progress to Last Call
2. Limited Out of Region Allocation of IPv4 Resources (AFPUB-2011-v4-003-draft-02)	Proposal withdrawn
3. Addition of Real Contact Email into ASN Whois Bulk Data	No consensus
4 IPv4 Soft Landing Policy (AFPUB-2010-v4-005-draft-04)	Consensus reached to progress to Last Call but subject to changes
5. Transfer of IPv4 Addresses to Any Entity (AFPUB-2011-v4-001-draft-01)	No consensus
6. Reclamation of Allocated but Un-routed IPv4 Addresses (AFPUB-2011-v4-002-draft-01)	No consensus

1. Global Policy for Post Exhaustion IPv4 Allocation Mechanisms by the IANA (AFPUB-2011-v4-004-draft-01)

Presented by one of the authors, Philip Smith, who stated that the proposal addresses the lack of a policy to guide IANA on what to do with any blocks of addresses that may come under its possession after IPv4 exhaustion. He said this proposal is an improvement over the “Global Policy for IPv4 Allocations by the IANA Post Exhaustion” proposal <<http://www.afrinic.net/docs/policies/AFPUB-2010-v4-003-draft-02.htm>> because it does NOT mandate any returns of IPv4 space to IANA, and does not deal with any issues of transfer. He also reported that it has been endorsed at APNIC, had completed Last Call at RIPE, is in Last Call at LACNIC, and is under discussion at ARIN.

S. Moonesamy excused himself from the consensus evaluation for this proposal (on the grounds that he is a co-author) and it was up to Alan Barrett alone who evaluated and declared consensus. The next step was for it go to Last Call.

2. Limited Out of Region Allocation of IPv4 Resources (AFPUB-2011-v4-003-draft-02)

Presented by Andrew Alston who called everyone to speak up for or against the proposal as he sensed too much apathy in the community. The proposal essentially wants out of region parties to get address from one /8 of AfrinIC space and that these members be charged a premium for it.

The author said that he does not believe that we can stop foreign entities plundering African resources but we might as well benefit from it. He said that foreign entities currently can already acquire AfrinIC space through holding companies in Africa and use them anywhere as they see fit anywhere. This proposal simply introduces a penalty fee for what is currently the status-quo. The author believes that any funds thus acquired can be used to fund development of IPv6. The author clarified he was not proposing AfrinIC sell space, it continues to

be a penalty membership fees and such allocations will continue to be managed like other resources.

After a heated debate amongst the community, the co-chairs evaluated consensus and announced that there was no consensus and said the author could either withdraw the proposal or modify it and send it back to the mailing list for discussion.

In a closing statement, Andrew remarked that this proposal succeeded in motivating Africans to stand up and speak passionately about African resources, as opposed to about four (4) African comments on the mailing list. He said that one foreigner currently accounts for 17% of posts to the mailing list and that is not good. He would like the community to transfer the passion shown here to the mailing lists so that foreign entities do not steal our policy process because of lack of participation. While acknowledging that the proposal was controversial, he said it has succeeded in stirring Africans up and hoped that the folks who commented here should also post on the mailing list. He officially withdrew the proposal and challenged the community to think about what the controversy achieved.

3. Addition of Real Contact Email into ASN Whois Bulk Data

<<http://www.afrinic.net/docs/policies/AF PUB-2010-GEN-007.htm>>

The co-chairs reported that the author of the proposal wants to withdraw the proposal and then opened the microphone for anyone who had read the proposal and wants to discuss it.

As no one made any comments, the co-chairs asked if any one supported or objected to the proposal as written. In the absence of any comments from the community, the co-chairs declared that there was no consensus.

4. IPv4 Soft Landing Policy (AF PUB-2010-v4-005-draft-04)

Frank Habicht presented the proposal on behalf of the author (Douglas Onyango) who was unable to make it to Dar es Salaam. This proposal calls for a change in the assignment and allocation criteria used when AfriNIC starts making allocations from the Final /8 as follows:

Exhaustion Phase 1 during which allocation/assignment will continue as in the Current phase (/24 for a EU and /22 for a LIR) but the maximum will change from /10 to /13.

Exhaustion Phase 2 starts when no more than a /11 of non-reserved space is available in the Final /8, and during this phase a minimum allocation/assignment size will be /24, and the maximum will be /22 per allocation/assignment.

For each allocation or assignment made during the Exhaustion Phase, no more than 10% of these resources may be used outside of the AfriNIC region, and any use outside the AfriNIC region shall be solely in support of connectivity back to the AfriNIC region. This still remains the main thorny issue which was responsible for the proposal not succeeding in Last Call on the mailing list.

