media/rep/

Repositorium für die Medienwissenschaft

Ali Balunywa; Guido van Diepen; Wouter Dijkstra; Kai Henriquez; Ben White; Geert Lovink

Beyond ICT4D. New Media Research in Uganda

2011

https://doi.org/10.25969/mediarep/19272

Veröffentlichungsversion / published version
Buch / book

DFG Deutsche Forschungsgemeinschaft

Philipps Universität Marburg

THEORY ON DEMAND

BEYOND ICT4D: NEW MEDIA RESEARCH IN UGANDA

BEYOND ICT4D: NEW MEDIA RESEARCH IN UGANDA

Print On Demand Series
TOD#1: Geert Lovink, Dynamics of Critical Internet Culture (1994–2001). Amsterdam 2009. ISBN: 978-90-78146-07-0.
TOD#2: Pit Schultz & Geert Lovink, Jugendjahre der Netzkritik: Essays zu Web 1.0. Amsterdam 2010. ISBN 978-90-816021-4-3.
TOD#3: Ana Peraica, Victim's Symptoms, PTSD and Culture. Amsterdam 2009. ISBN: 978-90-78146-11-7.
TOD#4: Joost Smiers and Marieke van Schijndel, Imagine There Is No Copyright and Cultural Conglomorates Too… Amsterdam 2009. ISBN: 978-90-78146-09-4.
TOD#5: Nikos Papastergladis, Spatial Aesthetics, Art, Place and the Everyday. Amsterdam 2010. ISBN: 978-90-816021-3-6.
TOD#6: Tom Apperley, Gaming Rhythms: Play and Counterplay from the Situated to the Global. Amsterdam 2010. ISBN: 978-90-816021-1-2.
TOD#7: Image, Time and Motion: New Media Critique fromTurkey, Ankara (2003 – 2010). Amsterdam 2010. ISBN: 978-90-816021-5-0.
TOD#8: Forthcoming, Spring 2012
TOD#9: My First Recession, Critical Internet Culture in Transition. Amsterdam 2011. ISBN: 978-90-816021-7-4.

CONTENTS

Acknowledgements

PREFACE
GEERT LOVINK

I haven't been to Uganda. My role in this publication was first of all to encourage students to conduct research overseas and to supervise the five MA theses that form the basis of this study. After the thesis research was completed in early 2010, we reassembled and started organizing the framework for this publication. By that time the Institute of Network Cultures had just started the Theory on Demand series. A publication of these studies in Kampala proved difficult to arrange from Amsterdam, and the individual theses had to be shortened, edited and collected along with a general chapter. Despite having done the coordination in the belief that the collection would eventually be compiled, I do not see my role as a main editor whose task it is to synthesize the work of the five individual researchers. Instead I want to say something about my own motivation to conduct 'post ICT for development' research. Independent 'ICT4D' critique was the topic of the first ever course I gave at the University of Amsterdam, back in 2004/2005. Since then I have stimulated a number of new media students to do their MA research overseas, including Rikus Wegman, who studied the use of ICT in Zambian high schools, Pieter-Paul Walraven, who investigated the Chinese internet industry, Ellen de Vries and Fei-An Tjan, who worked with media activists in Brazil and Columbia and Jidi Guo, who witnessed the arrival of 3G smart phones in urban China.

But wait a minute – I did have a connection to Uganda that linked me to the topic. In late 2005, during the second meeting in Tunis of the UN World Summit on the Information Society (WSIS) I got to know the Uganda delegation, and they were kind enough to adopt me as a fellow traveller for a couple of days. What I saw there was not only the increased role of civil society (a few members of such organizations managed to become an official member of the delegation), but also the large role that government agencies played in the roll-out of ICTs on top of a rapidly emerging telecom sector. Despite Africa's having the lowest overall penetration as a whole compared to the rest of the world (11%), Uganda is in the African Connectivity Top Ten and enjoys impressive growth rates. Ben White's chapter in this study is a strong account of the early entrepreneurial ICT start-up activity in the country. What struck me about the Uganda delegation was the warm and informal character and the open communication between the different 'stakeholders' such as government bodies, companies and NGOs. In most countries this 'multistakeholderism' was merely ideology. As I was rather sceptical about the 'corporatist' nature of such 'governance' constructions (I hate thinking of society as an organic body), I thought it was an odd coincidence that I could see such coalitions in action. Was I perhaps tricked by a cultural convention that I was unfamiliar with?

For me the 'ICT4D' rhetoric works as a mirror, a detour operation to investigate the essence of technology in a time when functionality is overshadowed by marketing and celebrity. Ever since 2005 we have seen a shift away from general claims and demands voiced in policy reports, towards the actual expansion of telecommunication infrastructures and the creation of new media markets on a truly global scale. In terms of its research agenda this publication has to be situated as a post-WSIS but also post-World Social Forum initiative. The Solaris and Incommunicado net-

works in which I was involved (2002-2010) tried to criticize the roll out of telecom infrastructure from a deconstructivist post-colonial policy perspective. The issues ranged from topics such as the ideology critique of 'good intentions' of Western NGOs and companies involved in the wiring of the 'rest' of the world to e-waste dumping, cognitive justice and the already mentioned 'multistakeholderism'.[1]

Since 2005 the critique of development, already well established decades ago by scholars such as Arturo Escobar, reached the mainstream with titles such as The White Man's Burden from William Easterly (2006) and Dambisa Moyo's Dead Aid: Why Aid is not Working and How There is Another Way for Africa (2009). This rather personal content cloud also includes Linda Polman's investigative journalism into the role of the UN and emergency aid, including We Did Nothing (2003) and The Crisis Caravan (2010), and Renzo Martens' video art work 'Enjoy Poverty' from 2009, widely screened at festivals, in museums and on TV, and which calls for Africans to take media representation into their own hands. In an odd and not yet fully reflected manner the justified critique of the development and emergency aid industries and the problematic role of the UN in a variety of conflicts started to coincide with the militarization of aid on the one hand and rise of right-wing populist demands to radically cut back spending of development aid by Western countries. Meanwhile the scholarly-activist work about ICT for development also slowly made progress; we can look at the achievements of Richard Heeks and his work in 'development informatics'. The same could be said of the still active bytesforall email list or efforts that came together at the recent 2010 London and 2012 Atlanta conferences (see: http://www.ictd2010. org/ and http://www.ictd2012.org/). And how about a progress report of One Laptop per Child? Instead of yet another ICT4D critique, this study is part of an emerging research field that tries to look at what is actually out there. Call it the 'ethnographic turn'; what endlessly fascinates are cultures of use that spread like wildfire. Mobile phone and internet users in Africa, Asia and Latin-America are not just consumers, they increasingly start to take matters into their own hands and develop their own websites, software and apps. The post-colonial subjects have agency that create their own techno-cultures. Not only can they speak for themselves and do this without remote representation, they are fun to work for as bosses and can be as annoyed as anyone else about software mishaps, failing connectivity and corporate lock-ins.

The rate of the rollout is mind blowing, even for experts. Africa is said to be the fastest-growing mobile market in the world, and is the biggest after Asia. The number of subscribers on the continent has grown almost 20% each year for the past five years, a GSM Association report on Africa stated, expecting there will be more than 735 million subscribers by the end of 2012, the current penetration rate being 65%. Former Nokia researcher Jan Chipchase: "In parts of Africa they're talking about a 4G rollout next year. The speed at which that just becomes part of the landscape, does, still manages to surprise. It's progress. Whether it's good or bad, it's progress.

---

1.   See: Geert Lovink and Soenke Zehle, Incommunicado Reader, Institute of Network Cultures, Amsterdam, 2006. I have summarized the debates of the Incommunicado netwerk in Zero Comments, Routledge, New York, 2007. The <incom> mailinglist ceased to exist around mid 2010. No attempts were made to organize a second meeting after the first Incommunicado conference in June 2005 in De Balie in Amsterdam.

It just is."[2] Chipchase observes that a lower-middle class, twenty-one year old woman in Nigeria now has a Blackberry as her first phone. "What used to be strictly the domain of the 'Wall Street Warrior' is now an accessible accessory." The trend to emphasize real-existing new media practices instead of time-and-again repeating digital divide statistics can also be found in the Centre for Internet & Society (Bangalore) and Hivos (The Hague) study entitled 'Digital AlterNatives with a Cause?'[3] The main message made here is that ICT is not merely a fashion amongst youngsters, even though young people are indeed the main drivers of the market expansion and experiment most when it comes to the use of social media in the current wave of political protests. The same confusion that we found with the term ICT4D, situated in between policy recommendations and the actual ICT use by the billions, we find in the term 'digital natives' which is both a reference to a particular generation (born in the 1980s and later) and a positive-productive attitude towards technology, media and social networking by both young and old.

One of the ways for me to keep up with what my students were researching and what was going on in Uganda was to follow 'i-network', an email mailinglist dedicated to 'knowledge sharing advocacy and expertise in ICT4D'. In my mail program I have a folder with over 15,000 mails posted to i-network in the period of February 2010-November 2011 (which comes down to an average of 23 postings a day). For the purpose of this preface I was only able to study a few thousand. The list gives a unique inside look at everyday troubles of a second league country in terms of IT-industry and internet use, with South Africa, Egypt and Nigeria being on top, while countries like Botswana, Mozambique, Madagascar and Tanzania are virtually absent. The i-network list has around 1500 subscribers, a fairly lively community that discusses vital issues in a convivial mood. Flame wars are rare. The atmosphere on the list is surprisingly informal and direct ("your website is a total mess", "stop being overly dramatic", "what is unethical about publishing the truth?", "how can someone post a message that simply goes.… 'Hahahahahahahahaha.…', seriously?"). Most members seem to know each other from start-up firms and ICT-related events in Kampala and are keen to give each other technical advice. In other countries and contexts this information would be shared through informal chat channels, but in this case email works very well and enables outsiders like me to read and enjoy the Ugandan ICT dialogues.

The i-network list works as an interface to academics, journalists, policy makers, network operators, freelance programmers, webdesigners and telecom regulators, all firing questions, comments and URLs at each other. In most cases the short exchanges deal with the technical specs of software, mobile phones and web procedures such as electronic payments. Some of them work at the Makerere Faculty of Computing, the Parliamentary Sessional Committee on ICT that discusses the Cyber Bills or the Africa Leadership Institute. Others are correspondents of The East African, work at the Uganda Christian University and companies like Techsys, SecondLife Uganda Ltd. (specialised in sale of refurbished branded computers), E-Tech, Appfrica Labs, Elmot Ltd., Best Grade (a free school management program designed for use by schools in sub-Saharan Africa and pioneered in Senegal), Eight Technologies, Owino Solutions and the Community Open Software Solutions Network. A considerable part of i-network members work overseas in

---

2.　http://www.fastcodesign.com/1665425/jan-chipchase-lays-out-3-deep-trends-affecting-tech-today.
3.　Nishant Shah & Fieke Jansen (ed.), Digital AlterNatives with a Cause? CIS/HIVOS, Bangalore/The Hague, 2011.

tech firms in the UK, NL and the US.

The mailinglist, running on the so-called 'development through dialogue' D-group software, developed by the Dutch ICT4D agency IICD in The Hague, started in 2002, aiming to promote 'knowledge sharing' and please a significant part in the consultative meetings they co-organized with the Uganda Communication Committee, prior to the 2003 and 2005 World Summit on Information Society. The iNetters for instance discuss the deplorable state of the Uganda ICT Excellence Awards website, how ICT can help AIDS infections, job opportunities for technical I.T. professionals in Uganda, the new PC Tech Magazine which "is distributed in high impact retail outlets, newsstands, airport, gift shops and bookstores Uganda, Kenya, Rwanda, Ghana, and Nigeria" and which sparked the remark: "The magazine is about 72 megs, can you please compress it or host it on a local mirror? It's going to take me about 45 minutes to get it"). We also read about the Google Technology User Group Kampala, the first Apps Circus on 21 November 2011, a workshop on Business Process Outsourcing (BPO) Enterprise, the company Nodesix looking to hire some young talent, meetings of Mobile Monday Kampala, the Fifth eLearning Africa conference, the start of the Mozilla community in Uganda, messages of the Women of Uganda Network, the Conference on M4D (Mobile Communication Technology for Development), news from the African Network Operators' Group, the 2004 Electronic Signatures Act, counterfeit phones, and hospital management software "with health solutions in logistics and chain stock management capabilities".

Let's continue the list-o-mania, as the high frequency i-network is denser than life itself. Topics vary from cheating mobile money, the use of MIT open courseware, mobile phone charges, getting test results by SMS, Internet Explorer exploits, mobile money rates, fraudulent SIMBOXs, the promise of unlimited local data plans ("we can't have high-speed, unlimited *and* cheap plans" - Reinier Battenberg), the growing challenge of e-waste, the value of professional webdesign, reasons to promote Linux, Cisco vs. Huawei routers, repeated calls for local content, .ug management issues, publishing CEO salaries, mapping landslides, reports from the Digital Africa Summit and the African Network Operators' Group, the use of PayPal checkout, a 'money management in marriage' seminar, GSM signal jammers, laptops being stolen at Ntinda Fuel Station, online district maps, the Swedish ambassador officially launching Makerere University's wireless hot spots, the Uganda Linux User Group hosting a party at Guzzlers Pub in Bugalobi to celebrate the official launch of Ubuntu 10.04, the first free webmail service ugamail.co.ug and PR around the launch of YouTube Uganda.

At some point Daniel Okalany asks: "Can someone please tell me where piracy laws are in this country? I don't seem to have heard of anyone being arrested for illegal software/music/movies. Are they existent?" The list responds that, "Microsoft goons fly in occasionally and help the cops kick down a few doors. Other than that, I don't think there's any enforcement." Statistics say that 83% of software in East Africa is pirated.

Another returning issue is the import and use of recycled computers. While Uganda is planning to reverse its ban on imports of used computers, Kenya is joining Zambia in prohibiting what authorities allege are old PCs being dumped on their markets by developed countries. Semakula Abdul: "I think for starters like Uganda, banning used computers will stall the development of the

ICT sector. Our society is so in love with cheap items." Also discussed is medical equipment and related software for hospitals such as the Navivision/ClinicMaster debate. Kyle Spencer: "Microsoft charges us $706 per-seat for the legacy Navision system. This is a bargained down price from standard fee of ~$1000. Furthermore, they want us to buy in blocks of 15. To illustrate just how much money this is, we recently opened a new clinic in Kololo which required us to put ~10 computers on Navision. The Navision license fees accounted for 10% of the entire budget for building and opening the clinic."

Debates and discussions on i-network have indeed prompted action by policy makers who are usually 'silent listeners'. Eunice Namirembe, the Monitoring and Evaluation Coordinator at I-Network, the ICT4D coordination network behind the list, says about 30 people join the platform every month for various reasons, especially when there is a 'hot' topic under discussion. Interestingly, about 40 percent of the membership are women now that so many are now involved with advocacy issues, while others have gone back to university for further studies and use the D-group for research.[4] One such silent listener is Hon. Nathan Igeme Nabeta, the Chairperson of the Parliamentary Committee on ICTs who follows debates on his blackberry. "It is always important to keep abreast of what is happening in the sector, and I-Network has provided this platform for us," he says. It is the same for Eunice Namirembe, who quietly moderates the list mostly through direct exchanges off list, sending out a public warning every now and then concerning off list topics and excessive debating. Every now and then subscribers express their concern of the list being turned into an advertising forum. Whether or not the overall anxiety on the list has grown in accordance with the ICT business expansion in Uganda will remain a question for further research.

"The only fiber which is worth its salt in Uganda is the Banana Fiber."
The disadvantages of Uganda as a landlocked country without direct access to sea cables are obvious. Needless to say that the politics of bandwith is the number one topic on i-network. We get factual data about ISP pricing, hear about the landing of the third cable in Mombasa (http://twitpic.com/1a69bb) and read discussions on how difficult it is "building tech companies in the land of dialup". In 2010 it was revealed that Uganda was laying the wrong fibre-optic cable, spending $30,000 per kilometer and $61.6m to cover 2,100 km, with Chinese firms handling the contract. We also read of repeaters stations without generators and about shallow trenches used for the cable which were not sufficient to avoid interruptions by even minor excavations ("The recommended depth is at least 1.2 meters and within the designated road reserves along highways etc this will typically protect the fiber from culverts and other minor excavations due to road works, where major road works are ongoing its safer to go deeper as the cost benefit analysis of the Cost of the interruptions vs. the Cost of trenching deeper come to play.") Raymond Kukundakwe responds: "You may argue that the cost is exorbitant, but you can't say you are being 'cheated' - that's like holding a demonstration outside Spear House complaining about the high cost of Mercedes Benzes." Mayengo Thomas Kizito adds: "People watching Chelsea vs. Arsenal in rainy areas of the country can bear me witness, We all understand that the weather affects digital signals but not for two hours and most importantly during a crucial game like that one."

---

4.   http://www.i-network.or.ug/index.php?option=com_content&view=article&id=462:i-networks-decade-of-ict-knowledge-sharing&catid=161:q2-newsletter-2010&Itemid=185.

Corruption (real or perceived) seems to dog IT projects in the region. "The republic is a grand casino." (Paul Asimwe) And: "I am not so afraid to say Ugandans are not interested in Uganda…" If we take productivity losses because of persistent electricity load shedding also into account, we're no longer sure what to make of the overall picture. Or take this news report: "Controversy has arisen over a $3.9m contract awarded to M/S Cyber School Technology solutions by the ministry of education. This comes two days after donors cut support to the sector over alleged corruption and mismanagement in the sector. The proprietor of the company, Mr. Keneth Lubega is the chairman of National Information Technology Authority-Uganda, and MPs on the ICT committee allege that Mr. Lubega could have used his influence to win the contract."[5]

The connectivity outages are no mystery for i-netters and can be easily traced back to the precise source of trouble. This knowledge might eventually be satisfactory but the frustration remains. See here the bandwidth dialectics, Ugandan style: "Two years ago, we were used to slow internet, we never complained. Now that we expect better, it seems that it has become slower." (Joshua Twinamasiko). The submarine cable company SEACOM[6]" still does not give any ISP a service level agreement and because of that what we have recently witnessed, it is clear why they don't. They had promised redundancy on the fiber cable that runs to Mombasa for quite sometime now and the time to deliver has moved to the end of the week. This having been said, they have been plagued with vandalism on their fiber, equipment failure and yesterday a routing problem." (letter to Datanet.com customers, March 16, 2010). Stephen: "It almost feels faster to walk to pick up a page than to get the bytes delivered to me by my ISP." A little while later SEACOM is down for five days because of a broken cable somewhere around the Seychelles. Others express the fear of overemphasizing the topic: "the network is losing its sense of existence if all we do is point fingers at which ISP is at fault." Joshua Twinamasiko puts the anxiety in perspective: "Internet may be a basic of life (1M link is a human right in Finland where over 95% of the population have internet access), and important in efforts to overcome poverty, corruption and potholes, but its not yet a reality in Uganda. First give people food, shelter, electricity, then you can talk about internet being basic. ITU Internet Usage statistics put us at only 7% of Uganda's population."

