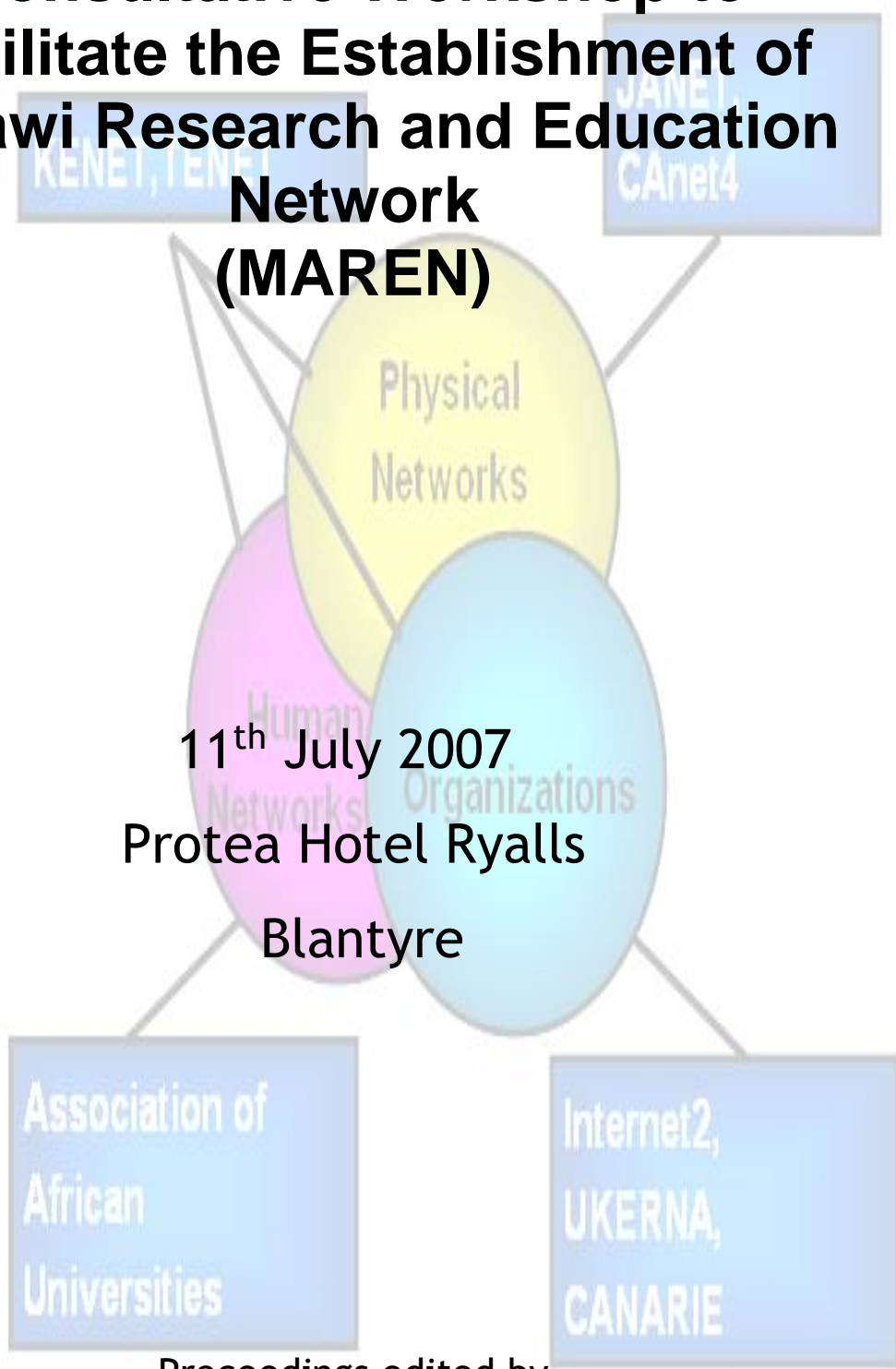


What are NRENs?

Consultative Workshop to Facilitate the Establishment of Malawi Research and Education Network (MAREN)



11th July 2007
Protea Hotel Ryalls
Blantyre

Proceedings edited by
Chipo Kanjo
on behalf of the MAREN Task Force

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Facilitate the Establishment of
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Network
(MAREN)**

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Zomba : Maren 2008

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Supported by a Grant from FRENIA

Acknowledgements

The Chairperson of MAREN Task Force and the entire team would like to sincerely thank FRENIA for funding the consultative workshop, MACRA for waiving fees for the licence, ESCOM for granting access to two fibre strands and MTL and CELTEL for permission to use their towers and all partners . In addition thanks are extended especially to the Honourable Minister of Information and Civic Education, Patricia Kaliati and members of her Ministry for ongoing support,.

Special thanks go to all the participants for the valuable inputs during the workshop and all those who gave administrative support.