Based on the several arguments made around this policy the co-chairs suggested a number of options to reach consensus on it and called for a show of hands (both for and against) each of these options and based upon that, the co-chairs declared that:

Option (D): No number, just a statement “AfriNIC resources are for the AfriNIC geographical region and any use outside should be solely in support for connectivity back to the region.”

And option (E): Internet resources allocated by AfriNIC may be used solely within the AfriNIC region or to support connectivity back to the region

had consensus but the others did not. The co-chairs further called for a show of hands to choose between these two options. There was more support (show of hands) for option (D) but with “geographic region” changed into “service region”.

5. Transfer of IPv4 Addresses to Any Entity (AFPUB-2011-v4-001-draft-01)

In the absence of the author, Mukom Akong from AfriNIC presented the proposal whose objective is to provide a legitimate way for ISPs to acquire IPv4 addresses from existing AfriNIC members (legacy or not) who wish to give away some addresses (with some consideration or otherwise).

The proposal has generally been rejected on the mailing list based on the fact that:

- the current IPv4 allocations policy requires transferred space to be registered;
- the proposal violates principle of needs-based allocation;
- it provides ability for v4 space to be stripped from Africa for short-term monetary gains.

Arturo Servin from LACNIC clarified that Transfer policy at LACNIC was different as the LACNIC one was needs-based, the transfer must be approved by LACNIC and an agreement must be signed with LACNIC. All the other commenters opposed the proposal and there was no support for it and when the co-chairs explicitly asked for a show of hands for those who support it.

The chairs declared that there was no consensus

6. Reclamation of Allocated but Un-routed IPv4 Addresses (AFPUB-2011-v4-002-draft-01)

In the absence of the author, Mukom Akong from AfriNIC presented the proposal whose objective is to reclaim free allocated but un-routed IPv4 space so that it can be issued to the ISPs that have a real use for it.

The proposal was generally opposed on the mailing lists for the following reasons viz, there are valid reasons for prefixes not appearing in routing table, and visibility in routing table does not mean it is being used.

All comments from the floor expressed their opposition to the proposal.

The co-chairs declared that there was no consensus.

C. AoB/Open Mic

Andrew Alston questioned the process to change the PDP to allow for outright rejection of a proposal. Alan Barrett replied that in order to change the process of policy development, the new suggestions should be proposed through the existing process. Andrew Alston said he would be making a proposal soon to that effect.

The policy discussions were declared closed by the co-chairs.

2.6 Social event

The social event was held at the Movenpick Hotel in Dar es Salaam. The attendees got to experience some of the local culture and cuisines and engaged together in song and dance wearing the “Shukas”, the traditional dress of the Masai warriors.

2.7 Board election

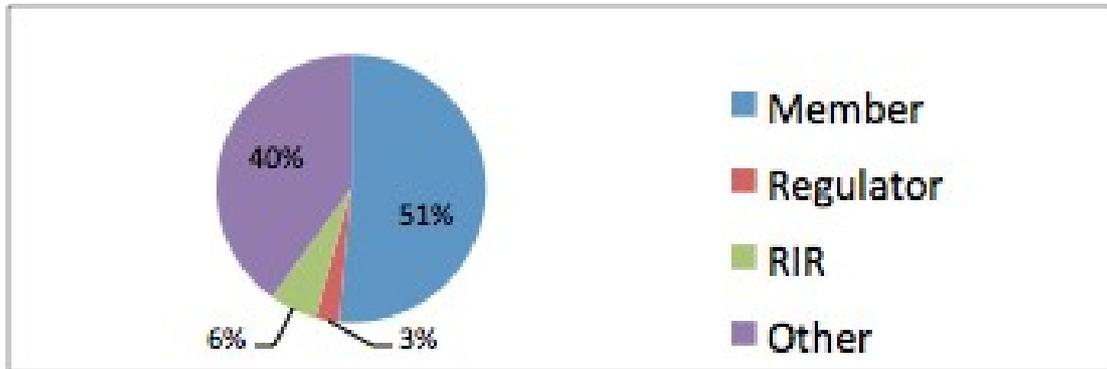
The Board election was held during the AfrinIC-14 Public Policy Meeting on 09 June 2011, for the seats of the Indian Ocean and Central Africa regions, the results were as follows:

Indian Ocean Region	
Primary	Lala Andriamampianina
Alternate	Krishna Seeburn
Central Africa Region	
Primary	Janvier Ngnoulaye
Alternate	Christian Bope