Related to access is the debate over the status of content. Whereas for some this might be a chicken 'n' egg question that, at least in the West, was extensively dealt with during the late nineties, the answer remains relevant on an everyday business level. One i-netter wrote: "Providers such as MTN, Warid, Zain, UTL and Orange all bring connectivity to parts of the country. Not content (they don't do content, they don't know how, it's not their strength). Voice is not considered content the way we understand content today. SMS is not considered content the way we understand content today. " Others contradict this: "Voice is content, SMS is content, electrical current passing over a wire is content. All give connectivity and, by extension, infrastructure providers a purpose." (Kyle Spencer) Reinier Battenberg responds by saying: "Voice is not considered content so far, as it's vaporous. It disappears right after it happened. It also tends to be 1-1. The web

---

5.   Daily Monitor, November 19, 2011. URL: http://www.monitor.co.ug/News/National-/-/688334/1275424/-/bgs4jtz/-/index.html.
6.   "The SEACOM submarine fibre optic network system was launched on 23 July 2009. The cable network serves to directly connect South Africa and Eastern Africa with Europe and Southern Asia, covering a distance of over 17 000km worth of fibre optic technology." (http://www.seacom.mu/).

on the other hand is 1-many and 'content' is stored. It's a whole 'new' (mark where have you been) paradigm. Storing & sharing content allows content to be transformed into 'information'. Information creates (or even is) economic value." Yet, if the network is down nothing happens anyway. "I have over 200 staff members on Airtel CUG but for now a week we cannot communicate and work in Mbarara town. The network is too pathetic." (Thomas Kizito)

The question that is at stake here is how to kickstart a rich, local new media culture. Do you have to wait for higher bandwith to reach a critical mass? Do you set up a geekish/engineering driven startup scene first that provides the emerging scene with basic code? Or would you rather emphasize the development of content first? Says Reinier Battenberg: "Local content has to be started and then we can track progress. We are the campaign. Every single one of us. If you don't know where to start: create a Wikipedia page about your cultural heritage. Tip: there is no page for Kwanjula yet. Map your neighbourhood. Go to www.openstreetmap.org create an account and off you go. www.walking-papers.org has helped me greatly mapping mine. Create a facebook page about a subject that is close to you and find others that think alike." Local apps play an interesting role in this context as accelerators of local content production, and even while strictly speaking about content, perhaps they are a promising way ahead.

Having become familiar with the i-network community over the past years made me wonder at what point the ICT-telecom-NGO-government consensus in Uganda will erode. When will local academic media and communication studies step in and present their research outcomes in such a forum? Web designers are already out there but when will the aesthetic interface component start to become visible? And how about the Voice of the People? Needless to say that i-network is focused on infrastructure, regulation and the business side of new media in Uganda and so far hasn't paid much attention to the real existing users. The next stage in the 'ethnographic turn' that is occurring in this publication, will no doubt focus on user cultures. Before we get there let's investigate the following reports that take us outside of the grand development policy schemes and portray so passionately the worked on the emerging new media cultures in Uganda.

INTRODUCTION
ALI BALUNYWA , GUIDO VAN DIEPEN, WOUTER DIJKSTRA, KAI HENRIQUEZ AND BEN WHITE

If one has never visited Africa, they will be pleasantly surprised to find themselves in a traffic jam in Kampala, Uganda. All road accesses to the city have long and annoying jams, with vehicles moving at a snail's pace. From the direction of the international airport, about ten kilometers from the city centre, the jam starts. Traffic jams mean having too many cars on too few roads. Television images in the west depict famine, disease, conflict, wildlife and generally unspoiled nature. A traffic jam therefore destroys this image that one has in his or her mind.

To beat the annoying, slow moving vehicles, ingenious Ugandans discovered motorcycle taxis. These are locally known as boda bodas. It is a new phenomenon, which took root about ten years ago. It was a metamorphosis from bicycle taxis to motorcycles. It started with cheap secondhand imports from Japan and now the recent adoption of even cheaper Chinese and Indian imports. These boda bodas can carry up to six people, animals, property, etc. They seem to follow their own rules. They don't stop at traffic signals, use no helmets and sometimes have no registration numbers. They are however the quickest way of beating the jams and keeping time. They are cheap, very fast and can manoeuvre their way through the tightest jams. They use pedestrian pavements, the wrong way along one-way streets, restricted areas etc. They are very popular with all classes of people, including tourists.

But when one opts for the snail pace of the car, one has an opportunity to see the outside. All along the highway are blocks of shops. The telecommunication companies seem to be competing against each other by painting these shops. Zain uses some ugly purple colour, MTN bright yellow, Uganda telecoms blue, Warid red and Orange orange. In bold print they invite new users to 'A Wonderful World' by Zain, 'Everywhere you go' by MTN and a 'Hello' greeting from Orange translated in most Uganda languages. The telecommunication companies seem to have a heavy impact on the people. The bombardment of advertisements does not stop at painting buildings alone. On all FM radios, televisions, print media and outdoor advertisement, telecommunication companies monopolize space. These same companies sponsor most of the public events and entertainment. They also employ many people in their corporate world as well as their sim card and airtime vendors.

Rising ICTs in Africa
The African ICT space is experiencing an explosion of activity. This period of growth and development was first marked by the UN General Assembly's decision to host the World Summit on the Information Society (WSIS) in 2001. The first phase of this summit took place in Geneva 2003 and was used to outline concrete steps needed to establish the foundations for a global information society. The second phase took place in Tunis 2005 and was used to put Geneva's Plan of Action into motion as well as outline an initial framework for Internet governance, financing mechanisms and a plan needed to follow up the implementation of the Geneva and Tunis documents.

These events were instrumental in putting forward a multi-stakeholder policy needed to encourage the creation of a true global information society. Remarkably, more than 19,000 participants from 174 countries attended these two events. The WSIS served as an effective call to action and established an initial road map needed to close the digital divide, a term used to describe the information gap that exists between the connected and the unconnected populations of the world. An otherwise noble effort, it is important we review both existing and new intentions. We need to constantly assess the progress made since these historic events and refine our strategies moving forward.

Incommunicado (referring to a state of being without the means or rights to communicate) is a forum that took place in 2005 and was an early step in this process. This event was a new effort to start addressing developments post WSIS and in the interest to introduce both a critical and alternative point of view. Specifically, the event arose out of the need to start looking seriously at 'info-development' and 'ICT4D', and to deconstruct both these theories and practice - to look beyond the rhetoric and to critically challenge the emerging sector otherwise tasked with closing the digital divide.

It is clear that the 'flattening of the world', as described by Thomas Friedman in 2005, introduces a new era captured by Incommunicado, 'where most computer networks and ICT expertise were located in the North, and info-development mostly involved rather technical matters of knowledge and technology transfer from North to South. While still widely (and even wildly) talked about, the assumption of a 'digital divide' that follows this familiar geography of development has turned out to be too simplistic. Instead, a more complex map of actors, networked in a global info-politics, is emerging'.[7] It is along these lines that Incommunicado introduces a new space that supports an outside opinion and perspective on the activities of the major agencies (like the ITU, UNDP, UNESCO, WIPO and the UN), international NGOs and multinational corporations dedicated to addressing the issues at hand. This approach is grounded in the deconstruction of ICT4D as a term, an approach and an agenda.

So where are we four years after Incommunicado? What progress has been made and what can we learn from our experiences? How has the situation changed and how can we best move forward? This research project aims to pick up where Incommunicado left off, to look past conferences organized in the West, the debates sponsored by western organizations, and to instead look through the lens of the individual end users on the ground. This project aims to embed itself amongst the people living at the 'bottom of the ICT pyramid' and to look at the same discussion from their perspective. It is this 'other' point of view that is too often missing in the ICT4D debate, otherwise a valuable voice that helps to put technologies, projects and organizations into their proper context.

Our collective experience needs to be deconstructed, reviewed and assessed. Now is the time to recognize the increasing levels of activity and to start examining both the role and implementation of ICTs to date. Now is the time to look into their social implications and the consequences

---

7.   http://www.incommunicado.info/conference.

that emerge from these actions. We need to separate what is working with what needs to be improved, redefining the position and the roles of the different actors involved in the process. This is in an effort to move forward with the improved thinking for the future.

More importantly, we need to look beyond the actual technology in the effort to better understand what is actually happening with our local cultures and societies in the process. As Christine Hine explains in her book Virtual Ethnography, 'one particularly persuasive current format is the foretelling of strange new futures based around the advent and widespread use of computer-based communication, with Negroponte (1995) and Gates (1996) among the most prominent in a legion of futurologists. To date, far more effort has been expended on predicting the revolutionary futures of (technology) than has been put into finding out in detail how it is being used and the ways in which it is being incorporated into people's daily lives.'[8] It is on this foundation that we can move past the technical and into the social, where we can recognize the impact ICTs have on our societies and better manage them moving forward.

ICT Developments

Since these historic WSIS events, much has been achieved. Most governments have developed an Information and Communication policy and established a better framework needed to foster the uptake of Information Communication Technologies (ICTs) in their respective countries. Many governments have established dedicated ministries, regulatory bodies and policies needed to coordinate their ICT efforts. Early framework and legislation have been implemented and considerable investment in infrastructure continues to be made. Public sector utilities have been liberalized and most governments now actively encourage private sector development. It is hard to find a government who does not see the value of ICTs or encourage their implementation on some level.

As the result of African governments implementing many of these initiatives, the continent is in the process of experiencing a digital communications explosion. Nowhere has growth been so rapid or had such a marked impact. The uptake in both mobile and Internet access the last three years is significant and positively reflects these initial efforts. The International Telecommunications Union (ITU) says that the mobile phone industry in Africa is growing at twice the global rate and remains the fastest growing mobile phone market in the world.[9] David Rogers of Open Mobile Terminal Platform said at the 2009 SXSW conference, 'More people have access to a mobile phone than have access to running water. More people have access to a data enabled mobile phones than there are desktop computers in the world.' The spread of mobiles in Africa is rampant and continues to spread faster than even our wildest expectations. More than 60% of Africa has access to a mobile phone that is soon to be the continent's most ubiquitous piece of technology.

East Africa offers the greatest room for development. Where West Africa benefits from high-speed Internet connectivity, supplied by the SAT-3 cable that connects the continents' Western seaboard, East Africa still depends on slow dial-up and expensive satellite connections. A 2005

---

8. Christine Hines, *Virtual Ethnography*, London: Sage Publications Ltd, 2000, p. 2.
9. International Telecommunications Union, 'ICTs in Africa: Digital Divide to Digital Opportunity', http://www.itu.int/newsroom/features/ict_africa.html.

study by a U.N. task force found that 90 percent of calls between African countries are routed by satellite through Europe or North America at a cost of $400 million a year. Some experts claim that bandwidth prices in Africa can be as much as 25 times greater than equivalent service in Europe. BMI TechKnowledge, a research firm based in South Africa explains, 'projects worth around $6 billion, including 10 undersea cables and several national networks, are planned or under construction in Africa.'[10] These recent investments in undersea cables and national networks could make the difference in 'unlocking' the region.

One example is SEACOM, the Mauritius-registered private equity venture. The organization has invested $650 million in fibre-optic undersea cables that will link east and southern Africa to Europe and Asia. The cable has reached the shores of Mombasa, Kenya and is currently making its way across the region. Another initiative is the EASSy submarine network, a second investment worth $265 million and scheduled to be completed in 2010. The project is owned by African operators, including Telkom Kenya and Telkom South Africa, and has the potential to supply additional bandwidth to 23 landlocked African countries. Richard Hurst, telecoms analyst at global telecoms advisory firm IDC, explains international bandwidth rates are expected to drop to a fifth or less of current rates of $3,000 per megabit after these two cables go into operation. Hurst says, 'undersea cables are a major positive step in a right direction.' Two other projects, TEAMS (The East African Marine System) and Lion, will only add to supply and further spur competition. The government of Uganda is in the process of completing a national fibre optic backbone that will serve to connect a large part of the country, most importantly in rural areas. AfricaNext says, 'There is a confluence of indicators that suggest that for the first time in more than a decade, broadband growth in the African continent may be on the verge of truly taking off.'[11]

Infrastructure aside, the African ICT sector increasingly understands that they need to adapt to the African context if they are going to successfully meet its needs. The New York Times article explains, 'people in the mobile-handset business talk about adding customers not by the millions but by the billions, if only they could get the details right.' More specifically, 'how do you make a phone that can be repaired by a street-side repairman who may not have access to new parts? How do you build a phone that won't die a quick death in a monsoon or by falling off the back of a motorbike on a dusty road? Or a phone that picks up distant signals in a rural place, holds a charge off a car battery longer or that can double as a flashlight during power cuts?'[12] These are the issues that have been ignored in the past and are now a priority in getting ICTs to succeed in the African context.

The growing number of mobile phones, and increasing access to affordable Internet, has resulted in the rise of African content. The African 'blogosphere' exemplifies this shift. Three years ago an Internet search resulted in only a handful of postings from across the continent. Now there

---

10.   Mernat Mafirakurewa, 'Africa's Broadband to Grow Four-fold', Africanews.com, 10 February 2009, http://www.africanews.com/site/Africas_broadband_to_grow_fourfold/list_messages/23101.

11.   Reuters, 'Broadband Set to Grow in Africa', 2 September 2009, http://www.nytimes. com/2009/02/09/technology/09iht-cables.4.20051593.html.

12.   Sara Corbett, 'Can the Cellphone Help End Global Poverty?' *New York Times*, 13 April 2008, http:// www.nytimes.com/2008/04/13/magazine/13anthropology-t.html.

are thousands of African blogs and the numbers continue to grow exponentially. Global Voices (United States), Afrigator (South Africa), Akouaba (Congo), Naijapulse (Nigeria) and BlogSpirit (Uganda) have emerged as Internet platforms that aggregate, organize and distribute the ever-increasing amount of information.

The rise in African blogs is joined by further developments in the African mediascape. In the last three years Africa has seen the emergence of Reuters Africa, CNN Africa, CNBC Africa and many others. Other global players see new opportunities too. Heavyweight Google has opened offices in East Africa, setting up local search engines, expanding their Google maps initiative and supporting numerous efforts to translate the web into local languages. Google has also made a big push to support its Android technology and implement it into the African mobile society. This effort is only highlighted by the company's launch of Google SMS and the recent Google investment in the O3b Satellite project.

Challenges

The fast pace of development of the ICT sector in Uganda has shown that investors are ready to take on Africa as a new frontier in creating a worldwide information society. Foreign and local entrepreneurs are finding ways to connect Africa to the grid. The only doubt that lasts is whether Africa is ready to collectively take advantage of all these new opportunities. In the wake of novelty, old problems still persist. In order for contracts to have value, an effective juridical system should be in place. For the building of a fibre optic backbone, sturdy roads should carry the new cable across the country. At this moment, cash flows which accompany the ICT-Boom act as catalysts for different forms of corruption.

Government involvement in the upcoming ICT markets has seriously impeded on market driven development and has hindered affordable and reliable access to ICT channels. Old hierarchies and personal interests from politicians obstruct free competition and market dynamics. The apparent success story of the ICT boom in Africa cannot veil the ongoing conflict, civil unrest, corruption, fundamentalism, lack of mobility, gap between rich and poor, food shortages, lack of clean drinking water, the ongoing HIV/Aids epidemic, increasing violence, an energy crisis, ecological crisis, climate change and other economic, social and political challenges.

In this grim light, the successful increase in connectivity can be easily mistaken for a golden bullet that will solve Africa's problems. Computers and mobile telephones can be presented as the gateway for Africa's emergence into the global economy, right behind China and India; however, such assumptions should be added to one of many misconceptions and 'off the shelf' solutions for sustainable development in Africa. This book will therefore try to put the dazzling development in the ICT sector in perspective with leading thinkers on development and in some instances try to show how ICT's can assist in overcoming specific challenges in the wider African development debate.

This research group unanimously agrees with thinkers who believe that the emphasis in the development debate should be shifted from a 'top down' to 'bottom up' approach. Instead of outside forces trying to shape countries like Uganda, local empowerment should lead to demo-

cratic change from within. Individuals on the ground have the power to seek out local solutions. They are in a unique position to take advantage of local opportunities and tackle local needs and challenges. This new line of thinking is relevant to development efforts and the ICT4D debate in particular.

From a Ugandan Perspective

Andrew Mwenda, a previous editor of Uganda's Monitor newspaper and the Chief editor of Uganda's Independent magazine, has come to symbolize a new generation of African thinkers. At a TEDGlobal conference in 2007 he asked, 'What man or nation has ever become rich by holding out a begging bowl?' He argued that more aid to Africa, whether it comes from the West or China, will not solve the continent's problems. 'It should not give us too much hope because, at root, foreign aid is an ineffective instrument that distorts recipients' incentives for the worse.' He went on to explain that aid is given with the assumption that its recipients lack the necessary resource base needed to generate tax revenue. This lack in revenue is in effect what limits African governments ability to meet public expenditure needs. Mwenda argues that insufficient tax revenue is caused by poor tax administration, bad policies and institutions that otherwise work to undermine the country's economic growth. The revenue that is collected is then spent on the wrong, less pressing priorities.

The Ugandan tax base is currently at 14% of GDP compared to 58% of GDP in for instance Sweden. In order to boost its popularity and to attract votes for the elections of 2006, the ruling party of Uganda abolished the national 'graduated tax'. This was a small tax, which had to be paid by all men above the age of eighteen, who did not attend school. The decision was welcomed by the population and awarded the ruling party enough votes from the peasant population to win the elections. The regime is able to take such irresponsible measures as abolishing tax because the deficits in the treasury will be filled up by aid in the long run. This example illustrates the way in which the Ugandan government, with the help of foreign aid, is taking away the peoples 'ownership' of the country. Without having to pay taxes, citizens lose their rights to have a say in what is best for the country and to hold the government accountable for mismanagement of the countries resources.

Mwenda goes on to explain that, 'the failure of Western aid in Africa has little to do with the conditions attached to it, but a lot to do with poor governance on the continent. Look at China giving Sudan money to build a multi-million dollar presidential palace. That surely does not promote economic growth and development in that poor and conflict-ridden republic. You might criticize China, but over the years, Western aid to Africa has done more or less the same thing i.e. helping corrupt African rulers build palaces, fly executive jets, and acquire prime real estate in New York while the citizens of their country go hungry and die of disease.' The result is that African governments answer only to their 'financiers.' It is this final point that is really starting to gain ground in the development debate. The link between governments and citizens needs to be rebuilt if there is to be any kind of real accountability, the kind of democratic dependency that binds a country's ruling party to its citizen base.[13]

---

13. TED, 'Andrew Mwenda Takes a New Look at Africa', June 2007, http://www.ted.com/talks/andrew_ mwenda_takes_a_new_look_at_africa.html.

