



eGYAfrica Workshop: better Internet connectivity for research and education in Africa

Accra, 24-25 November 2010

REPORT

Venue

Mensvic Grand Hotel <mensvic@yahoo.com>
24 Lagos Avenue, East Legon, Accra
P.O. Box CT 5086 Cantonments - Accra, Ghana
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Overview

The workshop brought together 12 participants from seven countries to review progress in eGYAfrica and NREN (Research and Education Network) development, and formulate a work plan for the next steps. The program for the workshop and the presentation materials can be found on the eGYAfrica website (www.eGYAfrica.org/eGYAfrica.php). New officers were appointed to serve for the next term (Appendix 2), and jobs were assigned (Appendix 3).

Background

eGYAfrica (www.egy.org/egyafrika.php) was initiated during the Electronic Geophysical Year (eGY) to improve Internet access for scientists and educators in African Universities and similar institutions. New undersea cables around Africa and fibre-optic cable networks on land have greatly improved internet access in recent years. Despite these advances, the digital divide problem remains greater in Africa than elsewhere, and the gap is widening. Thus, despite the new opportunities for collaboration and sharing of data and resources offered by modern ICT, African scientists and educators are becoming increasingly marginalized from mainstream developments elsewhere in the world. Ironically, it is widely acknowledged that achievement of the Millenium Development Goals identified for Africa is conditional on having a vigorous, effective, and affordable research and education sector in each country.

Objectives

The purpose of the Workshop was to bring together people who share a common desire to improve Internet access for scientists and educators in African institutions. Specific objectives were:

- raise awareness about the digital divide problem, its impact on development in Africa, and the benefits of Internet connection
- review the status of Internet and NREN (National Research & Education Network) development in Africa – progress, plans, and problems
- introduce newcomers to eGYAfrica
- review and revise the eGYAfrica strategy for improving internet access in African institutions,
- provide a focus for developing national action groups
- develop a work plan for eGYAfrica and assign responsibilities.
- strengthen our network of people with common interest in reducing the digital divide and NREN development
- explore collaborative arrangements with other organizations and programs committed to reducing the Digital Divide in Africa
- identify funding opportunities and patrons.

Participants

Name	Address	Affiliation	Email
AMAESHI Larry	Dept. Physics, Univ. Lagos, Lagos, Nigeria	eGYAfrica Committee	larryamma@yahoo.co.uk
BAKI Paul M: 254-734524066/ 254713784534	The Kenya Polytechnic University College, Dept. Technical nd Applied Physics, U. Nairobi, Kenya		paulbaki@gmail.com

BANKOLE Sam A.	Faculty of Science, Olabisi Onabanjo University, Ago Iwoye, Nigeria	Dean, Faculty of Science	sabankole@yahoo.com
BARTON Charles M: +61 4 06377599	Research School of Earth Sciences, Australian National University, Canberra	Co-chair (International) eGYAfrica	cebarton@gmail.com
BARRY Boubakar M: +233 246682059	Association of African Universities, Accra, Ghana	Coordinator, NREN Unit	boubakarbary@gmail.com
CHUKWUMA Victor M: +234 805 507 5270	Department of Physics, Olabisi Onabanjo University, Ago Iwoye, Nigeria	Co-chair (Africa) eGYAfrica	victorchukwuma@yahoo.com
FOSU Collins	Dept. Geomatic Engineering, Kumasi National University of Science and Technology, Kumasi, Ghana		fosucoll@hotmail.com
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DOUMBIA Vafi	Maître de Conference, Laboratoire de Physique de l'Atmosphère, Université de Cocody, Abidjan, Cote d'Ivoire	Prof. Geophysics - geomagnetism	doumouya@ucar.edu
MEBRAHTU Alem M: +251-914-753502	Dean, College of Natural and Computational Sciences, Mekelle University, Mekelle, Ethiopia	Secretary, eGYAfrica	alemmeb@googlemail.com
MENSAH Moses M: 233-20 853 7903	Chemical Engineering Dept Kwame Nkrumah University of Science and Technology Kumasi, GHANA	Attended CODATA Cape Town	mymens@gmx.net
NYANGANYURA Daniel M: +27-764152009	ICSU Regional Office for Africa, Pretoria, South Africa	Programme Specialist: Physics, Maths and Engineering Sciences,	nyanganyura@gmail.com d.nyanganyura@icsu-africa.org

WORKSHOP PROCEEDINGS - INTRODUCTIONS

eGYAfrica co-chairs, Charles Barton and Victor Chukwuma, welcomed the participants.