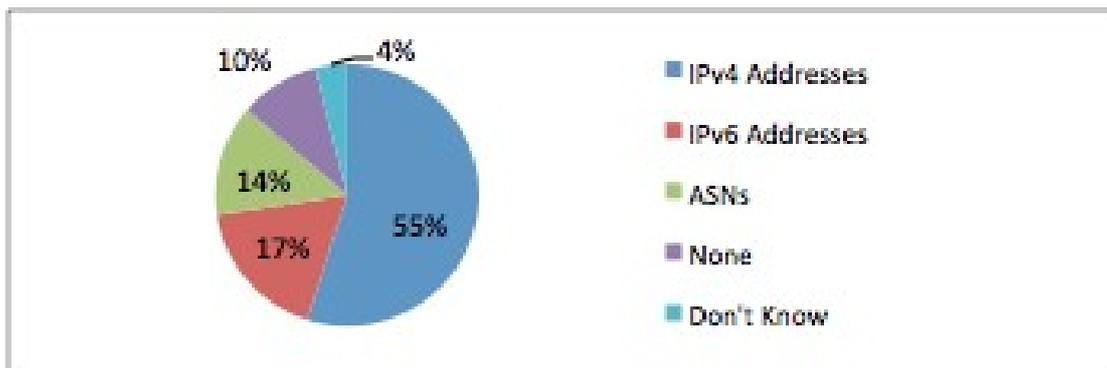
2.8 Participants feedback

The following graphs are based on the results of the feedback forms that were distributed during the meeting.

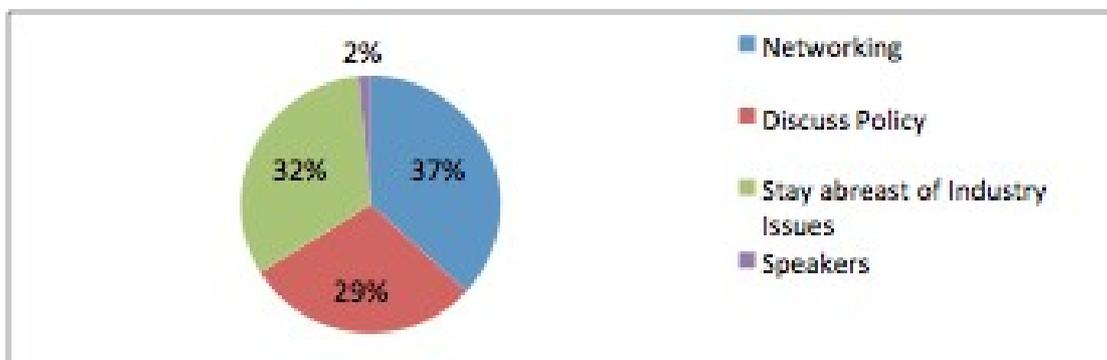
1. What is your affiliation with AfrinIC?



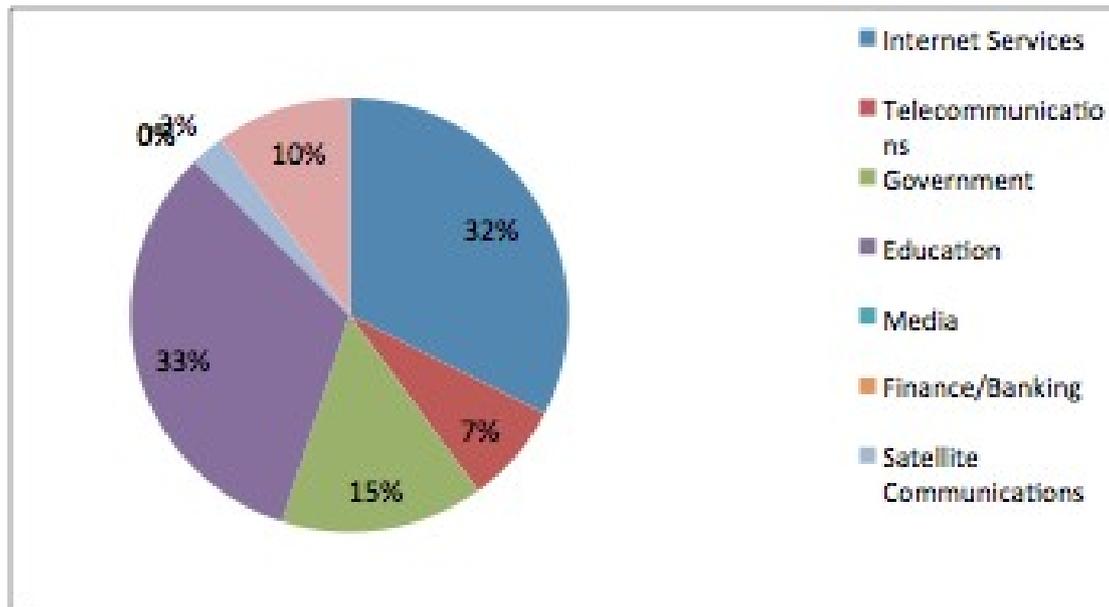
2. What are the AfrinIC resources currently being used by your organisation?