To make sense of this problem and to see the distance between the ruling party and the Ugandan population, a thorough understanding of the relationship between elites and civil society needs to be formed. In understanding the gap that lies between citizens and leaders, a clear distinction should be made between the rural and urban population. Decentralization of the country into more and more districts is distancing the central government from its responsibilities to ensure local governments are well managed and refrain from corruption and patronage. It is in the rural areas of Uganda, where over 80% of all Ugandans live, that the most blatant forms of corruption and mismanagement of public funds take place. Local governors have strong ties with the ruling regime and make sure the rural population brings in votes for the party. Central government is hesitant to clamp down on local government officials because they are part of the patronage system that provides the democratic base for the ruling NRM party. In this way, local and central governments hold each other in a deadlock, which is preventing inclusion of the majority of the population in political or economical participation. The patronage system is preventing the emergence of a middle class, which is instrumental to promote the emancipation of civil society and a healthy national economy.

The government of Uganda has worked out excellent policy frameworks. The new national development plan stresses the importance of healthcare, education, water sanitation and service delivery. The reality on the ground however differs radically from the formal policies. The same goes for policies to fight corruption, waste and inefficiencies. Isolation of millions of rural dwellers from any feedback mechanism that would allow them to take action or to even file a complaint against mismanagement of public resources holds back any significant political change. The inability to hold leaders accountable is most apparent at district level, at a safe distance from any direct liability on the central powers. Obviously, incentives for the central authority to create effective mechanisms of accountability at the local level are missing. The spiral of cronyism reaches from state house to the most remote corners of the country and dissolves any chances for improvement in public service delivery and political reform.

Mwenda goes on to argue that the real potential for development is in fostering trade and business and that the local government is to blame for the continent's inability to join the global system on a wider scale. On an international level, the failure to effectively implement and take advantage of several agreements can be clearly witnessed in agricultural exports. Mwenda: 'The real cause of Africa's trade predicament is mismanagement of policies and institutions that form the relationship between government and exporters.' He goes on to explain, 'For example, Africa's major exports are agricultural. Governments in Africa have for many years pursued policies that reduced farmers' incentives to produce both food crops and export crops. Poor government ruling is to blame for the continent increasingly becoming a food importer.' He argues that even when western countries have given Africa preferential trade arrangements the continent has been unable to take advantage of them. He references the Cotounou Agreement and the fact that not a single country in Africa, including Botswana, has met their quota.

In the case of his home, Uganda, the country has been given a free trade quota to export 50,000 metric tons of sugar. Unfortunately, the country has failed to export a single kilo. He explains that, 'Under the Africa Growth and Opportunities Act (AGOA), African countries have 6,000 products

they can export duty free to the U.S. market. Most African countries have failed to take advantage of this opportunity and their benefits have been limited. This is because external trade - whether with China or the West - only offers an opportunity. Which country will take advantage of the opportunity depends on its internal institutional capacity. Unfortunately for Africa, this internal capacity is lacking all around. We need to stop looking outside of the continent for solutions. Africa needs internal reform before it can benefit from the rest of the world.' More specifically, the need to identify local solutions stems from a growing need to identify local talent that can lead the way. [14]

Unless internal structures are sorted out, African people could see yet another major opportunity for economic development slip through their hands and into the pockets of the ones who have benefited for so long. ICTs can provide so many chances for democratization and integration into the world economy; on the other side of the coin, these ICTs could also widen the gap between those who have and those who have not. The way in which ICTs could be applied for development has been reason for debate and is the domain in which this research group hopes to make an impact. Traditional ICT4D has survived a transformation into ICT4D 2.0, we question this paradigm shift and hope to convince the reader of a more thorough shift into a new line of thinking about the use of ICTs in Africa.

ICT4D 1.0

According to Oestmann and Dymond, developing societies could profit in a number of ways from ICTs, namely by means of the Internet, email and chat-rooms, software development, increase of bandwidth and connectivity, and public access schemes.[15] A concrete outcome of efforts concerning these issues and the whole digital divide debate is seen with the emergence of telecenters. This rather basic implementation of ICT-supplying-centres throughout the world has given a lot of practical insight in to success and failure within ICT4D.

Telecenters 'are physical spaces that provide public access to information and communication technologies, notably the Internet, for educational, personal, social, and economic development.'[16] Telecenters come and go in different forms, from a box on the street with a payphone on it, to big rooms filled with computers with Internet access, fax and copy machines, telephones and libraries. The idea was to make information technology publicly accessible for people formerly cut off from the digital world in order to improve their chances. Worldwide telecenters were created in order to bring development especially to rural areas, so as to include them into the global information society.

14. Ibid.
15. Sonja Oestmann and Andrew C. Dymond, 'Telecentres - Experiences, Lessons and Trends, in The Commonwealth of Learning', in Colin Latchem and David Walker (eds) Telecentres: *Case Studies and Key Issues, The Commonwealth of Learning*, 2001.
16. Ricardo Gomez and Katherine Reilly. 'Comparing approaches: Telecentre evaluation experiences in Asia and Latin America', International Information & Library Review, 2002: 57.

The potential of the new interactive technologies is:
- To connect disadvantaged people with societal decision-makers so that their voices may be heard in the agenda-setting process.
- To empower people and communities to determine their own futures through developing self-efficacy and collective efficacy.[17]
- To provide accurate information about social problems and their possible solutions.'[18]

In short the potential of ICT4D lies in empowering people through access to information and opening pathways to organize in a way that can enable people to improve their socio-economic and political situation. The loose concept of the telecenter allowed for a lot of different interpretations and different outcomes. Apart from the principle of public access, '..there exists little guidance for the individual telecenter operator on how to successfully carry out a project'.[19] Because of this lack of know-how concerning ways to incorporate such a project in one's surrounding, success stories were rare.

Jellema and Westerveld argue that the telecenter concept up until now hasn't been able to fulfill its promises at all. They claim that this is because the non-profit telecenter models aren't sustainable. Attracting funds is difficult, since there are no prospects for commercial yielding. Jellema and Westerveld therefore argue for input from the private sector.[20] In this way the model will have to change so that it can run on its own terms and capacity, without endless external funding. An example of such a model is the privately owned telecenter, these days better known or understood as cyber cafés or Internet cafés. These commercial variants that pop out of the ground throughout African capitals offer food and drinks for a pleasant consumer experience, which attracts a wider public. However, the question remains whether these initiatives bring about true development.

It seems all but impossible for computer enthusiasts to examine critically the ends that might guide the world shaking developments they anticipate. They employ the metaphor of revolution for one purpose only – to suggest a drastic upheaval, one that people ought to welcome as good news. It never occurs to them to investigate the idea or its meaning further.[21]

ICT4D has become a more simplified concept due to very complex issues. Langdon Winner was one of the first to discuss that the discourse on ICTs was very much characterized by utopian prospects. Computers have been dispensed in the last decades as if it would be the ultimate bridge toward development and it is this blind enthusiasm that has covered up the true effects

17. Albert Bandura, 'Personal and Collective Efficacy in Human Adaptation and Change', *Advances in psychological science: Vol. 1. Personal, social and cultural aspects*, J. G. Adair, D. Belanger, & K. L. Dion (Eds.), Hove, UK: Psychology Press, 1998: 51-71.
18. Everett M. Rogers and Pratibha Shukla. 'The Role of Telecenters in Development Communication and the Digital Divide', *Journal of Development Communication*, 2(12), 2001: 26-31.
19. Gomez and Reilly, p. 60.
20. Jako Jellema and Rudi Westerveld, 'Learning lessons from failure: the Ugandan telecentre experience in prospective', *ITU Telecom Africa*, November 2001.
21. Langdon Winner, 'Mythinformation', The New Media Reader, eds. Noah Wardrip-Fruin and Nick Montfort. Cambridge, MA: MIT Press,,2003, p. 589.

that various technologies and policies have. The best-known project concerning the dispersal of computers is One Laptop Per Child (OLPC) founded by Nicholas Negroponte. Through this project, children in developing countries could achieve a small and robust 100-dollar laptop. The project description on the website shows their mission statement:

To create educational opportunities for the world's poorest children by providing each child with a rugged, low-cost, low-power, connected laptop with content and software designed for collaborative, joyful, self-empowered learning. When children have access to this type of tool they get engaged in their own education. They learn, share, create, and collaborate. They become connected to each other, to the world and to a brighter future.[22]

Negroponte's general idea is that the user should be empowered by computers so that: 'each individual can be his own architect'.17 The project was initially praised for its originality, but soon massive criticism did away with the widespread optimism: again a top-down approach was used in developing efforts, little attention was given to the differences between and within societies and local needs were completely overlooked. There was no local capacity for maintenance and to adapt the technology in the long term, if the laptop would be damaged there were no means to fix it. Furthermore, in regard to the point made earlier, context should always be taken into account, and this proved an issue with OLPC too, since the individual and self-educating character of this project clashed with indigenous and communal forms of education, in which the teacher always has authority over the pupil. Another criticism that is worth mentioning here, which Winner already suggested, is that in the end it's the transnational corporations that will profit most from the dispersal of a given technology.

ICT4D is a strategic part of ICT expansion: ICT4D is digital capitalism looking South – to growing middle classes, rising educational levels, vast cheap labour pools, and yet difficult regulatory environments. It is about market expansion and converting unused capacity into business assets on the premise that new technology is the gateway to hope. And it is about the deepening of the market by pressing for liberalization, opening up spaces for competition and investment, bypassing regulations or devising new regulations that will shape the future.[23]

One has to consider that ICTs are technologies that are often developed in the West. A computer doesn't bring food, clean water or electricity. Therefore the term ICT4D, is in a sense, a dangerous one. ICTs can help in developing a country, but it's only one step in a chain of thousands. The context in which ICTs are brought, is often overlooked, due to the fact that the policies are often created in Europe or the USA. It is very tempting to argue that investing in ICTs is positive, since information is often seen as the key to development from within, but ICTs alone are not equivalent to an (useful) information flow; they are part of the pre-requisites for an information flow.

Below is a description of how these lessons have been incorporated in to a new approach toward development.

---

22. http://laptop.org/en/vision/.
23. Nicholas Negroponte, Soft Architecture Machines, Boston: MIT Press, 1975.

ICT4D 2.0

Richard Heeks names the era of ineffective ICT efforts concerning development: 'ICT4D 1.0'.19 The outcomes of the techno-centric development projects during the ICT4D 1.0 phase, like the telecenter as the prime example, led to specific new and important lessons and buzzwords for development actors.20 Among these were sustainability; projects were doomed to fail with wasted development money as a consequence, therefore the need was felt to put more emphasis on ensuring the longevity of the projects. Scalability; projects had a limited span, and as was argued in chapter 1.2.4., the services enabled by ICT4D projects were still inaccessible to the poorest of the poorest. And evaluation; proper evaluation of development projects were often lacking making it difficult for development actors to learn from their mistakes or to ensure that the project implementation was following the correct path. However, as Heeks argues, 'more generally, these outcomes of the first decade of ICT4D have led to a rolling re-appraisal of priorities, processes, and purposes'[24]

In a more specific sense, new technological innovations mark the re-assessed development priorities, new innovation and implementation models mark the re-appraised development processes, and new views on the poor and intellectual perspectives on international development constitute the re-appraised development purposes. These watchwords together thus mark the context of the shift from the 1.0 to the 2.0 phase in ICT4D. Yet, as Heeks further argues, 'there is no sharp divide to mark out the first from the second phase of ICT4D – the latter began as the first lessons were being learned back in the 20th century. And there is no consensus on what ICT4D 2.0 looks like – that is an ongoing discussion'. Therefore, in saying this, Heeks has contributed to the conceptualization of the ICT4D 2.0 paradigm by identifying some of its components.

New Technological Priorities

During the ICT4D 1.0 phase, technologies, which had already proven their impact on societies in the United States and Western Europe, were implemented for development purposes as off-the-shelf solutions. The computer and the Internet were two existing technologies, which transformed the sociocultural and economic dynamics of Western societies, and were thus seen as technologies which would have the same impact on developing countries when used as tools in the development process. The obsession with technology-as-invention, and the minor focus on technology-in-use, which was characteristic of the initial approach to ICT4D, has lead to an 'invention-down' approach of ICT4D instead of a possibly and more natural effective 'use-up' solutions. Therefore Heeks typifies the shift in technological priorities for development with the concept of the invention-use balance. The invention-use balance can be seen as part of a wider trend in western perspectives of development in the south. Heek's calls for more of a 'Use-Up' solutions approach within ICT4D, which can be related to research methods proposed by social scientist William Easterly who, in his book The White Man's Burden, calls for 'searchers' instead of 'planners'. Planners are the top down strategists who study systems and will try to implement schemes of development into a dysfunctional society. Searchers are the ones who apply a bottom-up perspective, searching for demand and home grown solutions.

---

24. Ibid

This shift in balance of technological priorities is characterized, according to Heeks by:
- Less emphasis on what might be used (the Internet and PCs), and more emphasis on what is actually used (mobiles, radio, television).
- Less emphasis on fundamental technical innovation; and more emphasis on application and business model innovation.
- Less emphasis on piloting and sustaining new applications, and more emphasis on as sessing and scaling existing applications.[25]
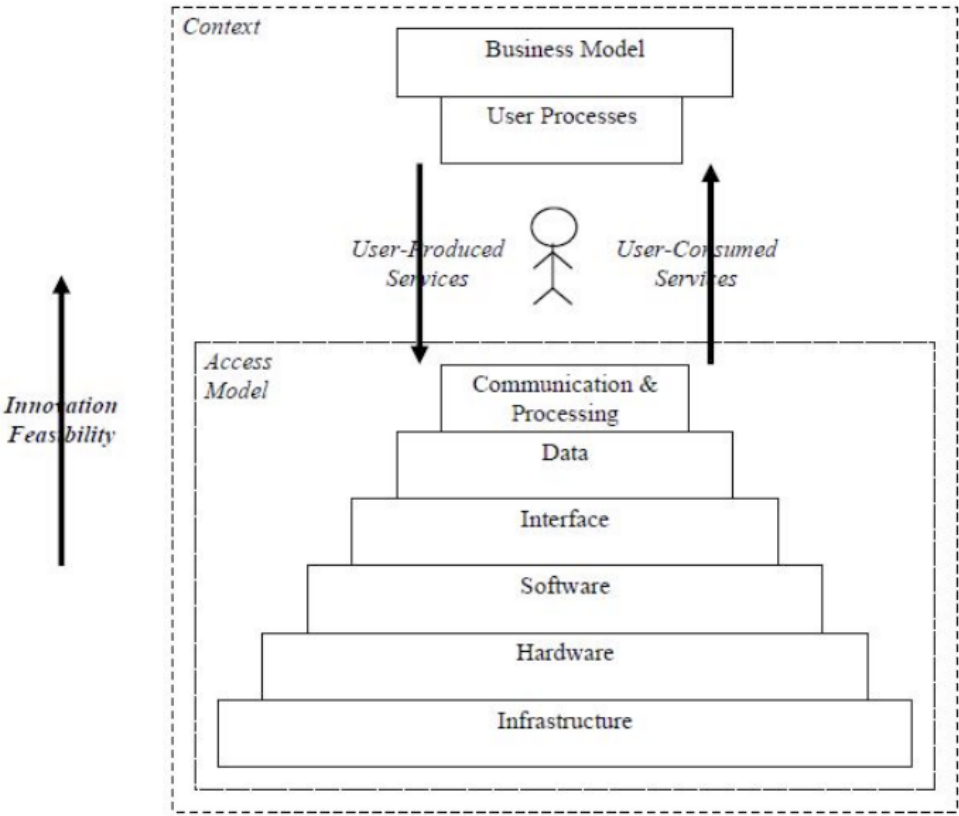
Figure 1: The Innovation Feasibility Model

With these theoretical notions and newly formed development principles in mind, Heeks has formed the *innovation feasibility model for the technologies and processes of ICT4D,* which is a more socially-centered and technology-in-use focused framework for guiding technological development action. The model outlines the context in which ICT4D takes form and places the technological development priorities and processes into a hierarchical structure, from the least feasible elements to the most easily feasible.

---

25. Ibid.

Starting with the access model, Heeks gives an overview of the key technological elements, which make access (one of the most important ICT4D drivers) possible. When access is acquired, the door opens for new user processes, services and business models. Where development actions during the ICT4D 1.0 phase were mainly focused on the access model, the focus during the 2.0 phase gradually shifts towards these user processes and new business models coming forth from the access model. As this framework shows, it is more feasible to innovate these 'user processes' than to innovate the elements, which grant access, and thus it reflects and argues in favor of socially-centered development. However, even though this is the case, the elements that provide access still remain the backbone of ICT4D, they subtly influence ICT4D processes and thus the focus on their innovation must not be neglected within ICT4D practice.

As the ICT4Uganda research group, we seek to build on this initial framework set forth by Heeks, and push forward our own theory. Mainly that ICT4D (as a developmental practice) has found its place in history but no longer has a place in tomorrow's reality. Essentially a failed experiment, it's now time to progress into a new era, the digital era. However, as a research team we recognize the disparity of growth between advanced nations and third-world countries which has led to a digital divide that is still apparent today.

ICT4D is a term that no longer captures imaginations like it did years ago. ICT4D can be seen as a failed mission. People became scared and skeptical and no longer wish to associate with it. The shift from 1.0 to 2.0 doesn't represent the actual mind shift that is taking place in the field. A completely different mindset must be implemented in order to effectively deal with developments in which technologies are involved. We need no more terms or concepts and much more multidimensional focus on the complexity of individual situations and movement on the ground.

THE DIGITAL PROMISE
GUIDO VAN DIEPEN

Telecom companies are digging throughout Uganda to implement their network cables in the ground to connect the formerly removed Ugandans to the digital world. Finally people in developing countries have the chance to break through their geographic restrictions and participate on a more global level to improve their economical position. The Internet is a particularly interesting phenomenon considering that it offers people who previously depended on their direct environment for information now have access to this inexhaustible source of information. The question remains as to what ways the people in developing countries can actually integrate these new technologies in to their daily lives. Moreover, what are their actual chances of gaining economical success in this new digital world? Accompanied by four fellow researchers, I travelled to Uganda to conduct fieldwork on the actual effect of ICTs on a developing society. My aim was to find out in what ways the Ugandans used the Internet in the informal setting of the Internet café.