Boubakar Barry officially opened the workshop.

Participants introduced themselves.

Updated handouts were distributed (see Appendix 1)

VC: summarized the objectives of the workshop. He discussed about the progresses made so far, particularly related to the SCINDA workshop in Zambia in 2009. He listed the role some individuals like Barry, Christine, Justin Mabi have played in the IHY/SCINDA.

CB: gave introduction to eGYAfrica, its origins in eGY and present strategies. This information is available on the website: <http://egy.org/egyafrika.php>

THE DIGITAL DIVIDE AND NATIONAL RESEARCH AND EDUCATION NETWORKS (NRENs)

BB: *Research and Education Networks in Africa, update*

Barry described the AAU. It has been established in 1967 in Rabat, Morocco, and now based in Ghana, Accra. It has 200 (?) member institutions in all African countries. It consists general conference every 4 years, conference of rectors and vice chancellors every two years, it supports ICT for HE in Africa.

DN: *NREN development in sub-Saharan Africa current and planned*

He stated that African problems are trans-boundary for which communication can play a vital role to address it

African countries contributing only 1.7% of world share of ISI listed S&T papers, most of our problems are connected with lack of proper communications.

Scientists in Africa are 1/10K, they do not talk with each other, no coordinated efforts b/n private and governmental universities, politicians do not put money into research, scientific work is monitored and funded by external funders

SREN in Africa the present and the future: now promising, politicians need to be involved

AM: *Strategies for improving Internet access in African higher education and research institutions*

CB (for Les Cottrell): *The PingER project.*

PingER measures the Internet performance which correlates with development indices and the

parameters. Cottrell is seeking institutions to host new PingER sites in Africa.

Discussion

The following key issues were identified.

- How do we convince people to support improved internet access?
- How do we convince people/authorities to invest in Internet capability?
- Administrations can be convinced that ICT-driven teaching, research, and community service are cheaper and more effective than the traditional approach.
- Improved linkages are needed between Higher Education institutions (HEIs) and governments. HEIs need to focus on government policies, an need to be willing to contribute their own share.
- The idea of linked consortia needs to be stressed.
- Reaching out to government authorities for a higher budget for better Internet connectivity
- Expand the availability of information online.
- Publicise eGYAfrica (few people have heard of it) and further communicate it to those who are believed to have a say.
- Convince our governments to have chief scientific advisors to Presidents, Prime Ministers, and such like.
- Communicate with all the relevant continental level institutions, e.g., AU and the NRENs.
- Strengthening national coordination is highly important.
- eGYAfrica should connect to the University of Lagos to allow LL to display his network online as an example of best practice.
- How do we develop the awareness of different bodies? The Ethiopian Experience has been presented as an example

NATIONAL DEVELOPMENTS

Nine presentations described developments related to Internet connectivity and networking

LA: *Nigeria*

Comment: Lagos University's network (UNILAG) is a useful success case history.

VD: *Cote d'Ivoire*

Comment: University of Cocody, Internet access in research and education institutions in Africa in collaboration with Korea

PK: *Kenya*

Comment: Nairobi University. Internet infrastructure & access for research and education institutions

AM: *Ethiopia*

Comment: Mekelle University has a successful wireless Internet infrastructure

BB: *Ghana*

Comment: ICT infrastructure in all Ghanaian Universities. Recommended developing small clusters of connected institutions when a large NERN is not practical.

CB: *Rwanda*

Comment: The Government is heavily investing in a national fibre-optic network. The challenge for R&E institutions is to exploit this network. A small cluster of institutions have high bandwidth interconnection.

DN: *South Africa*

Comment: South African National Research Network (SANReN) is operated by TENET and one of the best networks in Africa.

RELATED PROGRAMS AND PARTNERSHIPS

The need to link eGYAfrica with existing organizations with related objectives was recognized. AAU and ROA were acknowledged as outstanding candidates.