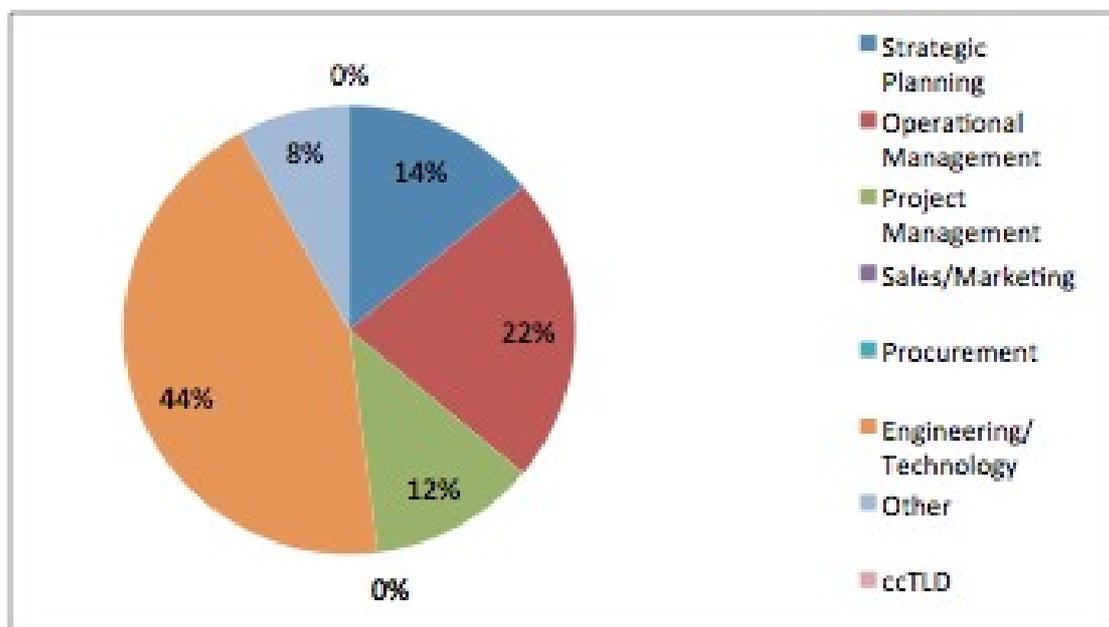
3. What is the reason for attending AfrinIC-14?



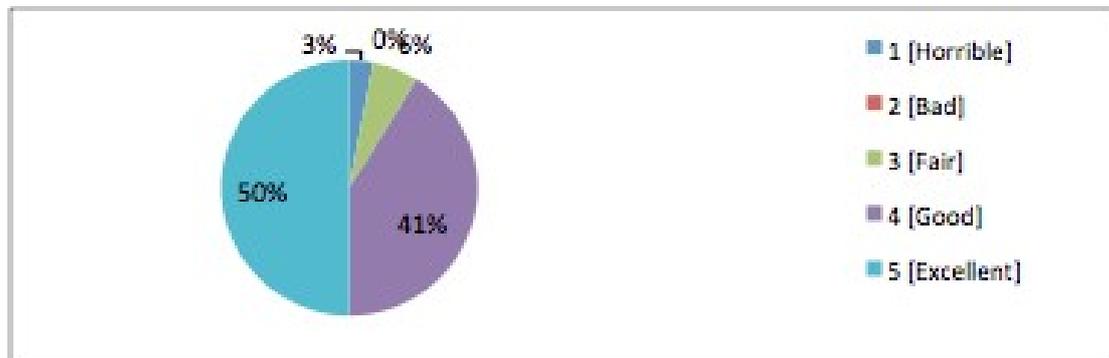
4. What is your primary Industry?