My concrete fieldwork started at the begin of April 2009 by meeting up with Jason, who had set up a few Internet cafés and telecenters in both Uganda and Tanzania. He brought me to a local Internet café, Kayesoft 1, outside the centre of the city, near the universities. He was a good friend of the manager, named Harry, so he spent much of his online hours in that particular Internet café. Since he helped Harry with technical problems from time to time, Jason could use the Internet for free. Jason explained to Harry that I was conducting research, and just as I hoped, Harry invited me to do research in his Internet café. He also told me about this other Internet café he was running in the centre, where I could do research as well. He invited me to use the Internet for half price, since I would be using it a lot. This made it possible for me to hang around the Internet café without looking suspicious to other visitors, since I was there 'using the Internet'.

The Kayesoft 1 was located on the second floor of a small shopping mall and consisted of two rooms. One was filled with computers, the other with three televisions and game consoles. When I arrived, approximately seven computers were being used by customers. Behind the counter there was a girl of about twenty years old named Vanessa. She would later turn out to be a valuable informant for me. First I had to take a look around.

In my research, the focus lies on the people in Uganda who do use the Internet. Most of the Internet users live in Kampala, since that city has the largest number of access points and the people there have the most financial means to obtain a connection. The urban environment of Kampala is vibrant and provides an atmosphere that is open to technological innovations. Using the Internet is a popular activity, especially amongst a noticeable part of urban youngsters and young adults, often students.

The connections available at this moment are not as stable and fast as we are used to in the West; they may best be compared to slow dial-up connection speed. Hence, Internet use in Uganda is to a large extent characterized by the connectivity problem. This is not only notice-

able within the Internet cafés; all throughout the country there are huge billboards portraying the frustrations caused by poor infrastructure:

Figure 1 Broadband Advertisement

The quality of access in Uganda is still pretty low compared to that of the developed countries. The slow connections influence the Internet use in Uganda in such a way that the range of possibilities offered by the Internet is low. In Kampala, I didn't encounter very much stress in regard to this issue; even when electricity goes down while someone is writing an email, it doesn't seem to be perceived as a huge disaster. It appears that there is a realm of acceptance over the limitations of the technology; people are more or less used to it. In the Kayesoft Internet café, it was common to hear the high tone singing of the generator that supplied electricity during a electricity break-down.

Figure 2 Generator at the Kayesoft 1 Internetcafé

This awareness of having to cope with lacking infrastructure is reinforced by the slow connection, which decreases the effective use of time spent on the Internet. Opening a website and down-loading can take a while. In the US and Europe, YouTube and other video broadcasting websites are extremely popular amongst Internet users, but in Uganda it is almost impossible to watch videos online. These popular video websites are known by many, but rarely used by them due to the limited bandwidth.

At universities and schools, the Internet is usually supplied for free. Some schools have a room with computers and Internet connection and one of the large universities also has a wireless con-nection throughout the whole building.

Jason often talked about the problems that the Internet café had using the VSAT system (Very Small Aperture Terminal): 'It is much less stable than the fiber optic cable. VSAT works via an-tenna's and satellites, so the connection stability depends on the weather. If it storms in the UK, which it often does, the connection is unstable.' Jason explained how they often notice this when the Western world wakes up, the connection speed drops immediately. Jason spends most of his time online during the night to bypass the slow connection. '...since richer sectors of society are the first to have access to new products, they have the benefit of initial competitive advantage in using and mastering them. At the same time, those who are excluded face new, or greater, disad-vantages. In both cases, new ICT products increase, in principle, poverty and social exclusion.'[26]

At this moment, Jason is not bothered and just waits for the broadband to arrive in 2010. One this time comes, he thinks these problems won't be an issue anymore. Rumor has is that the ISPs prices will take a high toll on the African continent, but the café owners are determined to stay strong in the negotiations about the price.

Costs are an important barrier for most people in using the Internet. Internet cafés charge be-tween 1000sh and 3000sh (0.50-1.25 Dollar) for an hour spent online. Therefore, I was shocked when Vanessa told me proudly that she earned 5000 Shilling per day. Jason explained to me that 5000 Shilling is a 'reasonable' daily salary for a lot of people in Kampala. Half of Uganda's citizens live under the international poverty line of 1.25 Dollar (3000 Shilling) per day. As a result, surfing the Internet as an activity seems out of reach for a lot of people. Some children get some money from their parents to use the Internet, while students use it for free at the university or save some money to go online a few times a week for an hour or so.

The fact is that the Internet is seen as a gateway to opportunities for a better life and therefore motivates a reasonable amount of people to invest in using it. Jenna Burell, who conducted a sim-ilar research in Ghana, observed the same motivation for usage: 'Visiting an Internet café was not only an enjoyable way of passing the time but the skills and foreign contacts gained might prove beneficial in the future, thus justifying the investment of time and money.'[27] Besides the strong

---

26. Bernardo Sorj, *Information Societies and Digital Divides: An Introduction*, Milan: Polimetrica, 2008, p. 63.

27. Jenna Burrell, 'Could Connectivity Replace Mobility? An Analysis of Internet Café Use Patterns in Ac cra', Ghana Mobile Phones: The New Talking Drums of Everyday Africa, 2009, p.161.

drive to use the border-crossing technology, competition between the more and more numerous Internet cafés throughout Kampala promises costs to be a smaller barrier in the nearby future. The WiMax at this moment does offer a fast connection, but is still far too expensive to be available for the ordinary Ugandan civilian. An example of the current problematic character of costs is the Makerere University Business School (MUBS) which has a large room with 250 computers waiting already for two years for a good deal with an Internet service provider.

Figure 3 Closed Computer Hall at the MUBS

In the meantime the computer hall stays closed. It is too expensive for the university to obtain a proper connection. One of the ideas is to form a block with other educational institutions in order to gain a stronger position in the negotiations with the providers.

Mindset

Whatever the form of change envisaged by a given theory, it has to be preceded or at least accompanied by a corresponding transformation in the people's way of thinking.[28]

Neither the government, nor most people on the ground until now discovered the inherent possibilities of the Internet. A student union of the MUBS did see some possibilities and was planning to hold the elections and the voting for their new leader on a website. Eventually they called it off, due to the minimal connectivity offered at the university, but even more so due to their idea that people are not yet accustomed to using the Internet. One of the professors there thinks that the mindset of the people is a bigger challenge than the connectivity. 'People need to become aware of the possibilities it offers.'[29] According to him this awareness is coming very slowly.

This image hasn't been strengthened by the situation on the ICT faculty of the Makerere University. There they did do the voting for the elections online, successfully. They will communicate their evaluation with the MUBS, to stimulate the MUBS to try it next year.

28. Ebere Onwudiwe and Minabere Ibelema, *Afro-optimism: Perspectives on Africa's Advances*, Westport: Praeger Publishers, 2003, p. 21.
29. We had a discussion with this professor at our introduction day at the MUBS. We spoke with several professors and students that day about our topics.

A visit at the Busoga University showed that there was both a lack of a proper connection and a lack of drive to establish one. We visited the Busoga University on Monday the 11th of May because Henry[30] asked us to have a look at the website of the university. Although we didn't have any experience in building websites or programming we said yes, with the idea we might be able to help in building a Ning platform, a simple online social network for communities.[31]

When we arrived to talk to some of the professors and the chancellor, the first question they asked us was: 'What will you do for us?!' Before we could answer, we were forced into a room where over a hundred students and teachers sat waiting for us. We had to sit behind the table opposing the hundreds of students and teachers. We were introduced as professionals who were there to solve all the problems concerning the Internet. We felt very uncomfortable with the authority and responsibility that was given to us. They asked us to build a website, to solve the accessibility and connectivity problem and to support them throughout the process. We explained to them that we simply couldn't because we didn't have any programming experience. We told them that they themselves were the experts, since they had an IT department, and that they themselves could build a website. They replied, '…Yeah…well, maybe we could..'

As a quick solution we talked about building a Ning platform for them. All students would be able to participate and could become more engaged in the university network. The students and teachers liked the idea very much, but then there was the connectivity problem. They had 15 computers with a 128 kb/s connection, which is pretty slow. This was surely not sufficient for the thousands of students who wanted to participate. Moreover, the university didn't have a lot of money and wasn't planning to spend the little money they had on better online connectivity. They showed us around a piece of land that was set to be renovated into a new football field and new classrooms for the students. This was more of a priority than improving the Internet connection. It seemed that they not only counted on our expertise to improve their digital infrastructure but also on our initiative to build it.

The high expectations that the principal had of us Westerners revealed a sense of authority which was believed to be held by the West; we often encountered this assumption that we have the solution for everything in Uganda. It seemed that there is a general dependence on the Western world and that without help from the West, solving problems is difficult. On Facebook I found a similar expression that illustrated the awareness of this concern:

'We owe so much to the community; so we have to join forces to contribute to the common good. We cant wait for others or outsiders; we have to stand up and take action as youth and young professionals to build up Africa. The youths have great skills and energy which could

---

30. Henry was a local friend with whom we as a group spent a lot of time. He introduced us to many people and also to the Busoga University.
31. A Ning platform (http://www.ning.com) is a readily available Internet based network platform, which one can relatively easily adjust to one's own wishes.

be instrumental in bringing social change; they just need motivation and assurance.'[32]

The scene at the university demonstrates that the chancellor and students didn't have much faith in their own potential. Nonetheless, after we had realized the promised Ning platform for them, in no-time hundreds of students subscribed and started to engage actively in the digital community.[33] Apparently there is the will, it needs only to be mobilized.

According to Sorj: 'The unification of space and time does not mean that temporality has disappeared. On the contrary, it represents the contradiction, acceleration, and increased value of time brought about by the disappearance of space barriers.'[34]

The Internet seems to have a stimulating effect on mindset. The transparency of the medium allows one to see how things are done elsewhere in the world. People communicate their actions on online forums, which reminds people who are surfing the web that the world keeps moving. A global transparent market encourages the people involved to keep up with the competition that is made visible by the web. A lot of Internet users interviewed during this research confirmed that the Internet had a stimulating effect on them.

Robert, for example, who imports cars from Japan and Singapore, using websites like tradecarview.com, sees a lot of trading online. 'I have to act quickly when I see a good deal online. Otherwise it is gone. This competitiveness motivates me to work hard. By comparing myself with others online, I keep myself sharp.' Robert is not content with the very slow Internet connection in his office. Luckily his office is located above the Internet café Click, so when he needs a faster connection, for example to upload a picture or send a lot of emails, he goes down to Click. Although he has to pay 3000Shilling (1.50 Dollar) per hour in the Internet café, he says that it is definitely worth it for his business.

Jason feels inspired by the Internet too: 'There are so many possibilities online! I am sure I will build my career online as long as I put enough effort in to it.'

Internet Usage - Local Amusement

In the Kayesoft 1 Internet café there was an internal music and movie database. This was put in place 'to attract more young people', Vanessa told me and proudly showed me the hardware box that made this possible. It contained a large collection of songs sorted by music style such as African fusion, techno, reggae, western, new local music, gospel, Quran, old skool etc. An excess of movies were also available, of which most were Hollywood movies. However, there were also a lot of music videos sorted in maps named Swahili, Indian, Rwanda music and MTV cribs videos.

---

32. This expression is cited from a Facebook message in the group Ugandans on Facebook from the Uganda Rural Fund that invited people to attend the International Youth Camp & Young Professionals for Community Dev't Conference.
33. The Busoga University Ning network can be found at http://busogauniversity.ning.com/.
34. Bernardo Sorj, 'brazil@digitaldivide.com: Confronting Inequality in the Information Society', UNESCO, 2003, p. 38.

Some computers had headsets next to them, but most of them had been stolen already. Like the looting at the Makerere University, this theft issue exemplifies the lack of technological infrastructure and, even more so, the desire for it. Some people carried their own headsets. Luckily there was one lying next to my computer, so I could listen to some Indian pop. When I put the headset down, a young guy came up to me and asked for the headset. Apparently the Internet wasn't working at that moment; the database was especially popular at moments when the Internet 'timed out' or while waiting for a download or a site to open.

African music is well received within the continent. Most people in Uganda love local music, and when visiting bars and clubs, local music often got people on to the dance floor. In the streets, music comes from different places and creates a vibrant atmosphere. In supermarkets, but also on television, often a mixture of local or African music and American pop music was broadcasted, the latter usually being R 'n B.

This affinity with African music was also apparent in online behavior. On several different instances, I noticed people listening to music through websites that offer Ugandan music online.[35] On the Facebook forum 'what do you love about Uganda', music was commonly mentioned, together with food, dancing and climate: 'Uganda is de best country ever, de music, de food, de dancers, de comedy. de friendliness, de people, de sunshine, de places 2 visit, everyting is sooooooooooo gd.'

Amongst the men, soccer is an extremely popular source of amusement. The UK Premier League is incredibly well-loved and this is seen in a flood of stickers and posters covering the street in Kampala portraying the logos of Manchester United, Arsenal and other Premier League soccer teams. The city is crawling with taxi motorcycles called boda bodas, which are all decorated with stickers of UK soccer teams. People wear shirts of their favorite team and when there are matches, men gather together in bars and cafés to watch the game. Every missed goal causes an uproar throughout the whole city and are spoken about in the following days.

Figure 4 Screensaver at the MUBS

---

35. Examples of these websites are http://www.ugandaonline.net/mp3 and http://www.ugpulse.com/ musicuganda.

The enthusiasm for soccer was visible in the online behavior of many men. The competition is fol-lowed by looking up results on websites of the Premier League or the sport section of the BBC website. [36]Every time I looked into an Internet browser's history I found relatively a lot of links to English sport websites. To a smaller extent, I found links to Premier League betting websites.

Another popular Internet activity is reading local newspapers online. The biggest newspapers in Uganda are the Red Pepper, the New Vision and the Daily Monitor. Most popular is the Red Pep-per with its entertaining character: many pictures of beautiful Ugandan ladies, several sex-related items and gossip about politicians and celebrities. In the Internet cafés, I found out that reading these newspapers online is common for those who have already integrated the Internet into their daily lives. In this way, the Internet functions as a re-mediator of local issues.[37] Most Ugandans who follow online news stories also subscribe to international news updates.

Surfing the Globe

I was rather surprised with my first encounter with a Ugandan cosmopolitan man. On the plane from Cairo to Kampala, I met a young Ugandan of 19 years old who had just flown back from a tennis match in Egypt. He had already travelled all over the world for tennis matches; he studied in Uganda as well as in South Africa and received a scholarship for the following year to study in the USA. While laughing, he told me that he might do some economic studies too, to help us in Europe with our state of crisis. It later became clear that he was not really an apt representative of an average Ugandan; however, he made me aware of my prejudices in regard to young Ugandans. Later on, I had another surprising encounter with a form of 'global identification', when I was invited for dinner at a local family's house. We were looking at an engagement video, which re-vealed how two families negotiated, did some rituals and dancing. It was interesting to see that the different families belonged to different religions, one Muslim and the other one Christian. The chiefs negotiated and decided that the couple should decide which religion they wanted to follow as a couple.

The bridegroom, who was sitting next to me watching the video, told me that these days it is pretty common to have mixed marriages: 'This used to be different, but now we are part of a "global village", things are not that strict any more.' We find here an expression of acceptance with identi-fication in a global context in which different perspectives can co-exist. At that moment, I felt a bit naive thinking that there were still places that had not been reached by the impact of technolo-gies like television and the Internet. The main lesson learned was that developing societies also redefine themselves within a space, which encompasses not only the traditional and the physical, but also the modern and the digital.

Sorj: 'While on the one hand the fact that anyone can put content on the Internet represents a form of democratization of information, on the other hand it causes dependence on search en-gines that have the capacity to influence the priority level of texts for users.' [38]

---

36. URLs of these websites: http://www.premierleague.com and http://news.bbc.co.uk/sport.
37. This point will be elaborated later on in this chapter.
38. Sorj, 2003, p. 41.

Most people I interviewed used popular western platforms such as MSN, Yahoo, BBC and CNN; the most popular search engines were the ones provided by Google and Yahoo. Somebody even replied 'only Google', when I asked for the websites that he visited most often. This means that the sites which he was eventually redirected to were all selected by Google.

> Search engines are not merely technical but political matters, as political analysts Lucas Introna and Helen Nissenbaum point out. '[Search engines] provide essential access to the Web both to those with something to say and offer as well as to those wishing to hear and find. Our concern is with the evident tendency of many of the leading search engines to give prominence to popular, wealthy, and powerful sites at the expense of others.'[39]

Western websites often display pictures of white people and the language is always in English. I asked myself whether Ugandans therefore see Internet as a white space or only see their own route on the web, not bothering too much about this mono-cultural content? The latter was confirmed by the subjects of this research. People were often aware of the Western origin of the Internet, but most people explained that they saw the Internet more as a global space in which people have equal opportunities.

There is a widespread libertarian idea that the Internet opens markets for the less developed, that previous constraints are diminished and new avenues of freedom is increasing the potential of the individual. However, in Kampala the main entertainment industry embraced is from the West. Girls looking at pictures of Beyonce and boys reading about David Beckham are commonly observed in the Internet cafés in Kampala. Miller and Slater are in warning for the emergence of monopolies taking over unprotected markets.[40] Previously, the Internet could be seen as a more or less open, anarchistic landscape without any vertical power structures. However, more recently, portals like Yahoo, MSN, BBC, CNN, etc. have become more and more important for a complete Internet user experience, providing news, email services, weather and lifestyle, thus keeping the user within a corporate chain of sites and leaving the online back alleys largely undiscovered.

Massive Passive

The issue of free choice and unique identification within popular culture is problematized by theorists such as Adorno, who instead of finding variety, see standardization inherent in pop songs and other media forms. Popular music created for platforms such as MTV are based on standard models that give the listener a comfortable, but hidden feeling of recognition: 'Mass listening habits today gravitate towards recognition.'[41] The mass production of pop songs is a 'machine' that 'pre-digests' the music for the consumer.[42] The result is that the mass gets mediated in a sphere of passivity. The 'machine' is constantly running and produces song after song while the consumer is under the impression that he/she has unique choice and taste. In Adorno's words:

---

39. Richard Rogers, *Information Politics on the Web*, Boston: The MIT Press, 2005, p. 4.
40. Don Slater and Daniel Miller, *The Internet: an Ethnographic Approach,* Oxford: Berg Publishers, 2000.
41. Theodor Adorno, 'On Popular Music', *Studies in Philosophy and Social Science*, New York: Institute of Social Research, IX, 1941: p.32.
42. Ibid, p. 25.

'Popular culture becomes a multiple-choice questionnaire.'[43]

New media theorist Langdon Winner sees a similar tendency within the electronic mass media and states that: 'Passive monitoring of electronic news and information allows citizens to feel involved while dampening the desire to take an active part.'19[44] The all-consuming Internet platforms in this sense demotivate people to actively undertake creative initiatives, this even has political influence in the sense that it keeps people indifferent to issues that in fact could have an influence. Instead they surf through the consumer-oriented websites that constantly remediate the same themes in different forms. When looking at the news items on MSN news, there is a clear pattern in the recycling of themes such as sport, lifestyle and entertainment that maintain a safe, comfortable and consumer friendly journey through the digital world. Speaking of masturbation...