CB: *eGYAfrica Catalog of Organizations and Initiatives*. Currently 82 Organizations and Initiatives interested in the digital divide issue in Africa are listed and described briefly. The Catalog can be downloaded from the website.

BB: *Association of African Universities*. AAU considers eGYAfrica to be worthwhile and supports it. The AAU program is already agreed for the present four years cycle.

DN: *ICSU's Regional Office for Africa*. eGYAfrica objectives are closely aligned with some of the strategic objectives of ICSU. ROA will continue and expand its involvement in eGYAfrica.

Discussion

Collaboration

- Linking eGYAfrica with other well known organizations is essential.
- Avoid duplication of efforts/resources; use what already exists in preference to creating new entities.
- Link eGYAfrica to the AU and other AU-linked organizations so that these and other political bodies can contribute to achieving eGYAfrica objectives.
- Link to the important networks that share a similar vision.
- Reach out to the African Diaspora. We need them as part of our project implementation.

Publicity

- Make eGYAfrica more visible and, hence, more popular.
- Organize workshops for eGYAfrica, and a conference in 2012.
- Participate in conferences organized by others and present the eGYAfrica initiative. We can convince our partners to give us a session in their conference for our people in nearby area to participate and talk about eGYAfrica.
- Secure funds to sponsor some of our members so that they can participate in meetings and eGYAfrica.
- Portray science in Africa in a way it can be easily accessed by Africans wherever they are.
- Write articles and news items about eGYAfrica; contribute to books.
- Plan for an online eBook so that easy access can be obtained to information relating to Internet connectivity and eGYAfrica. Should the book convey a political message to convince politicians to engage, or should it describe what is already being done and what is planned? T Having hardcopies is quite good. We are lucky and grateful to have DN and BB with us.

PLANNING FOR eGYAfrica

Strategic directions

The strategic directions for eGYAfrica are set by the actions required to influence decision-makers. These were reviewed and revised slightly with regard to the need to:

- Raise awareness about the digital divide and the cost-benefits of effective Internet connectivity in research and education
- Work through national focal points/groups of concerned scientists and others to speak with a single voice to get government commitment at all levels.
- Link with other bodies and initiatives/programs with at the common purpose of working to reduce the digital divide.
- Make use of support from the international science community.
- Assemble information that can be used to argue for better Internet connectivity - status reports, declarations, policy statements, cost-benefit assessments, problems & barriers, successes stories, comparative case histories, comparative bandwidth costs, ...

eGYAfrica National Groups

Participants agreed on the need to nominate focal persons for each country, who will be instrumental in coordinating national activities related to eGYAfrica. Having national groups for eGYAfrica is our strength. The challenges and tasks of the focal person will depend on the situation in each country. It is important to avoid redundancy; whenever possible, work with and through any existing groups that have related objectives.

The following eGYAfrica focal persons were identified:

Algeria	Fatma??)
Cote d'Ivoire	Vafi Doumbea
Ethiopia	Alem Mebrahtu
Ghana	Collins Fosu

Kenya	Paul Baki
Nigeria	Victor Chukwuma
Rwanda	Otieno Onyango
Senegal	Mohamed Gaye
South Africa	Daisy Selematsela

We need to identify focal persons for other countries and give their names and emails to the eGYAfrica Secretary by 10th of December, 2010.

Working documents

Reference documents for eGYAfrica (introduction to eGYAfrica, conferences, people, organizations and initiatives, ...) are on the website under Resources > working documents. These documents are working documents and updated as required.

- C.Barton will continue to be the custodian of the reference documents
- Everyone agreed to make an effort to keep these documents up to date and expand them.
- B.Barry agreed to work on the catalog of policies, declarations, ...

Website

We need a more direct domain name. The name www.egyafrika.org is available for about 300USD. Our website is currently hosted at the University of Colorado, but this arrangement is temporary. The Workshop agreed that we should purchase www.eGYAfrica.org

Newsletter

Three newsletters have come out so far. We need a more regular newsletter (three to four issues per year). It should not be big but should be highly informative with important current and background information.

Daniel Nyanganyura agreed to take over as the editor of the newsletter. The next newsletter to be in January 2011. Everyone should provide suitable news information to Daniel. Charles Barton to notify Scott Bailey of the change.