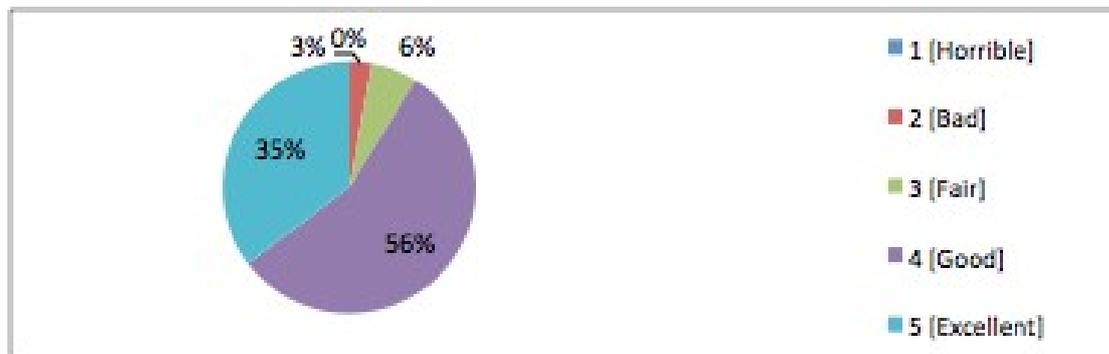
5. What role do you play within your organisation?



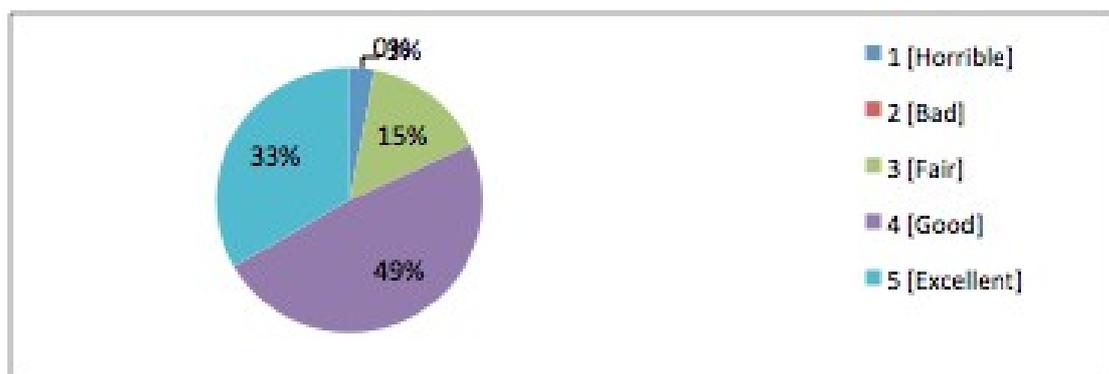
6. How relevant was the meeting to the Internet Industry?



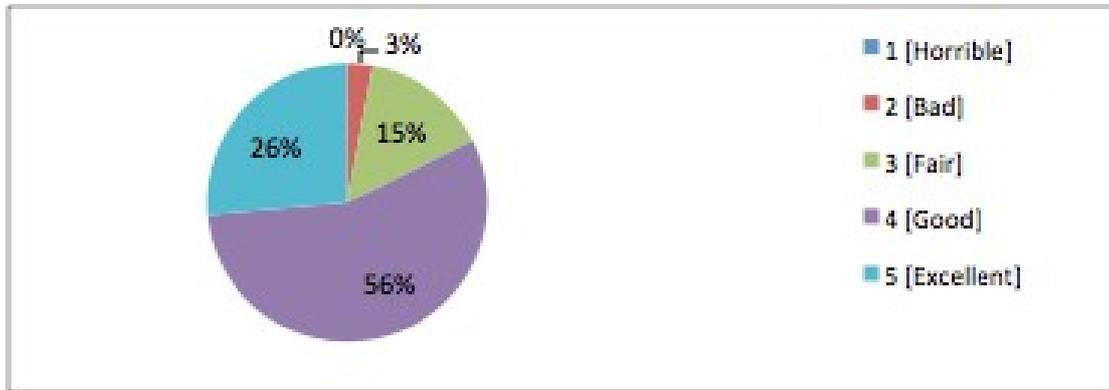
7. How did you find the speakers' expertise on the topics presented?