Professor L Kamwanja
Chairperson, MAREN Task Force



MAREN Launch Participants July 11th 2007

ZOMBA: MAREN, 2008
www.malico.mw/maren

Executive Summary

On all continents, **National Research and Education Networks (NRENs)** are national institutions whose objective is to provide Internet connectivity and related services among tertiary education and research institutions at a high speed and a fair price. They connect nationally, and with appropriate interconnection agreements and regulatory permission, provide cross-border connectivity to neighbouring NRENs, together forming a continent-wide network. The continents then inter-connect through submarine fibre cables. This connectivity enables the member institutions to participate fully in global research, learning and information networks.

The NRENs in the region fall within the framework of UbuntuNet Alliance for Research and Education Networking (www.ubuntunet.net), which is chaired by Unima Vice Chancellor, Professor Z D Kadzamira, who was appointed to this position by the Association of African Universities,

MAREN, the Malawi NREN-in-construction, is one of the first 5 NRENs in Africa, the mature NRENs being KENET in Kenya and TENET in South Africa. MAREN has been evolving from the MALICO VSAT network since mid 2005. The Chair of the MAREN Task Force is Professor Leonard Kamwanja, Pro Vice Chancellor of University of Malawi. Founding members include the University of Malawi and its constituent colleges, Mzuzu University and the Department of Agricultural Research and Specialist Services.

Currently, in Malawi, as in most of Africa, where we rely on VSATs for connectivity, connectivity speed is low and cost is many times higher than in the west. But when we harness the power of the submarine fibre cables being laid, the price should tumble dramatically and African institutions will fully enter the knowledge society. As an example of the potential of an NREN to assist, we may consider the health sector as exemplified by some of the current initiatives of College of Medicine. This sector may be a major beneficiary of an NREN, facilitating the sharing of continuing medical education (CME), quality medical journals and digital information, health informatics, video conferencing and telemedicine to mention only a few applications. At a deeper level, participation in genome research over GRID infrastructure is an application that may soon be applicable to MAREN

The purpose of the consultative meeting was to bring together MAREN members, potential MAREN members, and organizations and individuals who will affect or be affected by MAREN such as MACRA, the Regulator, ESCOM whose fibre may be accessible to MAREN subject to agreements, Internet Service Providers, Members of the Malawi internet Exchange team, and other key players to draw on their knowledge and obtain buy-in. As always, the MAREN Task Force appreciated the enormous contribution of the Ministry of Information and Civic Education, in particular, the Minister Hon. Patricia Kaliati, who in spite of her busy schedule, gave her time unsparingly. This document reports on the deliberations.

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**The Stakeholders' Consultative Workshop to Facilitate the Establishment of MAREN,
Ryalls Hotel, Blantyre on 11th July 2007**

Programme

0830	Registration: Mrs Mponela, Muza Gondwe
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Session 1

Chair: Ben Malunga; Rapporteur: Chipo Kanjo

0900	Welcome, introduction and background to workshop, Prof. Leonard Kamwanja
0910	Keynote address by Guest of Honour: Hon Patricia Kaliati MP, Minister of Information and Civic Education. The Role of Research and Education Networking in the Knowledge Economy
0930	MALICO & the Emergence of MAREN , Prof. J.J. Uta
0940	MAREN: Status, Challenges and Opportunities , Mr Antony Muyepa
0955	UbuntuNet Alliance & NRENs: Collaboration with MAREN , Prof. Zimani Kadzamira
1010	Group Photo [Gallery] and Refreshments

Session 2

Chair: Paxton A. Zozie; Rapporteur: Seyani Nayeja

1040	Why Build NRENs? Dr Harry Gombachika
1110	Group Discussion on Building MAREN - participation & functions, sustainability, legal status & governance
1210	ESCOM , Mr Chinguwo
1230	MACRA , Mr L.L. Momba
1250	MIX: Malawi Internet Exchange Point , Mr Bruce Zamaere
1310	Lunch Break

Session 3

Chair: Prof. Leonard Kamwanja; Rapporteur: Ulemu Nyasulu

1415	Roundup of key issues of morning sessions, Prof Zac Kasomokera
1430	Resolutions
1500	Closing remarks and vote of thanks, Prof. Leonard Kamwanja

Sponsored by [FRENIA](#) (Fostering Research and Education Networking in Africa)

Introduction

The Consultative Workshop was organised by the MAREN Task Force with the aim of facilitating the establishment of MAREN : the Malawi Research and Education Network with financial assistance from FRENIA. The workshop was divided into three sessions. The workshop was attended by over 80 participants from different sectors (*see Appendix 1 - list of participants*). The Guest of Honour was the Minister of Information and Civic Education, Hon. Patricia Kaliati, MP.

Session 1

Session 1 was chaired by the University Registrar, Mr. Ben Malunga, who was also the Director of Ceremonies. The meeting started with a prayer by Mrs. Nita Chivwara, the Assistant Registrar at the University of Malawi Office, and Secretary for MAREN Task Force. The Director of Ceremonies welcomed all participants, observing all protocols and acknowledging all dignitaries present.