Porn

...cyberporn paved the way for the 'Information Superhighway' to the extent that it initiated the Internet gold rush and caused media, government, and commercial companies to debate seriously and publicly the status of the Internet as a mass medium. [45]

While porn might not be seen as the pathway toward development, many theorists argue that porn was a primary accelerator of the Internet. Nowadays, porn sites are still the most visited sites worldwide. According to Jason, in Uganda, due to the limited bandwidth, online porn is often consumed in the form of pictures instead of movies, 'Although there are people who find three seconds of streaming porn more satisfying than any pictures at all.' Especially in secondary schools, porn is an attraction for many youngsters to become familiar with the Internet. Usually, they collectively watch porn in one of the computer rooms when the teacher isn't around. Some youngsters own a USB stick on which they can download the pictures. Later on, they can view the pictures privately on a computer elsewhere, independent of an Internet connection. The USB stick is very valuable for the Internet user in Kampala since it enables the user to transport the content to a place where there is no Internet connection. Most people in Kampala know someone with a computer at home.

One time in the Kayesoft Internet café, a man next to me was watching porn on 'xvideos.com'. He was in his early twenties and looked somewhat street smart but also slightly dodgy. He was wearing a headset and asked me immediately if I was interested in porn. 'Sure...' I replied. He called himself the 'porn king' and watched porn a few times a week. He said he used the sites '..xxnx, eskimotube, pornhub, redtube...just the normal stuff.' Apparently, these American websites form the biggest portion of the online porn market.

He told me with a smile that he first watches it and then goes home to put it in to practice. According to him, a lot of people in Kayesoft 1 watch porn in the evening. He was not interested

---

43. Ibid, p. 26.
44. Langdon Winner, 'Mythinformation', *The New Media Reader*, eds. Noah Wardrip-Fruin and Nick Montfort, Cambridge, MA: MIT Press, 2003.
45. Wendy Chun, *Control and Freedom: Power and Paranoia in the Age of Fiber Optics,* Cambridge: MIT, 2006, p. 79.

in pictures; he only watched 'the real thing', that is videos, even if the connection is poor and constantly buffering. He told me he prefers to look at 'ebony black women'.

The 'porn king' told me that there were a lot of white men in Uganda making use of women who couldn't resist the money. 'I don't like that. Our women go much easier with a white man than with a black man. Only for the money!' For locals, a prostitute might be cheaper in absolute terms, but a local pays relatively more since he has much less money, he explained to me. 'But my time will come. One day I will take multiple white girls at the same time and then I will give it to them!' It seemed to me as if this desire 'to take multiple white girls' was actually a desire for vengeance. It appeared to me that he would like to dominate a white girl to make up for all the western sex tourists coming to Uganda. This is one example of the frustrations which some Ugandans have over the ease with which foreign tourists travel in and out of the country and and more generally over the political and economical dominance of the West over Uganda.

The majority of porn watching however, was done by adolescents discovering what all young boys were curious of at that age. When we look at the interviews conducted during this research, we find that the general opinion among the respondents is that the fact that porn is so accessible is the worst aspect of the Internet. Most people that were interviewed during the research thought that porn was a terrible phenomenon and one of the most negative aspects of the Internet. People were especially worried about the fact that children could be exposed to porn so easily. Some people thought that for adults it should be okay to watch porn if they have the desire and as long as they keep it to themselves. Some people thought that porn was harmful to people's morality. One person said that it gives people the wrong ideas and could trigger them to visit prostitutes. Nevertheless, whether people support pornography on the Internet or not, in Uganda porn has been a topic of debate that has brought the existence of the Internet as a technology to the attention of the masses.

In July 2004, the newvision newspaper broke a story about two pornographic sites, www.kimansulo.com and www.hotugandans.com hosted in Canada but selling thousands of pictures and videos of Ugandan women having sex. A follow-up story by a journalist from The Monitor newspaper said,

> But most of the 'models' in the thousands of nude pictures on kimansulo.com are not actors and many did not know that their pictures were taken while having sex. They are neither models nor even prostitutes. They are ordinary office workers and university students who go for a party, get drunk and end up having a fling with someone they thought was a friend. Unknown to them, a concealed video camera is rolling away, recording the minutest details of their actions and facial expressions". By the end of August 2005, they had closed their web sites due to public outcry.[46]

Although religion and morality play an important role in Uganda, I noticed that flirting on the streets wasn't a rare phenomenon. Also in our conversation with local friends, we noticed that

---

46. Venansius Baryamureeba and Florence Tushabe, `Cyber Crime in Uganda: Myth or Reality', The World
      Academy of Science, Engineering and Technology, Volume 8, 2005: 68.

sex was a popular topic of debate. This is also evident in the most popular newspaper of Uganda, The Red Pepper. This newspaper is full of juicy stories about the sex lives of politicians and celebrities. More shocking for me as a Westerner was that news items about rape crimes were often described very vividly and in a somewhat sensationalized way. For example, an eight year old girl was raped by her teacher, and the newspaper wrote about it in detail how: '..he put his megawhopper inside her tiny kandahar and started bonking away.' This is only one example of how sex crimes are often reported.

Sex is far from a taboo subject in Uganda. Also in video stores, there is often a department where one can find porn. Like anywhere else in the world, the reality in Uganda is that: 'sex sells'. Twelve percent of all websites worldwide are pornographic and a quarter of all search engine queries are porn related. Not surprisingly, also in Uganda, the Internet is often associated with porn. Moreover, sometimes the Internet is even heard of for the first time because of fuss or hype around certain pornographic material. One of the respondents was told by his mother not to use the Internet anymore, because she had heard that the Internet was a space where Ugandan women were sexually abused.

Foreign friends

> Instead of search engines, many used their foreign chat partners to collect information about educational opportunities abroad, international news and life in other societies.[47]

In Uganda there is a huge interest in life outside of Africa. Most Ugandans like to hear stories about this distant life directly from the people living in the 'First World'. A contact abroad is not only useful for information, he or she can actually do something too, such as, for example checking up on possible scholarships within a country or writing an official invitation letter. Ibid, p. 157.

Having foreign friends has more practical advantages for Ugandans. For example, it is very hard for a Ugandan to get a credit card and often impossible to get a bank account. Even Jason had difficulties doing online transactions. He had already opened a bank account, but Pay Pal didn't allow Ugandans to receive money, only to send money. He told me that he felt seriously discriminated and disadvantaged. He thinks that this is because Uganda is known for corruption, which makes it difficult to convince an institution of financial stability.

With no digital platform for executing financial transactions, it is almost impossible to purchase anything online. Charly offers an example of the effort that a local must go through in order to make a successful transaction online. He first transfers money through Western Union to his foreign friends after which they pay for the purchase by credit card. Not only is this detour far from appealing for online banking transactions, it also explicitly exposes the advantages which westerners have in comparison with Ugandans.

Burrell: '…through the mediation of the chat room, foreign chat partners were completely objectified as suppliers of niceties, fashion items and mobile phones. These examples point to a form of

---

47. Burell, p. 158.

acquisition-driven play within a range of recreational activities…'[48]

Efforts to get in contact with the West were observed in the online behavior of the Internet users. It was interesting to see how much ease with which Ugandans approached people online in order to become online friends. It was common to add random people to their friend list on Facebook, even if they didn't know the person. Usually these chat-friends lived in the USA or Europe. According to Bonny, making friends online is 'the best thing about the Internet'.

Pen Pals

The poster in the picture is one example of multiple advertisements for sponsors and penpals throughout the streets of the centre of Kampala. It shows the explicitness of people making efforts to form relationships with people and organizations abroad. An interesting aspect here is that sponsors are associated with penfriends. Apparently a penfriend is not only seen as someone with whom one could build a friendship on an emotional base, but moreover on an economical base.

Figure 5 A Widespread Poster

Burrell: 'Users chat with pen pals for the sake of sociability and conversation while at the same time seeing this as a chance to network and build rapport with foreign contacts who might be able to help provide a migration opportunity or finance an education or business opportunity in the future.'[49]

48. Ibid, p. 157.
49. Ibid, p. 168.

In Ghana, Burell experienced the same kind of efforts in finding penpals both for fun and eco-nomical reasons. Relationships could be created '…as strategic affiliations for realizing material gain.'[50] Burell argues that this activity of collecting penpals is something that predates the Inter-net. Before, it was a common activity for Ghanaians to keep in touch with foreigners through the postal system.[51] In Uganda, there is a whole business built on this 'habit' of people in both the physical world and in the virtual world.

One day I asked a young guy on the street about the posters. He explained to me that they were probably 'con men', people who use tricks to gather money from ignorant people. I asked him if he wanted to call them up to check what would happen. He agreed and I gave him my phone. A man answered the phone and after the guy explained to him that he was interested in a sponsor, the man told him to bring two passport photos, an email address, a postal address and 35.000sh. After the conversation, the guy explained to me that these men were obviously con artists trying to make money. The con men did this by making people do a test-interview and subsequently letting them fail, usually with the argument that they did not fulfill the requirements. Another way is to put the interested people on a 'never-ending wait list'.

When I thanked the guy for his time he asked me if he could have my email address and if I could help him find a scholarship in Scandinavia. I explained to him that I was not from Scandinavia and that I didn't know much about scholarships, but it didn't really convince him. He replied, 'Come on, you are from Europe. I am sure you can arrange something for me!' The same day he sent me an email asking how I was doing, telling me that I could contact him whenever I wanted.

Another example of activities that are orientated around penpalling were found in the same build-ing as where the Kayesoft 2 Internet café was located. Jason told me about a woman that had an office one floor down. She asked 10.000 Shilling to register in order to apply for a penpal. After the whole procedure, there were never any results. People were often told to wait, 'because it was a slow period', or because they didn't have the right specifications. There is such a huge desire for people in Uganda to get in contact with the West that they are willing to spend their small savings on these 'opportunities', it's therefore common for con men to set up fake organizations to meet this demand.

Later on in Kayesoft 1, I met Sidney. He was pretty open about how he tried to get as many international contacts as possible. He tried this through Facebook, but also by asking Western tourists for their email addresses. He asked all of them if they could help him with respect to getting a scholarship, job or sponsor. He focused on American tourists, because his aunt lives in the USA and promised him to plane ticket there if he successfully completed secondary boarding school. In this way, he already had some contacts that might be able to help him with a job or a scholarship.

Success stories are rare, but do spread quickly. Three different people told me the same story independently about a local guy meeting an American woman online. After a while, the woman

---

50. Ibid, p. 157.
51. Ibid, p. 157.

came to Uganda to visit the guy and soon after they married and now both live in the USA. There is another popular story about a Dutch man who came to Uganda to marry a Ugandan woman that he had met online. They now live together in Kampala. Whether these stories are real is questionable, but above all they seem to function as motivation for people to look for spouses overseas, where life is thought to be much better.

Finding penpals is not a new phenomenon in Uganda, although these days the Internet has made it much easier to find contacts and keep in touch. E-mail has become the faster digital variant or maybe even the replacement of the letter. Social networking sites such as Facebook allow one to peak into another's friend list and then approach them. Having 'friends' abroad becomes much easier through these kind of social networking sites. These days, every Ugandan Internet user can create an international network.

Online Dating

Besides looking for penpals or scholarships, a lot of women look for partners abroad. It was not easy to experience this through first hand observations. Most women didn't like to talk about it and often chose to sit in the corner of the Internet café, which made it difficult to get a glimpse of their efforts. However, sometimes I succeeded and 'voyeured' my way through to some interesting findings. Besides my first hand observations, both men and women were eager to talk about how other people looked for partners online. According to most respondents, it was a popular activity among women, but also among some men. It was actually the men who spoke more openly about their own experiences. One of the employees of the Kayesoft 1 Internet café told me about a time when he tried to get in contact with a few western women. 'Just for fun', he said; he wasn't necessarily looking for a white woman, more so for a fun opportunity to travel to the West: '..to see other countries'.

One afternoon I visited the Kayesoft Internet café. Next to me there was a girl in her twenties video messaging with a white male in his fifties. The bald and overweighted man was sitting in his office. They were constantly calling each other 'sweetie'. I questioned if they had ever met in real life since the man asked her to show her face. She did this obediently. They were telling each other that it was so nice to see each other. Suddenly a black woman appeared behind the man. 'Who's that, sweetie?' the girl asked. The man told her not to worry, because it was just a colleague. The women started waving to each other. The man told her that his boss called him to lunch so he had to go. In the end the man wrote 'love you' and the girl answered him: 'I love you so much!' Before ending the conversation they gave kisses in the webcam.

Later on the girl told me she only visited Internet cafés with webcams, so she could talk to her 'boyfriend'/'fiancé'/'husband'. She constantly used another term to refer to the man. She told me that he works in the United Arab Emirates (UAE). When she went there on 'holidays'[52] she met him and they formed a relationship. Meanwhile, the man has visited Kampala to visit her and they are engaged. She was rather vague about whether the engagement was official.

---

52. Holidays is put between quotation marks, because a story that I've heard multiple times is that there are East African women who go for short times, often during holidays, to Arabic countries like Dubai and the UAE to work as prostitutes. It have to be noted too that I am not sure if that was the case here.

When I told her that I was from Holland she mentioned that her neighbor married a guy from Holland and that he moved to Kampala three years ago. This wasn't the first time I had heard that story. I told her about websites where people from different countries were dating online, and she was eager to find out more about these websites. When I showed her an online dating site she told me that she wouldn't like to get into a relationship with someone that she had never met in real life. According to her, a webcam is not sufficient enough to determine whether someone is trustworthy.

Patricia, however, had some tricks to discover if someone was speaking the truth or not. She was by far the most remarkable woman that I met in the Internet cafés. Jason had already mentioned her multiple times, because she was so explicit about her strategies in getting in contact with white men. When I heard about her, I asked Jason if he would make an appointment for me. It appeared that she would only do the interview for money. We agreed on 10.000sh. I asked Jason how I would recognize her and he told me that I would probably know it as soon as she walked in. On the day of the interview, I was waiting in the Kayesoft 1 for Patricia and indeed she entered. She had rather big and round contours, was wearing colorful earrings and plenty of make-up. Her perfume preceded her. It was rather awkward for me since I somehow immediately felt like I was a target for her. But then, she was an academic research target for me too. We decided that she would show me what she did online.

The first thing she did was go to Yahoo to open her mail and see if she had any replies. Then she typed in the Yahoo search-bar: 'looking for white man'. A few links popped up for dating sites which specialized in interracial dating. She explained to me that she knew most of them and already had accounts on some sites. When she got in contact with a man, the first thing she did was obtain his email address so she could approach him more personally and directly. She had different methods of finding out whether someone was trustworthy. For example, she asked for letters through the postal system to see if the address corresponded to the one that she was told. She also asked for different pictures in different settings. She made phone calls to hear the voice, so to get a more direct experience. Vocal conversations helped her a lot to understand who the man really was. Chatting with a webcam was the ultimate test. The next step was for the man to show his care for her, which meant that she expected money once in a while so she could support herself. At the time of the interview, there were three different men sending her money on a regular basis. 'Sometimes they sent me a small amount of 50 or 100 dollars; sometimes they sent up to 300 dollars. It depends on my economical situation. One day I had to go to the hospital, so I asked for 400 dollars and I got it.'

A few men had already come over to physically meet Patricia. Some promised to marry her, but it hadn't happened yet. A few hours after the interview Patricia sent me a somewhat remarkable SMS and we started to SMS back and forth:

> Patricia: 'Guido, will u give me a baby before u leave?'
> Guido: 'u want a boy or girl?'
> Patricia: 'a girl…'
> Guido: 'sorry I want a boy'

Patricia: am serious, don't bug on me
Guido: Sorry, cant help you
Patricia: 'suit yourself..'

I asked Jason if she was serious and he replied: 'of course she's serious. With a white kid of a white father in Holland she can easily get a visa..!' I was maybe expecting her to somewhat seduce me, but I hadn't expected this kind of straightforwardness at all. Nevertheless, it was a very interesting experience. As Burell noticed: 'Often, instrumentalist activities directed at self-improvement have not been entirely distinguished from recreational pursuits.'[53]

Cultural Dynamics

Both a premise and a promise of Internet development has been a concept of freedom. Discourse encountered on and about the Internet has been notoriously libertarian: like the Wild West, it has provided a screen on to which could be projected images of freedom, danger, transformation and transcendence. The Internet has both produced new freedoms (of information and of speech) and come to stand as a symbol of potential freedoms.[54]

There is a common belief that the Internet opens up traditional frames of mind. Huge amounts of information are freely accessible through a single mouse click. Christine Hines explains how the Internet can be seen as a post-modernistic phenomenon, since it is an unpredictable space of uncertainty in which concepts as religion, science, culture and the self are fragmented. New media platforms are providing 'new conditions for subject formation, which amount to a decenter-ing and dispersal of the subject.'[55] In the discourse on the reconstruction of subjectivities in the digital world, there is a tendency to speak of blurring notions between the real and the virtual, self and other, human and machine. People engaging in the virtual world must redefine themselves in to newer and wider contexts, and it is often assumed that people grow less certain and develop more fluid ideas about their original traditions.

The point here is that the Internet is seen as a technology that has the potential to crumble set-tled traditions and political structures. Below we will discuss what the empirical observations of this research suggest about the idea that the Internet has a tendency to blur cultural boundaries.

Traditions and Religion

Rather than transcending time and space, the Internet can be shown to have multiple temporal and spatial orderings which criss-cross the online/offline boundary.[56]

To gain insight in to the Internet's possible blurred cultural notions, we first have to take a look at what these notions could be. According to the Uganda Bureau of Statistics, in 2002 approximately 85% of the total population was Christian and 12% Muslim. Approximately 1% maintained traditional beliefs. Although there is not much conflict between the religions these days in

---

53.   Burrell, p.168.
54.   Miller and Slater, p. 16.
55.   Christine Hines, Virtual Ethnography, London: Sage Publications Ltd, 2000, p. 7.
56.   Hines, p. 11.

Uganda, observations and interviews conducted during this research revealed that religion does plays an important role in most people's lives.

Bonny, a 22 year old friend of Vanessa, sat in the Kayesoft 2 Internet café regularly. She explained to me that she was Christian and also part of the Ankole tribe group on Facebook. She didn't really associate with any tribe, although her parents are ethnically part of that tribe. 'It's just a fun way to get in contact, she explained, and 'not a big deal.' She said it wouldn't be a problem for her to marry a man from another tribe, as long as he is not from the Muganda tribe as she doesn't like their food. Most importantly, her future husband had to be Christian. Bonny, more or less, represents most of the respondents in this sense. Some people are part of one of the tribe-groups on Facebook, but for most it was not a necessary part of their online identities. Religion however was actively practiced by most respondents.