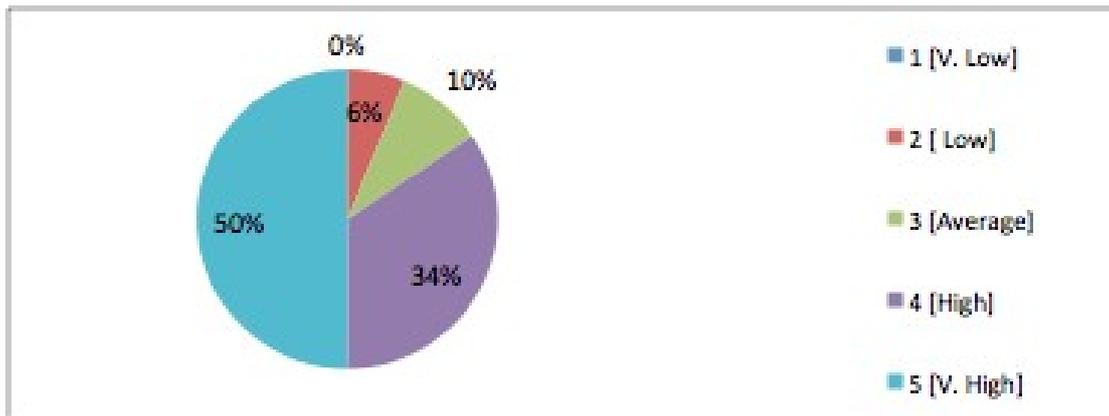
8. How well did the meeting address issues critical to Internet development in Africa?



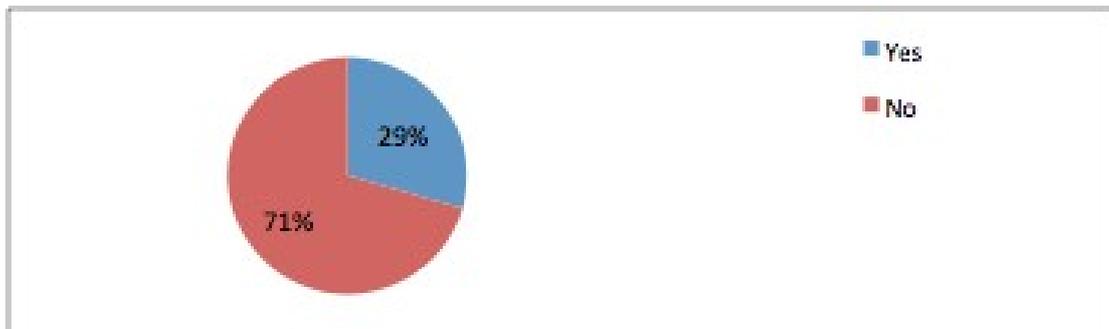
9. How educative and insightful did you find the meeting?



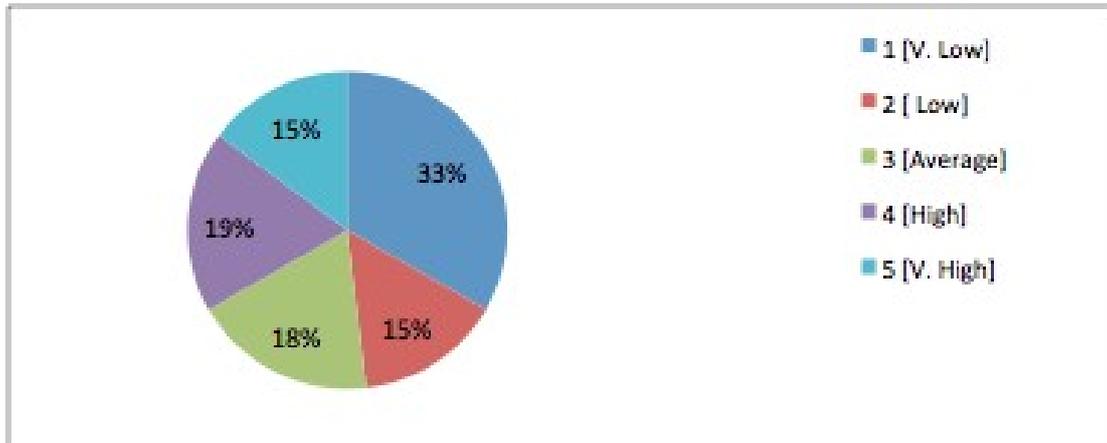
10. Was the meeting relevant to African Internet Industry?