Book publication

- DN pointed out that ROA publishes books on special themes. A book about NRENs in Africa, which will include eGYAfrica, was proposed.
- LA volunteered to lead the book project and will choose his own team.
- An outline of the book is to be drafted by Feb 1, 2011 and a possible list of contributors proposed by March 1, 2011.
- The book need to focus on eGYAfrica related activities, success stories, best practices for better connectivity, connectivity penetration, etc. It should cover a wide range of themes, aligned with eGYAfrica objectives and strategies.
- DN offered to try to arrange for ROA to publish the book.

eGYAfrica Questionnaire

An early version of the questionnaire was circulated three years ago. A new expanded version was produced, but this has not been used yet. We agreed that everybody should check and revise the new questionnaire and send his comments to C.Barton by 10 Dec 2010. We agreed to add a question about bandwidth costs. We need to use track changes. After that it should be finally given to the eGYAfrica Secretary for circulation. National focal persons need to help with the circulation.

Patrons, Sponsors, Funding

Sponsors are currently IUGG. IAGA support has ended. Patrons are currently IUGG, ROA, and AAU (we need to formally request AAU for an approval, invitation required). Other possibilities for patrons are:

- UNECA, despite the present challenges in reaching out to them
- NEPAD (DN to investigate)
- UN office for outer space (AM to follow up)
- EGEE as a sponsor and/or patrons (CB to follow up)
- ICSU (CB to approach).

eGYAfrica Workshop 2012

It was agreed that another formal eGYAfrica Workshop should be held in approximately 2-years time. Paul Baki offered to host the Workshop in Nairobi, probably in late 2012. This workshop should be a focal point for national eGYAfrica groups and provide an opportunity to review the objectives and tasks for eGYAfrica, as well as to market the initiative. Initial tasks include:

- seek support for the Workshop from potential funders (minimum EUR 20,000)
- investigate potential partnerships and co-hosting opportunities (which may influence the date of the Workshop).
- appoint a local organising committee and an international organising committee
- produce a Webpage for the workshop

Election of officers

A 3-year term in office for eGYAfrica Committee members was adopted as a temporary measure at the first Workshop, held in Addis Ababa in 2007. The formal eGYAfrica Workshops are clearly the occasion when officers should be elected, i.e., approximately every 2 years. This proposal was agreed. It was also agreed that national focus persons should automatically be members of the committee. The newsletter editor should also serve on the Committee.

The following were elected, to serve until the 2012 Workshop.

CHUKWUMA Victor (Chair)	Dep. Physics, Olabisi Olabanjo Univ., Nigeria	victorchukwuma@yahoo.com
MEBRAHTU Alem (Secr)	Mekelle Univ., P.O.Box 3044, Mekelle, Ethiopia	alemmeb@googlemail.com
BARTON Charles (Intl liaison)	Australian National University, Canberra, Australia	cebarton@gmail.com
NYANGANYURA Daniel (Editor Newsletter)	ICSU ROA, Pretoria, South Africa	nyanganyura@gmail.com d.nyanganyura@icsu-africa.org
AMAESHI Larry	Dept. Physics, University of Lagos, Nigeria	larryamma@yahoo.co.uk
BARRY Boubakar		boubakarbarry@gmail.com
COTTRELL Les	PingER Project. SLAC National Accelerator Lab	cottrell@slac.stanford.edu
PETITDIDIER Monique (EGl)	CETP/CNRS, France	monique.petitdidier@latmos.ipsl.fr
ROCHON Gilbert	Purdue University, USA	
<i>National focus contacts – one per country for the time being</i>		
Algeria – Fatima?	VC to follow up	
Cote d'Ivoire – Vafi Doumbea		doumouya@ucar.edu
Ethiopia – Alem Mebrahtu	See above	
Ghana – Collins Fosu		fosucoil@hotmail.com
Kenya – Paul Baki		paulbaki@gmail.com
Nigeria – Chukwuma	See above	
Rwanda – Otieno Onyango	CB to follow up	otienof@yahoo.com
Senegal – Mohamed Gaye	L'Université Cheikh Anta DIOP de Dakar, Senegal	
South Africa – Daisy Selematsela?	DN to follow up	daisys@nrf.ac.za