Welcome, Introduction, and Background to Workshop

The Chairperson for MAREN Task Force, the ProVC for University of Malawi, Prof. Leonard Kamwanja welcomed all participants, in particular the Minister of Information and Civic Education. He sincerely thanked the Guest of Honour for accepting to grace the workshop.

- He briefed the participants the purpose of the workshop which mainly was to obtain input from all participants through presentations, comments, questions and group discussions on their views of an NREN and how they would like MAREN to be established.
- He urged participants to share what they believe is best for MAREN and how it can be better sustained.
- In his remarks, the Chair congratulated Prof. Kadzamira who had been appointed as Chairperson of UbuntuNet Alliance, a move that will better place Malawi's Universities at regional level.
- He briefed the participants on the founding members of MAREN who are University of Malawi, Mzuzu University and later the Department of Agriculture Research.
- He thanked MACRA for providing the International Gateway Licence and ESCOM for providing two Fiber strands for academic purposes, adding that MAREN members will reciprocate by ensuring that they offer services that add value to the Nation.
- He thanked FRENIA for funding the workshop and making it a reality. FRENIA provided funds amounting to \$22,000 to be used for the workshop, setting up a Secretariat and for other meetings to be organised in future.
- He also described other NRENS in the region, particularly Zambia who are in the process of setting up their own NREN - ZAMREN.



MAREN: Status, Challenges, and Opportunities

Anthony Muyepa, a member of the MAREN Task Force set the pace by highlighting the current status for MAREN, the challenges and the opportunities. Anthony's presentation started with MAREN goals. (*full presentation attached*)

Goals

- Provision of connectivity among tertiary institutions as currently connectivity is low and very expensive
- Provision of infrastructure (giving an example of a project at COM with USA government on HIV which is currently under way, this is a collaborative effort).

The presenter cited the Tertiary Institutions in Malawi which could participate and benefit from the Research and Education Network.

MAREN Framework

It was stated that currently MAREN is being incubated under Malawi Library Consortium (MALICO) and that members are institutions that deal with research. The initiative to have an NREN in Malawi came about with the opportunity of connectivity which the MALICO VSATs provided to link institutions.

Current Status

Below are some of the developments within the research and education network which are already in place:

- The MALICO VSATs installed at four sites.
- Blantyre Campus Backbone. The Network design is in such a way that each site has an active node, using single mode fiber due to distances and VLAN technology is in use to control the viruses.
- Blantyre – Mangochi Link : this will be phase two of the project, this link will initially be deployed using wireless.
- Blantyre – Lilongwe Link in collaboration with ESCOM. This link uses the two fiber strands offered to MAREN by ESCOM.
- Currently there is the offer of assistance from CISCO foundation.
- International gateway Licence from MACRA to MAREN received three weeks ago.

Challenges

- It was mentioned that although connectivity exists via the VSATS, VSAT bandwidth is extremely expensive to run.
- While most sites in Blantyre have been interconnected using fiber optic cables, this remains a challenge for other sites, and therefore wireless connection has been used where there is no fibre.
- To build this network, MAREN needs different partners for different reasons e.g. access to towers.
- Other than partners, MAREN needs Government input, and a waiver on duty and licence.

Opportunities

- Great opportunity to collaborate with partners and Government.
- Network expected to be up before the end of the year.
- Received course ware from Massachusetts Institute of Technology. The course ware is currently housed at the Polytechnic.
- Connectivity between institutions help share these resources locally
- Closer collaboration between institutions
- Online health services

Existing Partnerships

- ESCOM
- MACRA
- Ubuntu Net Alliance for Research and Education Networking
- MTL
- CELTEL
- MISPA to obtain MAREN's peering rights
- Neighbouring countries. These are also having similar initiatives e.g. Zambia and Mozambique.

What can MAREN offer in return to Partners

MAREN realises the important role its partners play and is ready to offer a Symbiotic Partnership with Stakeholders whereby it would offer services in return and in addition, MAREN can be used as a test bed for new applications.

The Bigger Picture

MAREN would like to network at a regional level, through UbuntuNet Alliance and globally through other national and regional networks like JANET and GEANT.

Keynote address

The keynote address was given by the Guest of Honour, Minister of Information and Civic Education Hon. Patricia Kaliati MP. In her remarks, the Minister stressed the goals and objectives of MAREN and asked the PS for her Ministry to initiate a Task Force to ensure that there is fiber in place for government departments as a way of complementing MAREN efforts. She urged all participants on the need to prioritise ICTs and the fiber backbone in particular.

The Minister acknowledged that MAREN will assist Malawi to be a knowledge-based economy as the Broadband will assist Malawians to be citizens of the information society and benefit in research and development.