A noticeable part of Internet usage is related to religion. Half of the respondents said that they frequently shared their religious beliefs online. Many people send out religious chain mail or participate in online religious groups. Religious expressions on open Internet forums were mostly based in Christian belief. These religious tendencies were especially apparent in Facebook messages. Not only do people end messages with expressions like 'Let's see Uganda change in 2010 to the better........... For God and my country....'[57] people also tend to refer to religious values when personal or even societal problems are discussed:

> Goodmorning Uganda, i thx God who has seen us through 2009 and nw we once again are living in a new year 2010. A lot happened in the past year and i believe we can try to learn from our past mistakes to correct them and in all dat we did good, maintain it or even do better.

> A sound against corruption has been raised throughout all nu yr messages by both politicians and Religious leaders.
> I thx God for all those dat hv continually prayed 4 dis nation Uganda.

The examples above and the observations of this research challenge the idea that traditional or religious affiliations are vanishing due to the blurring function of the digital world. A clear example is the phenomenon that ethnic tribes organize themselves online. The biggest tribes such as the Ankole and Buganda even have their own network group on Facebook. It appears that the digital space need not necessarily subvert traditional affiliations, but rather offers new platforms for identity building, self-expression and cultural understanding.

It seems that there is some kind of revival of traditional/religious affiliations online. Of course it could be that the tribe-groups on Facebook will be taken less seriously over time and that people won't classify themselves anymore as such, due to modernization. However, we can gain some more insight in to this by looking closely at religious propaganda.

When visiting Harry's Facebook profile, it becomes clear that he is not hiding his religious belief.

---

57. Expression cited from the Facebook group page 'Ugandans on Facebook'.

He writes, for example, that his favorite music is 'Gospel' and his favorite TV shows are 'Christian Shows'. But he also follows certain preachers online, often American preachers that visit Uganda every once in a while to spread their ideas. He told me that he reads about their ideas on social and contemporary global issues.

Several news agencies noted that the Anti-Homosexuality Bill introduced in 2009 is a result of the big influence of American evangelical Christians, in particular notions of 'the family'.[58] A month before the adoption of this bill there was a conference which was attended by a few prominent American preachers who argued that homosexuality is bad for African social cohesion. It seems that the preachers have been taken rather seriously by the Ugandan government as the bill has now been accepted by the parliament.

Not only the government internalized this belief, but also the respondents of this research, such as Harry, who agreed with this vision. A few had even joined Facebook groups like 'anti gay marriage' and 'Speak loud for family: support anti-homosexuality bill '09'. Meanwhile, even more Facebook groups have been created in protest to the Anti-Homosexuality Bill. These groups have grown, but it must be noted that most of the participants of these groups are westerners. As I had already left the country when this development took place, I can only speculate how Ugandans perceive this Western effort to fight the bill and support gay rights in their country.

Education

Computer skills are a valuable asset and can be the key to obtaining employment and success in the educational sector. In other words, as the work system becomes more computer-oriented, the idea that it is important to master this instrument will quickly infiltrate all diverse social sectors, because using computers will eventually be seen as a prerequisite skill towards obtaining work and doing well in school.[59]

The relationship between ICT and education is somehow paradoxical. On the one hand, we have seen that education can help people make better use of the possibilities that ICTs offer. On the other hand, ICTs make it possible for people to bypass formal education by obtaining knowledge through the Internet. Furthermore, ICTs enable learning through usage and practice.

Self-education

Jason has a university degree in mechanical engineering, but as soon as he graduated he started focusing on computers. Nowadays, he has forgotten all about mechanics and has developed advanced computer skills.

---

58. 'The family' is a powerful fundamentalist Christian organization that is known for having members with powerful positions in politics, in ambassies, in business and in humanitarian aid organizations. It is seen as one of the most politically powerful fundamentalist organizations in the USA.

59. Bernardo Sorj and Luis Eduardo Guedes, 'Digital Divide: Conceptual Problems, Empirical Evidence and Public Policies', Incommunicado Reader, ed. Geert Lovink, Amsterdam: Institute of Network Cultures, 2005, p. 34.

There are some social scientists who argue that people with practical occupations or handicrafts have a huge advantage in computer skills. Fatima Mernissi for example points to a new generation of Internet users in rural parts of Morocco who have backgrounds as snake magicians and carpet weavers.[60] According to her, with the ability to concentrate for a long time on a certain threat, problem or activity (snake or carpet) and being accustomed to organize small things in such a way that symbols are created and messages are displayed (like the decorations of the carpet), one is in essence utilizing similar skills as a computer specialist. Therefore, Mernissi argues, it is not an odd phenomenon that Internet use is booming in Morocco. I think this theory is rather far-fetched, but I do believe in the possibility of people to better apprehend ICTs in an informal way than those in developing countries are more accustomed to. The educational and recreational possibilities inherent in the use of ICTs makes it an attractive subject for young people to invest their time in.

Miller and Slater speak of learning through practice: 'A high proportion of the most skilled and knowledgeable users of the Internet and IT that we met were almost entirely self-taught.'[61] In their ethnographic research in Trinidad, Miller and Slater explain that the Trinidadians learned to use information technologies in the same way as they learned to repair cars: not through formal education, but through practice.

This means that the lack of formal education in Uganda doesn't necessarily have to inhibit people from learning to deal with ICTs. We could further argue that computers and the Internet offer training possibilities through self-education. The fact that there are a lot of Internet cafés which offer (informal) computer training make ICTs an appealing route to focus on instead of seeking formal education. Since computers and other ICTs have a certain alluring status, these phenomena attract people (especially youngsters) who might not even really know what the technologies are, and inspire these people to gain access to ICTs and learn how to use them. The inspiration does not come solely from the glorified status of these technologies, but also from the idea that understanding them is the only way towards a prosperous future. For a lot of people, it is the most efficient and inviting way to gain knowledge and interact on a more global level. The arrival of ICTs in this respect creates a drive among the youth, both students and non-students, which urges them to act and partake in an information society which offers a quick road not only to obtain knowledge, but at a further point to maybe even profit from their new skills. In this sense, the Internet offers a gateway to jobs and other opportunities outside of Uganda. This issue will be discussed later on. First we will elaborate on the language and illiteracy problems that people commonly encounter when adopting ICTs.

Scholarships

It was rather surprising to discover that one of the most commonly conducted activities in the Internet cafés is applying for scholarships. Most youngsters between fifteen and thirty years old have the ambition to study in a foreign country. According to Harry, at least 80 percent of all his customers have tried to get a scholarship through the Internet. Peter Mwesige noticed the same phenomenon in 2003: 'It would appear that most café users who did "research" on the net, mostly

---

60. Fatima Mernissi 2004: p. 74-75.
61. Miller and Slater, p. 34.

engaged in searches for scholarships and college information in North America and Europe.'[62] This represented a concrete difference with that of people in the West where they use the Internet in a much broader sense, from gaming to studying to watching movies to social networking.

During my research in Kampala, in every Internet café there were often a handful of people busy applying for scholarships. First I thought this was a coincidence, but after a few weeks of observation I noticed this was a deliberate effort by the students in Kampala. This finding is supported by the research of Peter Mwesige, who unfortunately doesn't elaborate on these particular findings. Ironically, it is he himself who argues that former research has focused too much on quantitative data and that there is more need for a more qualitative approach.

Mwesige argues that a researcher should put their findings in to a broader socio-political context. It is interesting to ask what this actually means when a large amount of students are looking for scholarships. First of all, there is apparently a huge interest in education; people in Uganda are longing for a way to develop and better themselves. In Western countries, where education is an obligation until the age of sixteen, education is commonly experienced as something which must be done rather than a personal choice. In Uganda, it seems that everybody is eager to attend school, since they see it as a privilege and the only way to excel in life.

It is very difficult for a lot of students and graduates to find a job in Uganda. Unemployment or underemployment is most likely waiting for them as soon they start looking for a job. Almost 20,000 students graduate each year to fight with 400.000 Ugandans who enter the work force each year. One in four will find a job in formal employment, the rest must join the informal sector. More than 80 percent of Uganda's labour force works on the land.[63]

This might partly be due to the fact that Uganda is quite under-developed in terms of commerce and industry. Uganda is known to have a corrupt government that works on the basis of favoritism. This makes it very difficult to achieve a desired position by merely studying and working through merit. Not surprisingly, we see that scholarships are mostly applied for through Western universities, sometimes also through countries such as Japan, Singapore and Russia.

---

62. Peter Mwesige, 'Cyber elites: a survey on Internet Café use in Uganda', *Telematics and Informatics,* Volume 21, Issue 1, February 2004, 83-101: 14.
63. According to the labour force flow figures at the Uganda Investment Authority (UIA) and the Uganda Bureau of Statistics (UBOS).

Figure 6 Advertisement in the Suburbs of Kampala

A poster on the street shows that Russia even publicizes to Ugandan students. I will not speculate about the reasons for Russia to make this kind of public effort, but the option of obtaining a scholarship outside of Uganda is definitely common amongst students and their prospects for the future.

> This all-consuming focus on migration and mobility among Internet users in Accra illustrates… that beliefs in opportunity, about pathways to development and even the concept of development itself may be perceived quite differently by citizens of a developing nation than they are by development institutions.[64]

This citation illustrates an important point of this thesis. We have already discussed the promising idea of technological idealists and widespread notions that came out of events such as the World Summit of the Information Society about new communication technologies solving the problem of distance. Physical mobility wouldn't be an issue any more, since we would become part of a 'global village.'[65] People would lose the desire to physically visit another place. However, the opposite seems to be true:

> …at Internet cafés in Accra, rather than reducing the desire to migrate, for many users the Internet is further feeding this drive and makes it seem more attainable. The Internet has provided opportunities for engaging fantasies about foreign lands and international travel.[66]

I observed the same findings in Uganda as Burell had noticed in Ghana. The urge for physical mobility increased, because of the availability of information on other countries and even more so

---

64. According to the labour force flow figures at the Uganda Investment Authority (UIA) and the Uganda Bureau of Statistics (UBOS).
65. Burell, p 151.
66. Ibid., p. 151.

through available information about visas, scholarships and so on. Physical mobility and in partic-
ular migration has thus come to be seen as more realistic and feasible by means of the Internet.

The 'Green Card'

A worldwide, well-known phenomenon and also very prevalent on the Internet is the Green card.
The Green card is the United States Permanent Resident Card that allows non-US citizens to
stay and work permanently in the country with almost all of the rights that US citizens have. For a
lot of people, it is the ultimate chance to bypass all the difficulties in obtaining visas, invitation let-
ters, bank accounts etc. Once a year there are 50,000 Green cards distributed worldwide among
all the people who have applied through the Diversity Immigrant Visa program better known as
the Green card lottery. This is probably the most popular lottery in Africa and other developing
nations in the world. Almost half of the approximately 9.1 million applications sent in 2009 were
filed by Africans. When looking at the application numbers of 2010, namely 13.6 million,[67] we see
that there is a huge increase in people who want to migrate to the United States. It is possible
that the emergence of the Internet has made it easier for people to apply, which could be a reason
for this boost.

Nevertheless, the number of people that actually win this lottery has stayed the same. In 2009,
there were 165 Ugandans who got a visa through the Green card lottery.[68] Most Internet users
I interviewed knew about the Green card and had applied themselves or knew people who had
tried. Although they know that the chance to win is very small, they often argued that there is a
chance and the more one tries, the bigger the possibility.

Jason, who had applied a few times already, told me that it actually is a real hassle for a lot of
people to apply. For example, to get a photo of oneself that fulfils the requirements (the right
measures, ears visible, no smiling etc.) is pretty difficult for people. There are a lot of photo shops
that make use of this demand; the make the most revenue during the Green card application
process. Some even advertise with statements outlining their capacity to make a photo that fulfils
the requirements of the Green card lottery.

Overall, it is pretty clear that a large portion of the Ugandan population would like to work or
study abroad, particularly in the United States or the United Kingdom. The Internet has not only
exposed these options, but has also made it easier to try to go abroad. 'The Internet has facili-
tated the process of accessing information enormously, a process which by traditional methods
required great investment of time, energy and resources.'[69]

As a result, the desire has grown for a lot of Ugandans, since what they had always dreamed of
suddenly seems very feasible.

---

67. Data found on the website of the US Department of State on: U.S. Department of State, 'Diversity Visa
    Lottery 2010 (DV-2010) Results', http://travel.state.gov/visa/immigrants/types/types_4574.html.
68. Data found on the website of the US Department of State on: U.S. Department of State, 'Table III
    Immigrant Visas Issued (by Foreign State of Chargeability or Place of Birth)
    Fiscal Year 2009, http://www.travel.state.gov/pdf/FY09AnnualReport_TableIII.pdf.
69. Sorj, 2003, p. 41.

Conclusions

As we have seen, Internet usage in Uganda consists of a mix of economical and recreational activities. Almost all respondents used mainly western platforms, in particular Yahoo, MSN and Google. These websites offer search engines, email accounts, chat functions and news platforms. Seen in the context of global popular culture, we could say that the Ugandan Internet user operates within a space that is in the short-term satisfisfying, but ultimately paralyzing. He is captured within a space that keeps the surfer from investigating the true potential that the Internet has to offer. Within these spaces of comfort, people showed a huge affinity towards chatting and email, in particular with people in the West.

We have discussed how the Ugandan Internet users perceive themselves in this global and yet mostly western space. While on the one hand we found an awareness of suppression and marginalization, nourished by the dependency on foreign funding, people still reconstruct meaningful parts of their culture online and see the Internet as a space full of opportunities.

Nonetheless, we have noticed that people see most of the opportunities in the Internet as a doorway to the already developed world. The Internet has increased the desire to move abroad because it has made visible the possibilities which are available elsewhere. It has become much easier to find out about different scholarships and jobs abroad and to apply for these opportunities. Making contacts with the opposite sex in the West has appeared to be a widespread phenomenon. Finding a partner abroad makes it much easier for people to bypass all of the emigration restrictions. The Green Card lottery also appeared to be a popular approach among the respondents as a way to escape the country. However, out of over three million Internet users, only a few hundred of them actually get this 'ticket to freedom'. That is more or less a 1 out of 10,000 chance. Only a very small portion of the fortune seeking Ugandans will find a future in the West. However, the dedication with which the people try to get abroad is reveals that they don't see much of a future within their own country.

A clear outcome of this research was that lack of education and illiteracy inhibited people from making use of the potential of the Internet. Instead of using the technology to organize themselves in creative ways and to break through the vertical power structures that keep them immobile, the Ugandan Internet café users try to find ways to escape their situation individually. The Internet is obviously not yet seen as a suitable technology to seriously improve their local situation with the exception of those individual entrepreneurs who conduct business online. In these cases, it was the easy-to-use platforms offering short term financial solutions that attracted them the most. The lack of technological knowledge and experience, as well as the huge desire to increase mobility makes the ordinary Ugandan vulnerable to online scams. Considering that people with more computer experience such as Jason know how to use the Internet in more fruitful ways, it could be a matter of time before the Ugandan Internet user will be able to use the Internet in more economical ways. Better connectivity is essential in improving both quantitative and qualitative factors. More Internet access will mean more competition which will eventually give way to cheaper access. Only when the ordinary Ugandan citizen can easily access the Web, will further interest for the technology arise and consequently, expertise will follow.

The findings suggest that up until now, the Internet in Uganda hasn't functioned as a real development tool. However, we have seen some initial steps that may indicate a new shift in ICT usage. The ready-made platforms seem very attainable to most people in Kampala and there could be some more potential in this kind of accessibility. Jason is an example of someone who taught himself how to create websites. Obviously this is one of the positive features of ICTs, it is possible to learn to master it through practice, however, not everybody has the capacity or the means to do so. Educational skill training must be implemented in order to help people become computer literate. In addition, individual initiatives can also make a difference, if they receive the right form of assistane. One example is the website that was recently created by Jason and the Mountbatten organization which enables locals to start up their own easy-to-handle websites that are built by other local techies. In this model, software and content are created, built by and for the local society. These kinds of local initiatives, which need to be stimulated by training and education, pave the road for further online development projects.

ICT REDEFINING THE PRINT MEDIA
ALI BALUNYWA

Introduction - Background

My training and experience is in very traditional media methods. Cameras and recorders used then were not digital and not the cameras I carried for my research. Stories were written by hand, typed, printed out and sub-edited by hand. Upcountry newspapers had to physically travel distances up to 300 kilometres to the printers and deliver the CDs or floppies with the PDFs for the next day's newspaper. The New Times newspaper used to send a person physically from Kigali to Kampala by bus to take floppies with content to the New Vision printer where they used to print from. This is hard to believe since Kigali is almost 400 kilometres from Kampala.

Fast forward to my first day at the University of Amsterdam New Media Masters class. We were a class of 28 students from all over the world, though half the class was Dutch. I was the only black African student, while others came from Eastern Europe, Russia, America, Italy, France, Germany, Cyprus, etc.

The first thing I noticed in class was that the average student was half my age. During the introduction session, each one was supposed to tell the rest his name, nationality, why they opted for the new media class and their thesis during their bachelor's degree. In Uganda, there were no theses written during one's bachelor degree. When it was my turn to introduce myself, I amused the class by saying that I graduated before half the class was even born. I also talked about my postgraduate qualifications in Journalism and Media Management and of course my expectations for the course. Luckily, nobody noticed that I had left out my bachelor's degree thesis.

Lecturer after lecturer spoke about what was expected of us, but the truth is that the first day, I simply had no idea what they were talking about. After the morning session we were left with Dr. Geert Lovink. He was to lead us in our first course unit and began by simplifying the course content for us He assured us that we, the Students of New Media would gain in-depth knowledge in new media theory viewed from the perspectives of media-archaeological, materialist and other critical traditions, and applied to such topics as blogging, locative media, networks and protocol. He added that students receive training in the areas of information-aesthetics and visualization, in which the emphasis is on how to read, understand and critique information graphics, interfaces and online interactivity.

While listening to this, I wondered whether I had made the right choice, it all sounded Chinese to me. Dr. Geert Lovink promised to lead us through the New Media practices, which included Blogging, Websites, Social networking sites, Picnic 08, web 2.0. I knew then that I was in trouble. The ease with which my classmates were discussing these things made me want to withdraw from the class, especially because I had a family and was not currently living in Amsterdam.

In one of the early classes, the lecturer asked if anyone was interested in Second Life. Maggie

from Cyprus and myself put up our hands. Out of my ignorance of the digital culture, I sincerely thought it had something to do with belief in God and the after-life! Afterwards, it was clarified as digital life taken on by living beings with online avatars. I felt embarrassed, but did not give up my quest for learning.