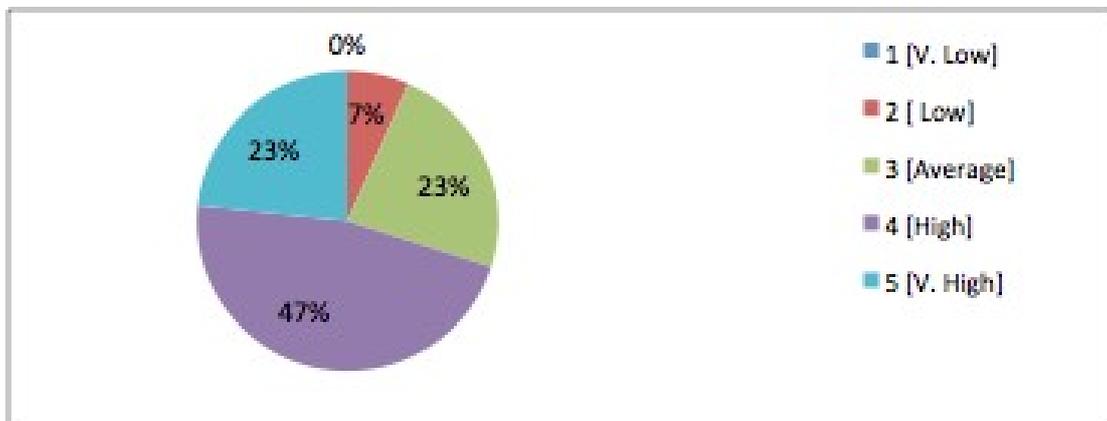
11. Are you subscribed to RPD mailing list?



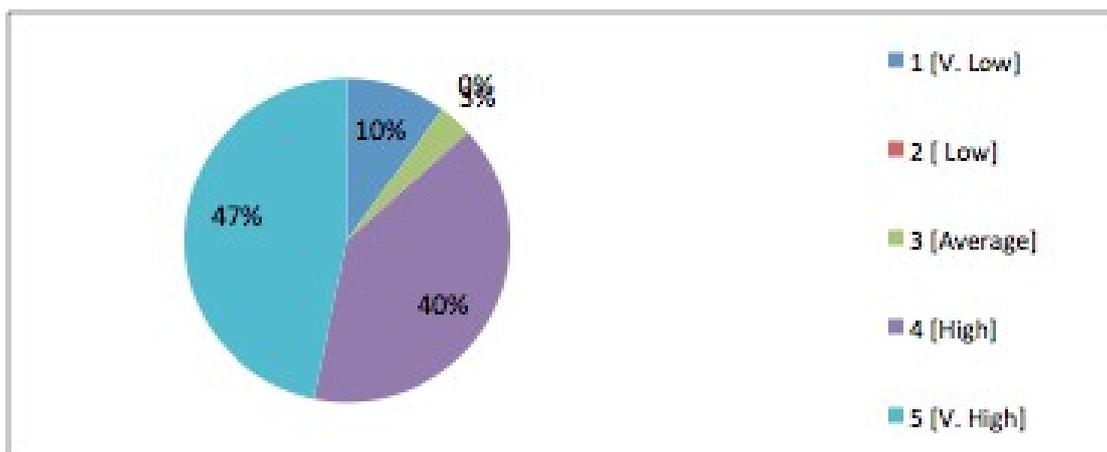
12. Did you follow the proposals on the mailing list?



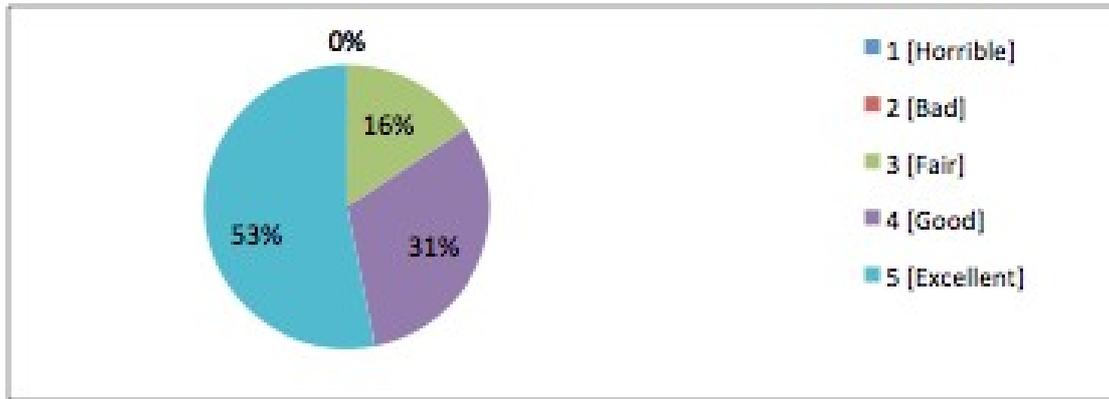
13. Did you understand the objective of the proposals?