She pointed out that there is the need for Government to drive the Internet Service Providers and not wait for them to drive Government mentioning that World Bank is ready to fund such initiatives by Malawi Government.

She made suggestions on possible options to tap fiber for regional connectivity; Zobue and Tete. She challenged all participants that if Mozambique and Kenya are ready, why not Malawi?

She concurred on the importance of networking all colleges and that it should be done as a matter of urgency since the issue of research is also a priority for the President. She commended MAREN that its establishment will help the nation move in the right direction.

The minister also applauded the initiative started by MALICO which has led to MAREN today.

She congratulated all professionals who have made MALICO and MAREN possible; however, she cautioned that action was needed much more than just talk, WE NEED ACTION. Adding that if this dream is to materialise, there is need to invest in infrastructure, and utilise those in the Diaspora to contribute electronically.

She also urged development partners to take part in funding some of the projects initiated by MAREN.

Questions and Comments

Following the three presentations, the session chairperson opened the floor for comments and questions.

- Mr. Hajat commended Hon. Minister for assisting in the arrangement which his organisation has with CONGOMA on behalf of and in partnership with Computer AID to lift the VAT, with the hope that this helping gesture by the Hon. Minister will extend to MAREN. He added that this connectivity will benefit future generations. He also pleaded that in future, we should use bottom up approach and not top down approach, which considers the tertiary institutions before the primary.
- Prof. Kasomekera commented that the MAREN initiative is critical to the nation's development. Information sharing is centre to development. He pointed out a biggest challenge which Malawi as a nation has: that of attitude, stressing that attitude is a huge stumbling block. That attitude has contributed to the long history of delaying releasing information. He concluded with a suggestion that MAREN should have free access to Information regardless.
- Hon. Kaliati seconded the need for free access to information and urged all Ministries to ensure that they upload relevant information on GWAN in a timely manner.
- Mr. Madise wanted to find out if the network at Chancellor College is also under MAREN, mentioning that connectivity is very slow. He also wanted to know if MAREN is doing anything on issues of Intellectual Property Rights (IPR).
 - In response, it was said that Chancellor College buys the amount of bandwidth it sees fit to , and that the slowness can be better solved locally. The more bandwidth Chancellor College purchases, the more they have to pay.
 - The interest in MAREN is terrestrial connectivity, and the more alternative routes, the better. VSAT bandwidth is expensive and slow and this is why fiber offers a better and more cost effective alternative.
 - Reacting to the collaboration with Computer AID, it was said that Computer AID mostly donates Pentium IIIs and that it is high time that Universities also budgeted for their own computers.
 - On the issue of IPR the response was that proper channels will be followed on how to access other peoples' information.

- Further it was mentioned that as a solution to the slow connectivity, most of the members have undergone training on bandwidth management organised by INASP and institutions should build capacity of staff to manage the bandwidth.
- Mr. D. Chiweza commended MAREN for offering new ICT prospects, however, he cautioned that as we develop MAREN, we should not forget to preserve the indigenous knowledge and digitize the local content so that our indigenous knowledge is not lost.

MALICO: 4 years of Library and Information Capacity

The presentation was co-authored by Prof. J. Uta and Mrs. M. Ngwira and presented by Prof. Uta.

He gave a brief background of MALICO, the Malawi Library and Information Consortium, stating that it all started in April 2002, and was registered as a Trust in 2004. The broad aim is to facilitate access to the excellent electronic journals that were available through providing a means for collecting members' contributions, to offer a Bandwidth solution as a vital component to providing access, and to build the capacity of its members in various areas related to the electronic environment. Just as is the case with MAREN, MACRA waived most of the fees for the MALICO VSATs. He further explained the technical processes involved in MALICO highlighting issue of viruses and spam as the major challenges. www.malico.mw

Where does MAREN come in?

It was learnt that since its involvement in providing connectivity to members, , MALICO has been seen internationally as an NREN. MALICO has incubated MAREN since its conceptualisation, ending up with a situation where an NREN incubates another NREN. The difference is that MALICO focuses on content and information literacy and MAREN on Infrastructure and technical capacity, so both are vital. MALICO and MAREN Synergies and Separate ways were highlighted (*see full presentation*).

He concluded by stressing the collaboration between MAREN and MALICO complementing their efforts rather than being competitive.

Licence Presentation



The morning session was spiced by the presentation of the International Gateway Licence from MACRA to MAREN (*see attached licence*). The licence was presented to MAREN on behalf of MACRA by the Hon. Minister, Mrs. Patricia Kaliati and received by Mrs. Ulemu Nyasulu on behalf of MAREN.