JOB ASSIGNMENTS

	WHO?	WHAT?	WHEN?
1	Everyone	Nominations for additional national focus contacts to SG	10 Dec 10
2	Everyone	Check the website. Update, revise, add, remove as needed. Check with Chair/SG if major change. Notify: ransom.christofferson@colorado.edu Copy: wkpeteron@gmail.com , SG	On-going
3	Everyone. BB to lead	Research policy statements, declarations, resolutions, recommendations, etc. for website	On-going
4	Everyone	Propose new participants to the Cmte. Revise the list of people as needed. Notify SG, Custodian	On-going
5	Everyone	Revise the list of Conferences. Add information about your conference attendances if relevant to eGYAfrica.	10 Dec; then on-going
6	Everyone	Seek funding for eGYAfrica, particularly the 2012 workshop	1 st half 2011
7	Everyone	Questionnaire – submit comments to CB	1 Dec 10
8	SG	Circulate Questionnaire to institutions	Jan 2011
9	Nat. focus persons	Help circulate questionnaire	Jan 2011

10	CB	Contact Monique re EGEE funding for eGYAfrica2012 and Patron options	
11	LA	eGYAfrica book via ROA – proposed outline proposed list of contributors	1 Feb 11 1 Mar 11
12	AM	Formal invitation to AAU & ROA to be a Patron	Dec 2010
13	DN	- ditto - for NEPAD	
14	AM	- ditto – for UN Office of Outer Space	
15	AM	Investigate if UNECA might be a suitable Patron	
16	Committee	investigate \$'s for Publication, W/shop2012, national group meetings, conference attendance, research	
17	CB	Tell Scott Bailey about new Editor	10 Dec 10
18	DN	Issue next newsletter	Jan 11

Report prepared by
Alem Mebrahtu, Victor Chukwuma, and Charles Barton

Appendix 1: List of handouts

AfGU proposal
African Conferences
eGYAfrica Introduction
eGYAfrica People
Guide – eGYAfrica National Groups
Guide – eGYAfrica Participants
Logos
Organisations and Initiatives
Participants eGYAfrica2010
PingER invitation
Program eGY Africa2010
Questionnaire
West and Central Africa REN Conference participants

IUGG Grant for eGYAfrica

Final Report by C. Barton

Project Title: eGYAfrica – 2009 Workshop

Amount awarded: USD10,000 (managed via IAGA)

Download links

This grant report: <http://dl.dropbox.com/u/31851729/eGYAfrica%20IUGG%20grant%20Report.doc>

Workshop report: <http://dl.dropbox.com/u/31851729/eGYAfrica2010%20Workshop%20Report.doc>

Project Objectives (as stated in the grant application)

The ultimate goal of the eGYAfrica effort is to make African communities wealthier, safer, and more sustainable through full participation in the information revolution. The specific objective is to achieve better Internet access for scientists (and others) in Universities and similar research and education institutions in Africa by influencing decisions about resource allocation and aid support. The aims of the 2009 eGYAfrica Workshop and planning meeting, for which IUGG support was requested, are to share information about the progress of eGYAfrica, to raise awareness about the status of Internet access in African Universities, to plan next stage of development of eGYAfrica, to strengthen and clarify the sense of purpose among eGYAfrica participants, to develop further national groupings, and to map out what actions are to be taken.

Results

The workshop was delayed by a year and was held in November 2010 in Accra, Ghana. The attached report “eGYAfrica2010 Workshop Report” summarises the purpose, proceedings, and results of the Workshop. Points of particular note are

- The Workshop was well attended (the limitation on participation being funds). Participants were pleased with the progress of eGYAfrica and were enthusiastic about its future.
- Officers were elected for the eGYAfrica Committee for the interval up to the next International eGYAfrica Workshop (approx. 2 years).
- A solid working relationship was established with the Association of African Universities, including appointment of Boubakar Barry, Head of the NREN unit of AAS, to the new Committee.
- A strong working relationship was also established with ICSU's Regional Office for Africa, including appointment of Daniel Nyanganyura (South Africa) to the new Committee, and as editor of the eGYAfrica Newsletter.
- Pathways were defined and lead ‘focus’ persons identified for establishment of eGYAfrica national groups in Cote d'Ivoire, Ethiopia, Ghana, Kenya, Nigeria, Rwanda, Senegal, and South Africa.
- Larry Amaeshi (Nigeria) offered to take the lead in producing a monograph based on the themes of eGYAfrica and the developments of NRENs in Africa. Daniel Nyanganyura will investigate getting the book published through ICSU-ROA, which would be very suitable.
- A comprehensive list was drawn up of jobs for participants.