The teaching method was very different from what I was used to. Each student had to make a presentation for the class, start a blog and upload material, contribute to the class blog and facilitate group discussions. I found the presentations that included YouTube videos and other graphics very impressive. They were a world away from the bland power point presentations that I was used to.

The Print Media in Uganda

My background is the print media and I was fascinated by the way the digital culture was taking over our every way of life. It therefore made sense for me to study the effects of digital culture on the print media in Uganda where I honed my print media expertise. After being away from Uganda for 7 years (2001-2008), I found the impact of new media to have dramatically changed the face of the print media in this region.

Uganda newspapers are the most important component of media in Uganda. There are a number of Ugandan newspapers but a few of them are the major ones with a print run of over 10,000 copies.

In the financial year ending in June 2008, turnover exceeded 35 billion (US$ 17million), with New Vision being among the top 40 tax payers in Uganda.[70] It topped the media industry remitting UGshs 8.4 billion (US $4.4 million) in taxes, closely followed by pay-tv service provider Multichoice Uganda at UGshs5 billion (US $2.5 million). The New Vision's competitor Monitor Publications came third in the sector paying UGshs 4.2 billion (US $2.1 million).[71]

This makes the Monitor's turnover half of what is ranked in by the New Vision.

Ugandan newspapers provide news and information on various local and national issues, political affairs, national celebrations, people and business. The newspapers also contain news on vacations, resorts, stock market, real estate and property, theatre, movies, cultural and sports activities. The major newspapers of Uganda are published in English. Apart from the major Ugandan newspapers there are a number of regional newspapers in Uganda, which are published, in various regional languages of Uganda (Bukedde; luganda language of central Uganda, Etop; Ateso language of Eastern Uganda, Rupiny; luo language of Northern Uganda and Orumuri; Kinyankore language of western Uganda).

The print media has not expanded as much as the electronic media in Uganda, which has seen a growth of over 1000% in the last 20 years. Instead, some of the old papers like Uganda Argus, Weekly Topic, Taifa Empya, Sekanyolya, Musizi, Munno, Star, Engabo and Citizen have ceased

---

70.   See http://www.newvision.co.ug/.
71.   See http://www.bizcommunity.com/Article/220/78/18002.html.

publication. In Rwanda, many small papers arise , but disappear very quickly because of lack of advertising. In Kenya and Tanzania the opposite is true, newspapers are thriving and the readership is bigger compared to Uganda or Rwanda.

The New Vision is the country's leading daily newspaper published by the New Vision Printing and Publishing Corporation. The paper has a print run of about 40,000 copies and a readership of 300,000. Another giant in the newspaper industry of Uganda is the Monitor, an independent daily paper. It was started in 1992 by a group of editors and writers who defected from the Weekly Topic after coming into conflict with management policies. The Monitor grew from humble beginnings to become New Vision's main rival. The Monitor's daily print run is 30,000 with a readership of 200,000. In 1999 the Nation Media Group of Kenya, owner of Nairobi's leading paper The Nation, bought the Monitor. This brought an influx of capital and expertise to the Monitor as the Nation has been in the news industry for a much longer time.

The Monitor and New Vision have readership in Kenya, Rwanda and Tanzania where thousands of copies are distributed daily. The quality of journalism is impressive since broadcasting was liberated ted in 1994. Private FM radio and television stations, differ immensely from the previous state-controlled media, and are still something of a novelty in the country.

The New Vision - Profile
Today, the New Vision printing and publishing corporation limited (NVPPCL) is a multimedia-publishing house, with interest in newspapers, magazines, Internet publishing, commercial printing, radio and television broadcasting. It also provides advertising and circulation distribution services.

Newspapers: The New Vision, Saturday Vision, The Sunday Vision, Bukedde, Bukedde ku Ssande, Orumuri, Rupiny and Etop

Magazines: Premiership is the only soccer magazine, City Beat an entertainment magazine, Bride & Groom is a wedding magazine, Flair for high-end females, Secondary Schools Directory - Uganda in 2009.

Websites publishing: www.newvision.co.ug, www.enteruganda.com, www.schools.co.ug

Broadcasting:
Radios: Vision Voice 94.8FM
is a stereo news radio station, Bukedde FM 100.5 broadcasts in luganda language of Central Uganda Radio West 100.2FM
is Western Uganda's dominant radio station, Radio Rupiny 95.7 FM is the new radio station, based in Gulu for the people of the Northern part of Uganda and Etop radio 99.4 FM
based in Soroti Eastern Uganda.

Television: Bukedde TV
Uganda's only luganda language and TV West for Western Uganda.

Printing Services: Pre-press, pressroom, bindery and printing

The New Vision newspaper was established in March 1986 after the coup-de-tat that brought in the current government. The minister of information at the time invited Mr. William Pike who covered the NRM bush war start the paper as a department under the ministry of information.

The New Vision's Mission is to inform, educate and entertain accurately and openly and its vision is to expand as the dominant multimedia enterprise through editorial innovations and world-class practices. Its values include honesty, courage, innovation, ambition and excellence.

In 1987, An act of parliament establishing the New Vision Printing and Publishing Corporation was passed with a board of directors appointed to run it. There was some semblance of independence, but the government had the ultimate say in its editorial policy. This is displayed by the way it covers the presidency, campaigns, opposition politicians and the ruling party. The New Vision was later released from being a government department under the ministry and became a state-owned corporation.

The New Vision started as a weekly paper and later progressed to bi-weekly, eventually evolving into a daily publication. Within one year it began distributing the regional papers beginning with Orumuri for Western Uganda, then Etop for the East, Rupiny for the North and Bukedde for the Central region. This decade has seen New Vision premiering with Lifestyle magazines like Premiership for soccer, City Beat for listings and Bride and Groom for weddings. They started as inserts in the newspaper, but they are now available for independent sale.

In 2002, the ministry of finance repealed the Statute that set up The New Vision Printing and Publishing Corporation (NVPPC) turning it into a limited company from a state corporation. It thus became the New Vision Printing and Publishing Company Limited. The ministry of finance took it over for purposes of divesture. This divesture involved selling part of the company to the public on the Stock Exchange market. In 2004, 20% of it was listed on the stock exchange. Last year there was a rights issue affecting ownership structure to raise money for expansion. From 80% ownership, the government's share fell to 53%. Under the Statute, The New Vision is a strategic organisation where the government must be the majority shareholder. It prints about 40,000 copies per day of which approximately 35,000 are sold. During the weekend, more copies are distributed. Today, it publishes eight Newspapers and four magazines. It also has a first class commercial printing section and a resource centre for photos, past newspapers and research. In the last two years, The New Vision set up an English radio and a Luganda language radio station. A Runyankore radio was acquired with the purchase of Radio West. Other radios for the east and North are awaiting installation. Television transmission equipment was bought and airwave testing has started. The television will be broadcast in the local luganda language spoken in central Uganda. The company has purchased most buildings around it and it can now be accessed from three streets. Currently, a new factory block is being built where state of the art printing equipment will be installed before the end of 2009.

The New Vision has more than 800 employees including freelance journalists. The chief executive officer has seven managers (Editorial, finance, audit, administration, production, sales and marketing and human resources). All constituents in the process of the newspapers publishing, from collection of stories, writing, editing, typesetting, pasting, colour separation, photography

and any other related work, are digital. New Vision has deliberately modernized the whole system by providing a network that is accessible to all journalists, editors, prepress and printers. ICT has made the work process more efficient and effective and it has enabled more business opportunities for the organization. In the near future, documents with vouchers and signatures will all be done electronically.

After finalizing the formalities with the administration, the human resource manager of the New Vision transferred me over to Mr. Ben Opolot, the then Chief sub-editor. We agreed to meet on Monday 20 April 2009 at the New Vision head office. Since all permissions had been granted, he thought all we needed was to let the editor in chief know before I began. He accompanied me to the chief's desk. To her amazement, I greeted her in Dutch as an icebreaker! The editor in chief is Ms. Els de Temmerman, a Flemish woman from Belgium. She promised to cooperate and help whenever necessary. Unfortunately, this did not occur, despite the several appointments I made with her, she never found time for an interview with me.

Ben went ahead to introduce me to many journalists and found me a desk. My first impression of the New Vision was the modern appearance of the working environment. The editorial offices are situated in a modern building with open office floor space. All desks are equipped with the latest flat screen computers, printers and air conditioning. The editorial room is a beehive of activity. I was told that because of the strict deadlines, journalists and editors have to move with haste all the time. On the walls of the newsrooms you find a notice saying: "DEADLINES – OR YOU ARE DEAD"!

The New Vision's ICT Department

Later, I conducted my first interview with the New Vision IT manager, Mr. Paul Ikanza. He holds a Bachelor of Computer Science degree from Makerere University and an MA degree in data computation. He is also CISCO certified level two for network professionals.

The IT department is located on the ground floor of the New Vision offices. It is adjacent to the resource centre and the Vision FM radio studios. When I entered the room to conduct the interview, I was surprised to find a room full of all types of computer parts. Flat and CRT screens, giant screens, first generation computers, CPUs, all sorts of cables, laptops and many other devices I could not identify. The office sits four people. I had expected to find a middle-aged boisterous computer expert, only to get a humble and down to earth young guy. He asked me to start right away, as he did not have much time being on-call 24 hours a day.

Mr. Ikanza briefed me on how the IT department started in 1999/2000. He informed me that initially, computer prevalence was very small. Every section had a typesetter who used to lay the pages of the particular section. The software used was "Adobe page maker". The Internet was more or less a luxury until 2003 when the Internet edition was started. Foreign news and sports was downloaded from the Digital Satellite Television (DSTV). Satellite dishes for Reuters, AFP and Xinhua news services were situated on top of the New Vision office roof. However, 10 years later, Ikanza admits that great strides have been made in the ICT department. The Internet traffic is now much heavier after upgrading from 92 KB to three MB bandwidth. However to ensure that the network remains efficient, services like Facebook and YouTube are blocked because they

consume immense bandwidth and of course employees waste time on these sites. The network is not only for typesetting, but is also used by subeditors and editors. A reporter types in a story and sends it together with pictures to the respective sub-editor through the network.

I gathered from Ikanza that all departments at the New Vision need to log onto the system in order to operate. Production machines cannot be turned on without logging onto the system. All departments of the New Vision, such as production, circulation, marketing, engineering and marketing cannot work without a computer. One must log on before doing any work for the New Vision. Typesetters are no more, so-sub editors have to lay their allotted pages. Page maker software is no longer used. The latest version of Quark Express typesetting software is currently in use. The system also enables a reporter search for news, by typing it in and sending information to the news editor. After editing a news story, it is forwarded to the subeditor in charge of the section. All the transmission is done electronically. The subeditor places the story on the specific page and when the full page is done, it is mailed to the chief subeditor who after approval, sends it to the pre press through the network shared folder. Pre press staff create a plate straight from the computer.

As he was explaining all of this to me, he was simultaneously answering phone calls, advising reporters on how to fix frozen computers, and asking his assistants to go help where physical assistance was required. These distractions did not stop him from conversing with me. He further explained that all upcountry offices are connected to the Internet, but not to the main server at the New Vision. Therefore they cannot log onto the system. Stories and photos from upcountry are instantly emailed to the New Vision as soon as they are written or photographed. Previously, the New Vision used to send drivers to take photos by car from all around the country, which was an expensive activity. The presence of new media has actually diminished costs by up to 90%.

Ikanza assured me that currently the New Vision has what is called 'the mobile office'. All senior staff at the New Vision own blackberry handsets, which can log onto the New Vision system outside of office hours. Normal email can also be sent and received from the set. Breaking news can be reported at any time of the day from anywhere without any impediment. New vision also subscribes to two closed user groups: Mobile Telephone Networks (MTN) and Uganda Telecoms (UTL), where all of the staff is connected. New Vision pays a lump sum per month and depending on the duration of the calls, receive the difference back. This reduced the amount of money that they used to pay prior to this.

Ikanza envisions the future of New Vision as very bright through adapting the use of new media and other technological advancements. The fibre optic cable have already arrived in Kampala. This means that the Internet will be much faster and journalists will be able to actively participate in social networking sites and access YouTube in addition to speeding up the system. Shortly, a full colour-printer will be installed which will be completely automated and all pages will be colour printable at once. He also hopes to develop a content management system in the future where a reporter can log onto the intranet system and submit a story even while outside the New Vision establishment within or outside the country. Archiving is also one of the things that is yet to go fully digital. All the records since independence are kept in hard copy form up to the year 2000. Hopefully, they will all be scanned and kept digitally for future reference.

In his concluding remarks Ikanza said: "The mandate for ICT at the New Vision is information and communication and making communication accessible and sharable. Initially it was only data, but we have now added audio (own 5 stations) and soon video (TV)."

I found this to be a true representation of a media institution progressing into the world of multi-media. After speaking to Ikanza, I set off in search of David Weddi, the website editor to chat over the New Vision websites. He joined the New Vision newspaper in 1996 as a freelance journalist. Upon recruitment, his first story, member in 2004. He has studied in Sweden, Germany and South Africa, for photojournalism and writing. He also did a course in Global Electronic Journalism for 6 months at Stockholm University in Sweden. The course involved researching news websites, uploading audio, visual and video online. They used tools like PHP, Java, CSS mobile XML, XTML and promoting new languages. Afterwards, he worked for a company that took digital orders for McDonald's in Stockholm.

At the New Vision, he founded the static website portal www.enteruganda.com in 2003 and started uploading. In 2004 he was promoted to website editor at the New Vision. The division was employing seven staff, but making a total income of a mere $200.00 per month! In order to increase profit, the site required a more efficient uploading team. Weddi and his team set a target of earning $25,000 per month within four years. Today, the department is earning much more than that with a staff of eight well-compensated employees. They have also opened up new websites for each project. A job-search website was also established www.jobs.co.ug. The advertisers from the printed paper add an extra 5% of the cost for the same advert to be run online. The income from the online advertisements is much more than what some newspapers in Uganda earn altogether. The websites are now integrated with the newsroom via the Integrated Enterprise Content Management System (IECMS) software, which facilitates the sharing of files and eventually eliminates paper from the newsroom. The workflow system follows what a journal-ist does – distributes stories to the editors, sub editors, pre press and eventually to the printer, afterwards it is finally uploaded automatically online.

When asked whether this has reduced the readership of the printed text, Weddi claimed that the statistics available don't show that sales are suffering and that the biggest online readers are abroad. Weddi's team looks at self-generated and Google analytics to monitor their hits. The New Vision newspaper is the most popularly visited content. In fact, it is the most commonly vis-ited website in Uganda. Mini Rank (http://www.minirank.com/tld/ug/), an international ranking organization, puts it at third place after http://www.cfi.co.ug/ and http://www.registry.co.ug/. Fol-lowing this, there are six other New Vision products, telecom companies and The Monitor comes in at number 19. No other Ugandan newspaper is mentioned among the first 50 sites.

The New Vision website is dynamic and it has the capacity of uploading content anytime. For example, content can be uploaded specifically for different audiences and time zones, for the Uganda market the following day and for the Diaspora the evening before. In addition, Internet stories are now sold internationally to organizations like AllAfrica.com

On the future of the department, Weddi hopes to redesign the website to fit the modern times. His department is now testing the mobile SMS, which is in the pipeline as a new product. Already

2 million mobile telephone numbers have been collected and the New Vision is set to sign up with all telephone mobile operators to allow all users to access the mobile SMS service. He is also confident that applications like E-government (digital interaction between government and its citizens), E-Health (electronic healthcare practices), and E-Business (application of ICT in support of business) can be designed and sold to the government. In this case the government can use the company's telephone number database for communicating development, health or political messages. Journalists will also be able to send breaking news through the same system. The system will allow readers and listeners to use New Vision's products interactively, with each other and the newsroom. The New Vision is prepared to face all challenges head on. It is heavily invested in its staff through in-house training and IT schooling. So far a few journalists maintain blogs, but soon it will be a requirement for every journalist, to be used as a platform where he/ she can interact with readers.

The New Vision is in the process of installing a Content Management System (CMS), which is an automated series of tools and commands that supports the creation, management, distribution and storage of digital information. In one place, you can create original content, edit and proof-read it, then publish it to the Web and other outlets while archiving for later use. You can typically accomplish all of this with a few simple mouse clicks.

However, the CMS being being put in place will automate the website uploading process, freeing up valuable staff time. It ensures the timely delivery of content while also giving you the ability to manage how your site functions and what it looks like. A good CMS allows consumers to navigate through a site. A CMS can help you update an entire site at once by making only one minor change. For example, if someone misspells New Vision in several different places, you should be able to tell the CMS to go through all of the documents and change it to the correct spelling instantly. A CMS can automate manual publishing tasks and can even be set to make new content live when there are no employees in the office.

On national Internet coverage, Weddi claimed Uganda's Internet usage is on the increase. Every day newspapers sign up new online readers especially the youth. Statistics from the ICT ministry show increased Internet usage. Currently there are over 22,000 local websites and nearly 300,000 email addresses. The New Vision has positioned well itself to meet this increasing demand. Soon local language websites will be developed.

Weddi painted a rosy picture of his department, but in comparing notes with Ikanza of the IT department, I found they both had positive reflections. I therefore concluded that the New Vision management has realised the importance of IT and they have ensured that enough resources are put in place to develop and nurture technological innovations. The fact that New vision is the leading multimedia organisation in Uganda is no accident, but a premeditated forethought strategized by its leadership. As a result of these initiatives and innovations, the New Vision has positioned itself as the leading media outlet in Uganda. This explains why when it floated its shares on the market, their subscriptions increased and like Google, increased in value exponentially in a very short amount of time.

Editorial and New Media

Editors at the New Vision newspaper mainly use similar types of tools in executing their work. John Kakande is the New Vision's news editor. He joined the New Vision in 1994 as a freelance reporter and was later recruited as a parliamentary reporter. He also used to run a political column before being promoted to the position of news editor. Kakande holds a Bachelor of Arts degree and a postgraduate diploma in journalism. He assigns day-to-day work for reporters by commissioning articles while also briefing reporters before going to the field and debriefing them upon return. Finally, he assembles approved stories for publication. The editors role is mostly to manage the news-gathering and to later process it.

Hellen Mukiibi is the deputy news editor at the New Vision newspaper . She joined the media house in 1989 as a reporter and is now a senior journalist. Her office is adjacent to the news editor's office. These two offices are in the forefront as you arrive in the newsroom. The open office layout enables them to supervise the journalists, photographers and subeditors. The offices are in the middle of the bustling activity in the newsroom. Every time I passed by, it was never quiet or without other people running around. It was therefore very difficult for me to get an appointment, and when I finally did, I made the best use of it. I simplified my questions by asking Hellen how she goes through her day and if new media helps her to get through it more swiftly.