Comments and Questions

- Prof. Kasomekera advised that since activities of MALICO and MAREN are overlapping (and looking at a situation where we have limited resources and capacity) the two should ensure that they collaborate more other than competing for resources eg. Do collaborative proposal writing. He also gave a follow up comment to the comment by Hon. Minister earlier that indeed we have tons of information, what is lacking is processing and packaging that information and making it available. And that MAREN should come up with means of processing and packaging information otherwise we will keep researching for the same things that were researched ten years ago. He also mentioned that a Memorandum of Understanding is required for smooth detachment of MAREN from MALICO. Finally he mentioned the need for MALICO to help in facilitating or initiate training for record keepers
- Mr. Madise suggested that National Archives should be a member of MALICO/MAREN, adding that it can be an extension to Chancellor College. His other question was on who should be the mother – MALICO or MAREN, adding that though MAREN is being incubated by MALICO, it can be a mother.

In response, Prof Uta pointed out the following:

- Though there is need to discuss about leadership between MAREN and MALICO there is good collaboration and good will this far. No conflict of interest.
- Indeed information is not properly packaged and pledged that MALICO can facilitate training.
- That National Archives can become a member
- A general comment was that Malawi and Institutions in Malawi should be prepared to invest in technology.

UbuntuNet Alliance and NRENs: Collaboration with MAREN

The presentation was given by Prof. Zimani Kadzamira, the VC for University of Malawi and Chair of UbuntuNet Alliance.



In his presentation, Prof. Kadzamira thanked members of MAREN Task Force for a job well done. He was quick to mention that MAREN will only achieve its objective of being part of a much wider picture across the globe, by being part of regional networks. He gave a brief background of the Alliance and how MAREN interacts with the Alliance. The Alliance was established in 2005 with NRENs from Kenya, Malawi, Mozambique, Rwanda and South Africa and formally incorporated in 2006 as a non-profit organisation. Its strategic objective is to build backbone using existing infrastructure projects. Ubuntu Net stresses the need to develop a fiber optic backbone cable to link up all participating countries with the ultimate goal of having ONE backbone that interconnects into a seamless backbone.

He mentioned that Ubuntu Net members meet annually. At its Nairobi 2007 meeting, University Of Malawi, Kamuzu College of Nursing was chosen as interim secretariat.

The Alliance has a Global Perspective as one of the world wide regional RENs and as part of a major highway. He gave an example of Europe whose global connectivity is Géant comparing it with the African situation where there is no region REN backbone, making Africa isolated from peers because the only form of connecting is via VSAT which is very expensive. As such he stressed the need to have access to terrestrial and submarine fiber as a solution.

He emphasised that the Alliances aspiration is to have connectivity with gigabit/sec taking advantage of the EASSY cable or other fiber deployment in the region. The end product will be 23 countries connected and barriers to cross border traffic removed. The resources required to establish this venture will include (not limited to) cross border links with telcos, mobile, power companies, submarine cable connectivity or VSAT

The significance of MAREN as a founding member of UbuntuNet Alliance was stressed in his presentation. (www.ubuntunet.net)

Comments and Questions

- Mr. Chiweza wanted to know what sort of political collaboration was there to ensure that this huge collaboration is realistic. Is there political will?
- Mr. Hajat was philosophical and wanted some clarification on this technical dream on a very grand scale vs. sovereignty, is it not impinging of sovereignty, since if knowledge is power, power is not to be shared.
- Opportunities were mentioned which could be tapped into i.e. Bill Gates Foundation, Microsoft.
- Prof. Mtenje advised on the need for some down to earth sensitization, cautioning that while technocrats are busy with these types of projects, there must be a deliberate effort to sensitize all kinds of leaderships in the institutions so that everybody is taken on board.
- Mr. Madise asked the relationship between Ubuntu Net and NGOs.
 - In response, Prof. Kadzamira reminded participants that we are talking about research and educational institutions and not commercial institutions, and the sensitization will be in that context and that Universal Access project is already known to the Ministers through the African Union and Ministries for ICT.
 - He further pointed out that the countries that decide not to join the initiative will be left out.
 - He informed the participants that the Alliance has tried very hard not to associate with any political associations.
 - For relationship with NGO, Prof. Kadzamira mentioned that the NGOs can only collaborate with Ubuntu Net through the local NREN, in case of Malawi it has to be through MAREN.

Session 2

Why build NRENs?

The presentation was done by Dr. Harry Gombachika who gave a very comprehensive background to NRENs, clearly defining what an NREN is, its role. He further explained an NREN in the context of Malawi. He gave the different components of an

NREN: the physical networks, human networks and the organisation structure. (*see full presentation*).

He further explained that an NREN carries academic and research traffic not commercial traffic and has an aim of sharing information, equipment or application and access to cheap bandwidth. He also gave the functions of an NREN some of which include: providing internet access, providing network services and applications, supporting teaching and learning particularly where there is Learner Centred Approach and promoting interest of its members.

NREN in Malawi

MAREN as the NREN in Malawi will bring a number of advantages as it will ensure cheap and high speed connectivity, stimulate ICT usage and exploitation, and extend access to higher education through Distance and E-learning, encourage collaborative research and human resource capacity building.

MAREN and National Aspirations

- ICT and Education policies can be implemented through MAREN
- There will be a relationship between MAREN and National government and MAREN can even be a government department.