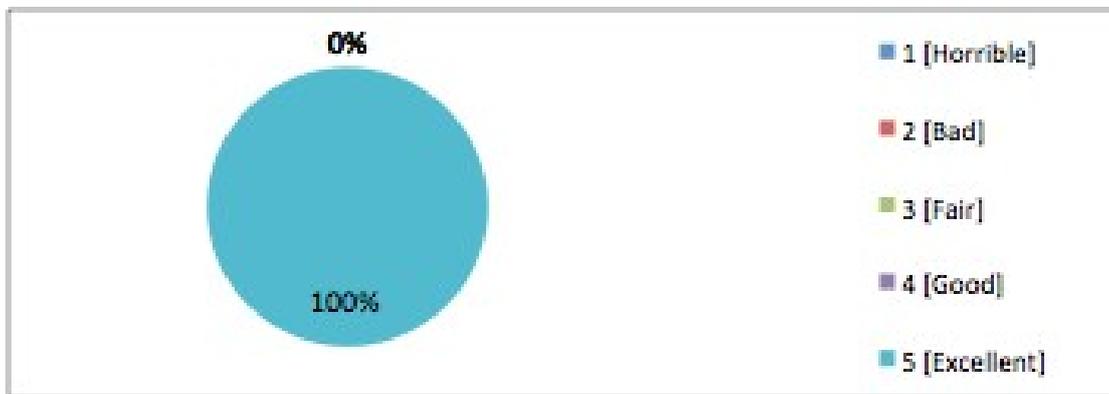
14. How did you find the Openness and Participation?



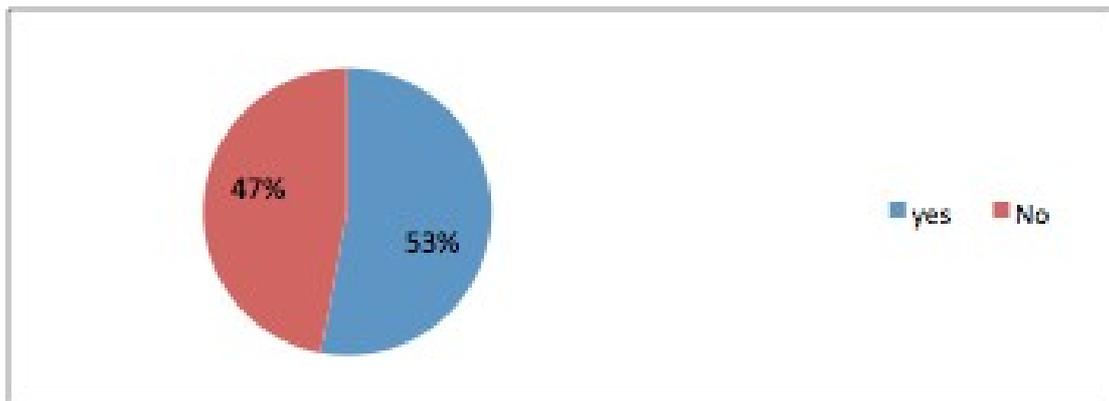
15. How did you find Time Management?



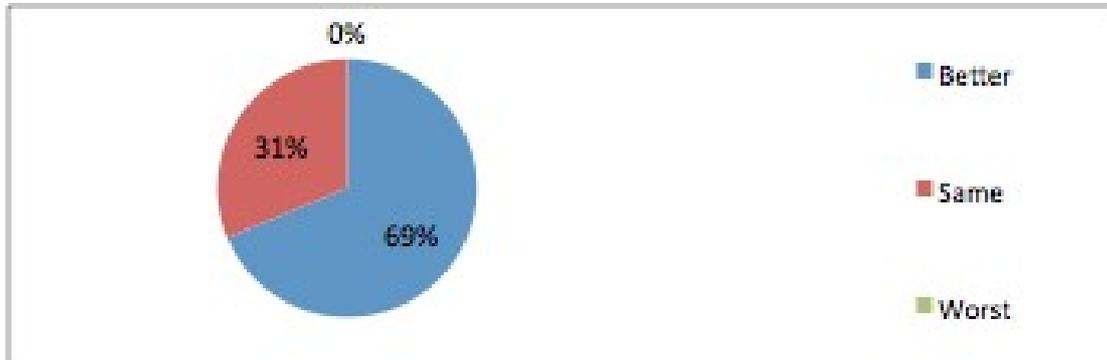
16. How did you find the Policy Discussions?



17. Is this your first AfrinIC meeting?



18. How did you find the caliber of speakers compared to other AfrinIC meetings?



19. How did you find the quality of policy debates compared to other AfrinIC meetings?