Budget

The IUGG grant money was held, dispersed, and audited by IAGA Secretary General, Bengt Hultqvist until August 2009, then by his successor Mioara Mandea. The cost of running the Accra Workshop (travel, board & lodging, and venue hire) was AUD 13,130 (USD 13,524 at today's exchange rate of 1.03 USD/AUD). The IUGG grant was insufficient to cover the full cost, so some additional IAGA funds were used.

Expenditures, as tabulated in the Appendix, were reimbursed in two claims on IAGA. Claim 1 includes the cost for secretary Alem Mebrahtu to attend two meetings in Ethiopia to promote eGYAfrica issues.

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7 November 2011.

APPENDIX – Details of expenditure claimed via IAGA.

Ref	Date incurred	CLAIM-1 C Barton	Local charge	AUD	Notes
Y1	27/8/10	Alem Mebrahtu for meetings in Addis Ababa: Science-with-Africa USD400; UNSPIDER USD300	USD700	838.90	CBA M/C
Y2	6/10/10	Mensvic Hotel deposit		1228.72	NAB Visa
Y3	13/10/10	C.Barton SYD-ACC, LOS-SYD		2562.86	Citibank Visa
Y4	15/10/10	Paul Baki Kenyan from Nairobi		1105.50	CBA M/C
Y5	25/10/10	Vafi Doumbia Emirates from Abijan		483.80	CBA M/C
Y6	26/10/10	Moss Vale Travel other flights		2986.00	CBA M/C
		PART 1 total		9205.78	
	18/11/10	1 st Claim + receipts mailed to IAGA			
	1/12/10	PAID by IAGA into CBA account		9200.78	CLOSED
		CLAIM-2 C Barton			
Y7	7/11/10	Nigeria visa for Barton	USD141.00	149.74	
Y8	8/11/10	Ghana visa for Barton		100.00	Cash
Y9	9/11/10	Nigeria visa adjustment – AUD20		25.95	Money order
Y10	15/11/10	CNB-SYD-CNB flight		247.70	CB's M/card
Y11	19/11/10	10 flash drives (program, handouts)		90.00	CB's M/card
12	22/11/10	Lunch for Chukwuma & others	GH52	-	No receipt
13	22/11/10	Drinks with Moses	GH14	-	No receipt
Y14	22/11/10	Dinner for Moses & Victor	GH43	-	
Y15	24/11/10	Taxi to AAU	GH10	-	
Y16	23/11/10	Refreshments at hotel	GH20	-	
Y17	23/11/10	Dinner for group	GH140	-	
18	24/11/10	Taxis for group dinner	GH15	-	No receipt
Y19	24/11/10	Group dinner	GH176	-	
		GH total with receipts	GH389	296.49	Note 1
Y20	26/11/10	Conference services, accommodation	USD 2357.50	2503.66	
Y21	26/11/10	Extra accommodation: 7 nights+meals	USD 724.80	769.63	
Y22	26/11/10	Accomm+meals for Fosu+Moses	USD 655.76	696.42	Please check
Y23	29/11/10	Taxi CNB airport to home		20.00	
		TOTAL		4899.59	
		EXCHANGE RATE INFORMATION			
YA	17/11/10	Purchase of USD2500 cash		2654.21	CBA SS Note 2
YB	20/11/10	ATM Accra airport GH200	GH200	150.80	
YC	23/11/10	ATM Accra GH300 Zenith Bank	GH300	230.10	
	4/2/11	Claim-2 emailed to IAGA		4899.59	
	11/2/11	Claim-2 paid by IAGA to Barton's a/c		4769.08	CLOSED

Note (1) Exchange rate GH 1.312 = AUD 1.000 – see YA

Note (2) Exchange rate USD 1.000 = AUD 1.062 – see YB+YC