Relationship with Service Providers

- MAREN can be a test bed of new applications and services
 - MAREN can be providing last mile connectivity
 - Capacity building of the service providers
 - The service providers can have access to funding through an NREN
- NRENs and service providers are partners.

Questions and Comments

- Is choice of technology based on the cost not performance?
- What about maintenance of the fiber optic cable, is it too involving?
- Is it not possible to resolve the problem of VSAT bandwidth high cost?

In response Dr Gombachika mentioned the following:

- The comparison is not only on cost as it has been for a long time. When cost alone was used for comparison, it was difficult to improve due to development of electronics. Fiber can carry huge quantise of data compared with VSAT with less interference and attenuation and therefore at higher speeds.
- In terms of maintenance, installation of fiber is high since it is glass. It does not rapidly deteriorate. Its life time is long. (An undersea fibre cable is costed as having a lifespan of 25 years)

Group Discussions

Participants were divided into five groups to discuss the following topics:

- MAREN Participation and Functions (2 groups)
- MAREN Sustainability (2 groups)
- Legal status and Governance (1 group)

Below are the presentations from the different groups

Group 1: Participation and Functions

Participants

Users

- All non-profit research and tertiary education institutions

Providers

- All service providers

Functions

- Provide connectivity to research and education institutions
- Interconnect research and education institutions, later secondary and primary schools
- Negotiate with service providers for affordable bandwidth on wholesale price
- Negotiating with government for tax waivers
- Negotiating with government on bandwidth issues (MTL)
- Provide user services in software applications
- Strategies to strengthen MAREN's bargain position
- Provision of training and capacity building for users
- Physical infrastructure development (redundancy)

Group 2: Functions and Participation

Key Participants

Education Institutions

- University of Malawi (all Constituent Colleges & Research Centres)
- University of Mzuzu
- Agricultural Research Centres
- Catholic University
- Lilongwe University of Science & Technology
- National College of ICT
- Natural Resources College
- Malawi Institute of Education
- Domasi College of Education
- TEVET & technical colleges
- Teacher Training Colleges

Additional Research & Information Bodies:

- National Research Council of Malawi
- National AIDS Commission
- National Statistics Office
- National Archives
- Human Rights Commission
- MALICO
- MALA
- Copyright Society of Malawi

Development Agencies and NGOs?

- UN Agencies
- CRECCOM
- MTTA
- Action Aid

Technical Partners

- MACRA
- ESCOM
- Telecom operators
- ISPs
- Government-wide Area Network

Functions

- Digitisation of national e-content
- Provide a portal for e-learning, telemedicine & video conferencing research.
- Provision of access to information/databases.
- Collaborative research, analysis and dissemination.
- Provision of connectivity infrastructure & technical support.

Group 3: Sustainability

Aspects of Sustainability

- Finances
- Human resources (Technical know-how and Management)
- Infrastructure
- Partnership

Finance -Expenses

- Establishment network
- Running costs
 - Executive board and secretariat
 - Hardware maintenance and upgrades

Finance -Income

- Membership depends on bandwidth required plus a margin (x%) to cover part of maintenance and secretariat
- Rather no charges to students
- Government subsidies through tax exemption, etc.
- Get university management support

Human Resources

- How to attract or maintain capable people at the university?
- Technical training program to joining universities
- Management: annual workshops for executive of member institutions

Infrastructure

- Backbone maintenance by MAREN;
- Local infrastructure by member institution

Partnership

- What can we offer partners (MTL -fibre, Celtel -towers)
 - Offer courses?
 - Offer business?
 - Advertising space

Group 4: Sustainability

Financial Sustainability.

- Ongoing funding of the organisation after its inception:
 - Wholesaler/Retailer relationship where MAREN buys bandwidth in bulk and resell it at a small profit to its members.
 - Services offered to its members and the general public at large.
 - Participating institutions set aside (budget) an amount to contribute towards the running of the NREN.

Capacity Building

- Train people to provide quality services.
- Linkages with other international providers in ICT.

Maintenance

- MAREN needs to take care of the infrastructure it deploys.
- Training of individuals who will manage and maintain the infrastructure.
- Ensure that the infrastructure is up-to-date.

Strong Legal Status

- To ensure that MAREN is protected.

Income generation:

- Advertising.
- Newsletters.

Security (access, hardware and software)

- Only registered valid users should have access to the resources.
- Ensure that the facilities (hardware) are protected.
- Ensure that there is adequate software to ensure virus / spam protection.

Level of control

- Independence:- Government should not be in total control of this entity.
- Formal registration for all users and a directory.

Membership

- MAREN should accommodate more members and build critical mass.
- Extend membership to associate members.

Fulltime secretariat staff

- No divided attention in carrying out MAREN duties.

Group 5: Legal Status

REGISTRATION & GOVERNANCE

- Trust
 - Legal title goes to the trustees – trustees are owners
 - A trust must have beneficiaries, and you account to beneficiaries
 - MAREN will be the settlers in this case
 - Going this way could mean that MAREN is both the settlers and the beneficiaries
 - Takes long time

REGISTRATION & GOVERNANCE

- Company
 - MAREN can be a non-profit organisation
 - Can be registered under Company Act
 - Can be Limited by Guarantee
 - It takes a comparatively shorter time
 - Owners of MAREN would be the members (owners)
 - Then have a way to elect directors of MAREN, who will represent the organisation and not their own organisation
 - Under this, you can have an association of members
 - You can have in this case directors
 - Directors represent companies
 - Directors don't work for a salary
 - Directors can appoint a secretariat headed by CEO

RECOMMENDATION - REGISTRATION

- Register as Company as the registered association act
- Can be given any other name eg MAREN
- Need General Assembly of constituent subscribers who are initial members and any other members who join later
- Need directors elected by the general assembly of the subscribers
- Need Secretariat with CEO

Governance

- What ever is put in the Articles of Association constitutes the constitution
- Other issues include voting, reporting etc
- Articles should not discriminate any would be members
- Needs an Acceptable Use Policy to Interconnect to UbuntuNet Alliance and Worldwide RENS

Reactions to group Presentations

MAREN Membership

- There may be a need for MAREN to have Associate Members and full Members as some members are very critical to the running of MAREN, while some are not.
- Caution was made that the existing members should not list names of eligible members; rather they should only list the criteria of the members that are acceptable.

Sustainability

- Participants were reminded that UbuntuNet has to survive through the NRENs
- There was a suggestion that there be no charge for bandwidth as MAREN can not dictate.
- Proposal writing was added as one of fundraising initiatives
- It was stressed that there is need to give back to companies: biggest thing is to be associated with something happening in Malawi (improving educational quality for Malawi)
- A question was posed whether charging students is to be acceptable under the legal status of MAREN?

Legal Status

- On being registered by a company limited by guarantee – Malawi SDNP has a similar case, but it is taking too long
 - Response: something is fundamentally wrong, registering a company should take days or weeks
- The moment we say a Company, people think of profit-making
- Most donors are reluctant to provide funding unless we explain very well how the organisation is being run
- We should look properly at the merits of Trust or Company other than how long it takes to be done
- We should not reinvent the wheel – we should find out how the other organisations in other countries have done because we may not be competent enough to make a decision on the legal status of MAREN *

PRESENTATIONS OF VARIOUS ORGANISATIONS

ESCOM

- Has a project to connect several areas in Malawi with fiber for its operations (Zomba-BT link to come in as long term plan)
- MTL is leasing 4 cores (2 pairs)
- One pair is for MAREN
- At the moment there are no other dark fiber customers, but once they come in, they will all share on the 4 spare dark fiber and they will share through multiplexing
- ESCOM to provide bandwidth to other companies like Celtel and Telecom and their prices are 60% lower than the current providers.

- A suggested commercial cost for fibre might be \$1,500.00/ pair /km per year – given for an initial period of 3 years

MACRA

- ICT4D Policy
- UNIVERSAL ACCESS POLICY– needs for rural areas
- Communications sector policy network is already there
- Promote research and telecommunications including radio communications.
- Have enhanced collaboration with University of Malawi specifically, case in point is the MALICO licence, agreed on a one off payment
- Total waiver is \$58,000.00
- Licence is to run for 5 years and renewed later upon negotiations
- MACRA to UbuntuNet – a partner in the EASSY Cable project
 - Malawi is a signatory to the protocol for the EASSY project
 - The concern has been the slow implementation of the project, but the process is in progress to ratify the protocol for the setting up of EASSY project, which was signed by 13 countries, and needs to be ratified by about 50% of those.
- MACRA willing to support MAREN in capacity building as well as the education sector
- Capacity building in the aspects of communication regulation is needed from the Universities
- If academic institutions would like to have some training, we could take advantage of the following portfolio for MACRA to propose courses and MACRA can take its current position to organise in house trainings
 - MACRA is also chairing advanced services committee on behalf of ITU
 - MACRA is also chair of ALFRALTI

IXP

- Main problem with using VSAT is delay and not very practical therefore for delay sensitive applications e.g. VOIP
- In Malawi, 2 ISPs close to each other are not connected, they have to go through their various providers (which could be in different continents)
- We need a lot more IXPs in Africa considering that we have 53 countries. There is one in South Africa and Egypt
- Progress so far:
 - All ISPs and College of Medicine have agreed to peer
 - ISP to be hosted at College of Medicine
 - All equipment has been received, installed and ready for use
 - 3 out of 8 participating ISPs have completed their connections
 - Conducted training for all ISPs in BGP
- Delays
 - A lot cheaper to procure it and ship it from Europe – it took months instead of days by DHL
 - Because of location of COM, some ISPs do not have line of sight, therefore, proposed that a mast be built taller than trees and buildings – funding for mast caused considerable delays
 - All ISPs are to finalise connections soon
 - IXP is to officially launched

- Once it is launched, there will be connection to other IXPs in the region
- Services
 - Local Yahoo for Malawi
 - GPS time server
 - IXP could host secondary country DNS
 - Deploy portal and directory services
 - Software downloads (Microsoft updates, Open Source Software, etc)

Round Up – Preliminary noting of key issues

By Prof. Zac Kasomekera

Key Issues

- The Director of Ceremonies, the University Registrar stressed the need for stakeholder participation, contribution of experiences, expertise & resources to ensure effective and efficient MAREN
- The chair of MAREN Taskforce, Pro Vice Chancellor, concurred with the UR and emphasised the importance of stakeholders contribution to a sustainable MAREN
- Mr. Muyepa highlighted the following issues:
 - Need for networking all research & tertiary institutions
 - Currently connectivity is slow & expensive
 - Need for resources from Governmentt and all cooperating partners to facilitate infrastructure for better connectivity
 - MAREN will result in improved learning, teleconferencing, and online health care
- The following partnerships were highlighted:
 - ESCOM (3 year)
 - MACRA
 - UbuntuNet Alliance
 - Celtel
 - MTL
 - MISPA
 - Govt. of India to Govt of Malawi
- Prof. Uta stressed the need for coordinated operations among UbuntuNet, MALICO, and MAREN
- Need to have collaborative sourcing of services, training and finances for MALICO and MAREN
- The chair of UbuntuNet emphasised the need for Malawi to join the global REN

Recommendations

- Govt should provide a waiver on duty and licences on ICT related equipment and services
- MALICO should assist institutions in training information management officers in processing, packaging, and retrieval of information
- The need for MAREN to ensure preservation of indigenous knowledge

- Have National Archive on board as part of MAREN

Round Up of Key Issues

- Need for stakeholder presentations
- Sustainability is very important and group discussions have said how this can be achieved
- Need for Government to make some issues a priority so that people can take such projects seriously
- We have to sensitize our institutions that MAREN is important for all of us e.g. teleconferencing that would cut costs incurred in travelling to various conferences
- Partnership is very important, MAREN being a network – also acknowledge the Government in talking to India on connectivity. How do we use that partnership – is a challenge to us.
- It is important for MAREN to be established so that we can have Malawi at a global level in research through Ubuntu Net. This is a key vehicle for our country and our educators and researchers to be recognised.

Recommendations

- Government of Malawi should take the issue of VAT seriously on all ICT equipment
- MALICO should take an aggressive initiative to train people to be able to archive information and process it so that it is accessible, e.g. info collected by Ministries
- New information should be packaged in indigenous packets
- Indigenous knowledge should be digitized and kept
- National Archives also have information which we can start with
- Our institutions should make provision for ICT in the budgets
- Encourage those that are assisting us by deliberately giving them some business, etc, so that it is a two-way benefit process
- Sector ministries (Finance, Economic Planning, National Statistical Office) should be taken on board – go through Treasury so that their contribution is diverted directly to MAREN so they can be members. These Ministries have a lot of valuable information which they keep.

Conclusion by Prof. Kamwanja – Resolutions

- Mandate to establish MAREN given
- Give the Taskforce a chance to prepare a report with all information from this meeting, presentations, suggestions, etc
- Should prepare tentative resolutions
- Ready within a month to be sent to all members present through email
- All members available to provide feedback on the report after its been circulated
- After report is finalised with feedback incorporated, those members eligible to form MAREN to be called for another meeting, for elections

Closing remarks

- Participants were thanked for staying late on behalf of MAREN
- Invited to continue contributing to the growth of MAREN as has been to the birth of it.

- All presenters, chairpersons, rapporteurs, thanked their availability

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Appendix 2: Presentations

MALICO & the Emergence of MAREN, *Prof. J.J. Uta and Margaret Ngwira*

http://www.malico.mw/maren/docs/malico_maren_uta.pdf

MAREN: Status, Challenges and Opportunities, *Antony Muyepa*

http://www.malico.mw/maren/docs/maren_status_antony.pdf

UbuntuNet Alliance & NRENs: Collaboration with MAREN, *Prof. Zimani Kadzamira*

http://www.malico.mw/maren/docs/ubuntu_net_vc.pdf

Why Build NRENs?, *Dr Harry Gombachika*

http://www.malico.mw/maren/docs/why_nrens_harry.pdf

ESCOM, *Mr H. Chinguwo*

http://www.malico.mw/maren/docs/escom_chinguwo.pdf

MACRA, *Lloyd.L. Momba*

http://www.malico.mw/maren/docs/macra_momba.pdf

MIX: Malawi Internet Exchange Point, *Bruce Zamaere*

http://www.malico.mw/maren/docs/malawi_ixp_bruce.pdf