Both editors feel grateful for the introduction of new media in their workplace and feel that it has eased their workload tremendously. New media has used to help with writing in stories by journalists, mailing, editing, subbing and printing. In addition, research is done online to collect background information for some stories. The fax machine has been slowly phased out, all correspondents and upcountry reporters use email for their stories. The mobile phone is also commonly used for briefing and debriefing and sometimes for sending photos and SMS to alert editors of stories. The impact of digital camera's has made photojournalism much easier. The computer enables reporters to type in (typewriters were discontinued in 1997), correct and share the story through the Internet. Reporters and editors also meet online through the Internet to exchange ideas, edit stories and correspond. The Internet has also facilitated easy news aggregation, for example Yahoo news and Google alerts keep editors up to date on all news. Some of them tweet and also get news updates through Twitter.

Barbara Among, a prolific writer, blogger and new media user, is the senior reporter at the New Vision newspaper. She was recruited in 2008 after working at the Monitor, The Daily Nation and The East African newspapers. She appeared to be a driven and determined person who often gets what she wants. She left a higher paying job at the prestigious East African newspaper to assume her present post at the New Vision. Working in a technologically advanced media environment has ultimately enhanced her career.

Barbara said she often uses the Internet for her research, mainly search engines such as Google and Yahoo and she also subscribes to Google alerts to stay informed about conflicts in Uganda, Kony, Museveni, and oil refinery updates. Barbara also subscribes to Africa Intelligence.com; AllAfrica.com, BBC News, The UN website (on conflicts) and Al Jazeera news feeds. She prefers Mozilla to Internet Explorer and uses the Alta Vista programme to search for news.

She is full of praises for her mobile telephone and Zain, her mobile telephone operator. Her phone has the capacity for reminders, Internet usage, horoscopes, ring tones, banking rates, stock rates and other information.

Barbara no longer uses pens and paper. She types in her stories direct during interviews. After typing and correcting the grammar, she sends the story direct to the editor through the Internet. Before the new system was put in place, reporters used to type in stories, print them out and take hard copies to the editor.

Every morning Barbara ensures that her bag has her mobile telephone, a digital camera, a digital voice recorder and a laptop. Barbara uses many different new media devices during her work process, for example she often conducts interviews via Yahoo chat or Facebook. Afterwards, she copies and pastes and feeds the interview into the system. She also uses social networking sites like Facebook, LinkedIn, Yahoo Messenger, Skype, Gmail, mostly for chatting and networking. She also frequently blogs via www.bamong.blogspot.com.

The New Vision Library and Resource Centre
I spent a day with Godfrey Malime, the chief librarian at the New Vision. He joined the organization in 1992 as a trainee librarian and went through the ranks to get to his current position. He graduated with a Bachelors degree in librarianship and information sciences. He is also in possession of a postgraduate diploma in journalism and media management and another postgraduate diploma in Tourism management.

The library/resource centre is located on the ground floor at the New Vision headquarters. It is easily accessibly by both the New Vision staffers and the general public. What struck me as I entered were the countless rows of old files and bound newspaper volumes on shelves lined against all the walls of the research centre. There were three desks for the library staff, worktops elsewhere for visitors and a large conference table where the day's newspapers and magazines were held.

Malime explained to me that the library at the New Vision constitutes of newspaper clippings, pictures, old newspapers, books, journals, magazines and pamphlets. The most frequent visitors are journalists and researchers. Old newspapers are bound monthly in hard cover volumes. Newspaper clippings and pictures are kept by subject to make it easier for a researcher or journalists to find.

When asked why the library was slow to embrace new media for archival purposes, Malime answered that most of the researchers who visit the New Vision seek physical evidence which is in most cases required by courts of law. This evidence is copied for them and later verified and is then admissible in court. Courts in Uganda have yet to accept digital evidence.

Secondly, due to budget constraints, the library is not on the priority list of institutions to become fully digitized. Today the library has only three computers for internal use. The clients are not able to search using the computers, but rely on the well-versed library staff for assistance. Unlike the editorial and printing department, The New Vision Library and resource centre has yet to embrace

digital culture.

On service costs, Malime clarified to me that the New Vision staff use the services free of charge, but for visitors, access is granted only between 9.00 am to 12.00 pm, at a fee of the equivalent of $1.00. Photocopying also has a charge of $1.00. Certifying and photographs are charged $2.5 and $10.00 respectively. However, according to Malime, the library still needs appropriate software for archiving. Currently, the digital newspaper is saved as a PDF and manually archived. Adobe Photoshop is used to archive photos in different folders on the Internet and hard copy photos have become scarce. The library has requested a bigger scanner to enable all past newspapers to be scanned and stored digitally. The library also uses the Internet to subscribe and receive magazines and newsletters for reference. Computers for clients and visitors are expected soon. Today, the library has changed its role from a traditional bookkeeping facility into a virtual and digital access provider. It is therefore important to digitalize all of the various aspects of the library to be able to embody and fulfill this new role.

'The buck ends here': Chief Sub

Ben Opolot, the chief sub-editor of the New Vision newspaper, earned his Masters degree in journalism online. He registered with a South African University and travelled there a few times during the year to interact with fellow students and lecturers. His job consists of quality control and maintaining the New Vision style, which includes the visuals, photography, grammar, language, content, accuracy and general standard. His job cuts across all sections including sports, health, magazines and so on. Though his major focus is on the daily newspaper, he also offers supervisory and monetary oversight for the Saturday and Sunday editions. He does this through a weekly review meeting with the staff.

Opolot has 35 sub-editors who report to him. On average each sub-editor lays out 2 pages per day. They receive stories from the editors through the Internet and depending on what pages they are working on, follow an established layout format. After designing the pages, they print them out and pass them on to him. After all corrections are made, he sends them to the pre-press department through the network, computer to plate process. In the near future the New Vision expects to implement many new technologies, which will eliminate the need for pre-press and will enable transmission of files from editorial direct to the press. Opolot believes that the New Vision has yet to harness the available ICT to create further efficiency and advancement. The organization requires new software to solve minor editorial issues, especially automating uploading on the website. New Vision should be in a position to send data to the press while simultaneously uploading to the website. However, the print version of the paper is more important because it earns the most profit from readers and advertisers. The editor-in-chief delegated the responsibility of the final product to the chief sub-editor, evidently, Opolot has his work cut out for him.

Opolot finds it difficult to imagine the days before the advent of the computer when editing used to be done on paper. Reporters wrote their stories by hand and then used typewriters. The layout and design used to be done by tedious cutting and pasting while today, the computer completes the whole process; inputting, editing, typesetting and design. All photos are in PDF format and are sent by mail to the pre-press when ready for print. The computer is also a powerful tool for grammar and spell check. Search engines like Google are effective when looking for verification,

historical context and research. Email too has simplified communication. Before the advent of Email, information from the field took several days to arrive at the news editor's desk. Today, files are instantaneously forwarded electronically.

Opolot, like many others are pursuing further education online. The computer allows users to study and work simultaneously. It has thus helped to retain employees who would have had to resign in order to pursue further studies. The computer is a knowledge and resource centre which provides journalists with current news at minimal cost. Due to the fact that Uganda has no libraries, computers with Internet are a vital point of reference.

Opolot posits that mobile telephony cuts costs and increases efficiency. Reporters and editors can be easily contacted at any time while on location. As for blogging, Opolot does not maintain a personal blog nor does he read others. He believes that blogs lack sufficient peer review and are therefore far too opinionated and subjective. Nonetheless, they can sometimes be used as news sources for stories and tips. Like blogs, Opolot finds the Social Networking Sites (SNS) simply exhibitionist. He understands SNS as a tool of communication which encourages citizen journalism. They provide a platform for people to express themselves and follow others. It is here that you can determine the pulse of the society, in the absence of the rigid newspaper structures.

Opolot spoke of the New Vision's discussion board with pride. He claimed that it was a very important asset to the New Vision to facilitate conversation and user feedback. The discussion board is one of the few places where the New Vision readers can interact with the writers and also offer their opinions on contemporary issues. The organization is in the process of developing a Short Message Service (SMS) as a new platform for news delivery especially breaking news. A significant amount of people are now using their mobile phones and their primary news source, the New Vision must take advantage of the mobile phone especially the SMS technology to reach out to its readers and garner new subscribers. The New Vision must therefore find new ways of delivering content, particularly targeted towards youth and women. Traditionally, newspapers were for men who purchased them when they pleased, but now with the mobile phone, the woman can enjoy the newspaper in a convenient handheld device. There are no existing statistics to support this, but it is assumed that since women are more active in text messaging, they will be open to receiving news via SMS. Consequently, the mobile phone, especially SMS features will help to maintain existing readers and possibly attract new subscribers if they are able to deliver the content in a way that is most convenient to the reader. Ultimately, this would call for a complete rearrangement of the business, where employee skills and departments must be tailored and reallocated to fit the new technologies.

Photojournalism at the New Vision

Jimmy Adriko is a veteran photojournalist who joined the New Vision newspaper in 1991. He holds a Bachelor of Arts degree in Fine Art and has attended many different courses in photojournalism in Moscow, South Africa, United Kingdom and the Netherlands. Upon being questioned as to what his role is in the organization, Adriko explained that as the photographic editor, he assigns duties to the various photographers on duty. He organizes meetings every morning and divides up the daily photographic assignments. For those photographers who are out of town, he communicates with them via telephone, SMS or email and they send photographs through

the network or via email. After receiving all photographs, he selects the best photos for the newspaper, sends them to the editors and archives the unused photos electronically. He also takes photographs, writes and coordinates training, equipment and budgetary needs for the New Vision and its sister papers as well as managing the sales and purchasing of photos. In addition, he collaborates with international agencies and institutions such as Reuters, AFP, photos.com and the like for photography.

Adriko explained that up until a few years ago, the photographic process was all manual. Taking pictures and editing them was a long, laborious process, for example if a photographer was to travel to Rwanda, the photos which he took would only be able to be used upon his return. Today coordinating activities is easily done using the Internet and mobile phones, photographers can be easily tracked down on the field and reassigned to other locations. The mobile phone camera can also be used during emergencies by capturing photos and instantly sending them via MMS or email. New Vision compensates members of the public for sending in photos which encourages citizen journalism. The Internet can also be used to buy and sell photos through wiring services, New Vision photographers search the Internet for the right photos to aptly illustrate the reporter's stories. All staff photographers use digital cameras to take photos after which they upload them on the computer, edit them and send them to Adriko through the network. All photographers are trained to use the Adobe Photoshop software to enhance the photos. Social networking sites have also been used to share photos with peers and create their own catalogues online.

In regard to new technologies in the world of photography, I talked to Mathias Mugisha, a veteran photojournalist who joined the New Vision in 1999. He holds a diploma in photography and journalism. He works for the different New Vision magazines and the Sunday Vision as a writer and photographer specializing in travel and adventure. When I asked Mathias about his work, he responded that he was a general photographer at the New Vision though 75% of his work is self-generated. Mugisha uses a Nikon D300 digital camera. It is a mid-range professional camera with 12 mega pixels.

Mugisha uses the Internet mostly for research and sending stories and pictures. While upcountry, he can instantly send stories and photographs to his editor for publishing. He also uses Yahoo messenger for chatting and for enhancing his work by way of collaboration and networking with other photographers around the world. Sometimes he consults them on technical issues such as lighting or composition while also discussing and sharing news on new technologies in the field. Mugisha holds high appreciation for mobile telephony but explains how he is not fond on the quality of the photos which they deliver. However, in the absence of professional photos, they are sufficient. He often uses his mobile phone as a recorder, radio, torch, clock, daytimer, alarm, memopad and finally to send summaries of his stories by SMS.

The Printing Process
Reuben Zaramba, the New Vision pre-press manager holds a BA degree in industrial and commercial design. He joined the New Vision group in 2004 and his main task is to prepare all work for printing. Reuben told me that New Vision had recently acquired modern equipment in the pre-press department. The old technology involved making films in a dark room, but today the process is automated directly from computer to plate to press. The newspaper artwork is received from

the sub-editor through the Internet in PDF form. The pre-press staff produce an mock layout on a plate using the appropriate software. The proofs represent how it will appear at the end of the process. This is compared with what is on computer and the impressions are approved, they can then be made ready to copy to the plates, which have a photo sensitive coating on one side where the laser beam burns the image.

All of these processes utilize new media, for example mobile telephony: "We can receive mobile alerts from the machines should something go wrong during processing, copies of the alerts are sent by email. The mobile telephone is also used to contact the sub-editor in case there is a problem with the PDF". In addition, the New Vision upcountry bureaus use email to send their PDF version of the regional newspapers for printing. Before automation, cars were provided to drive hundreds of kilometers to collect the mock-ups.

Adjacent to the pre-pressroom, is Samuel Kyagulanyi the New Vision Production and operations manager. He studied statistics at the University and has a post-graduate qualification in project planning and management. I spoke with Kyagulanyi in the production division and he explained to me that the responsibility of printing the New Vision's publications lies solely on his shoulders. He is also responsible for printing external works from other companies and individuals as well as assisting with machinery, materials and manpower.

A web offset machine called 'Goss' is the major device used in printing the newspapers. From the editorial, the documents are transmitted via the Internet to the pre-press for plates to be made. The Computer to Machine (CTP) machine burns images onto the plates, which are then sent to the Goss for printing. The Goss prints and folds the newspaper and brings it to the inserting room where it is finally wrapped up and prepared for the market. The new factory being built will house a top of the line printing press which will be able to print 64 pages at once in color at 40,000 copies per hour. It will have an insertion machine included. Presently, the New Vision prints dailies from Southern Sudan such as 'Southern Eye' and 'Yumbe' and also from Rwanda: Umuseso, Um-wezi and Umurugizi publications in addition to Uganda's Weekly Observer and Business Week.

Participatory Research at the New Vision
I spent some time with Joyce Namutebi, a veteran New Vision parliamentary reporter who covers the proceedings at the parliament of Uganda. She took me through the rituals of parliamentary reporting explaining its open-technological policy. Cameras, recorders, mobile phones, computers and other devices are allowed in the committee rooms. However, if one is to attend the plenary session, they must leave their gadgets at the door as only pen and paper is permitted inside. A parliamentary reporter I.D. was provided for me and off we went, I was most interested in the ICT committee itself. Having visited a number of committee rooms, I was surprised with the bareness of the ICT room, the rest of the rooms had modern equipment like microphones, speakers and high-tech screens, however, the ICT committee room had none of these amenities. This seemed to be a far cry from what the committee represented. The attendants of the session were few and there was only one journalist present.

Honourable Edward Baliddawa a Member of Parliament and veteran computer expert chaired the committee. The morning session was mostly discussed Uganda's ICT ministry proposed budget

for 2009 – 2010. The chairman observed that the ICT ministry which supervises the Uganda Communication Commission (UCC) has a budget of only Shs 6.5 billion (approximately €2.5 million) per year compared to UCC which has a Shs 46 billion (€16.0 million) allocation. It was observed that the parliamentary act that established the UCC did not envisage the creation of an ICT ministry. UCC was set up in 1995, yet the ministry was created in 2006. Most functions of the ministry are carried out by UCC, yet it is supposed to be a regulatory body. One percent of the annual income of all telecommunications operators is remitted to UCC in a fund called Rural Communication Development Fund (RCDF) which is supposed to implement telecommunications into to the underserved rural areas where major players aren't present because of the region's unprofitability. The committee agreed to suggest that the plenary review the UCC act in view of the current dynamics. UCC would remain the industry regulator, but the ICT ministry accompanied by the budgetary allocation should assume the function of implementer. The ministry of ICT was also found running parallel to the ministry of information, which was in charge of the government satellites, however, this should ideally be under the ICT ministry. In order to resolve this situation, thee members must review and revise the media act and obligations accordingly.

New Vision's Digital Revolution

Robert Kabushenga is the Managing Director of the New Vision conglomerate. I spoke to Robert in his offices at the New Vision headquarters in the industrial area of Kampala at the end of May 2009. Robert was very passionate while speaking about the possibilities inherent in new media. He actually congratulated me on my choice of research and spoke with great veneration about the media's incredible operational ability to generate content, share information, acquire physical networks and store data. He expressed awe in the potential of real-time access and immediacy into what is happening elsewhere.

Robert agrees that the introduction of new media has helped the New Vision to progress from a manual to a digitally-operated company in a relatively short period of time. The technological revolution has closed the digital gap in the last 10 years and the New Vision's digital operations are now at the same level as Europe or America. The speed might not be the same in terms of infrastructure, but the tools are similar. He offered an example of driving; The West has good roads, yet the south has poor ones.

In terms of efficiency and convenience of operations, new media has gone a long way in improving working conditions at the New Vision. In regards to hardware, he talked of how the computers and mobile phones have eased communications especially in this part of the world. He added that the development of the digital camera has made sharing, transmitting and taking photographs very simple. Prior to the advent of digital photography, the photo developing and printing process was constrained by use of film and long developing times for the prints which had to be manually scanned and fed into the newspaper layout.

The introduction of new media has also made it possible for media houses to evolve into multimedia companies. Robert said that new media has had a liberating effect on the media in Uganda and has also facilitated greater innovation. Business at the New Vision, for example, has shifted from being only a newspaper to a multimedia company, which delivers content both online and via handheld devices. To facilitate this shift, the price of the computer has come down nearly one-

third of the cost of a typewriter. This has had a big impact on gathering, processing and producing news content. For journalism, it has also had a positive impact on subscription rates and finances.

Robert, like all other senior staff members is on call 24/7. By 8.00am he is in office; at 12.30 he goes home to have lunch with his family and returns by 2.00pm, and he finally leaves the office at around 8.00pm. The administrative division of the New Vision has incorporated new media. For example, all company records are now digitized. Meetings are transcribed on a laptop and are circulated immediately after. Those who fail to attend the meetings are instantly updated on what was discussed. More information is shared in advance to ease decision-making and make meetings more informative. New media has made the processing and distribution of information much easier for those who are out of town of unavailable, they are still able to stay involved in decision-making procedures.

All the group's financial transactions are now made online, therefore it is irrelevant whether the bank signatories' are present. The New Vision has the largest bandwidth in Uganda. Payments can be made despite the inaptness of the bandwidth in Uganda, hopefully, this national problem will be sorted out before the end of the year with the completion of undersea cables. Mobile money technology has also made payments much easier. People in the rural areas who wish to advertise or distributors giving money to the New Vision can use mobile money to pay the New Vision. Advertisers too can send their adverts by mobile telephone texts or SMS. Once an advert is paid for and approved, it can then be run by the paper. The New Vision newspaper also makes payment to its contributors, writers and correspondents in the rural areas using the same system. Mobile money is a money transfer service which is operated by the two biggest mobile telephone companies, MTN and Zain.

In the spirit of embracing the new media, all senior staff at the New Vision were provided with a company Blackberry telephone handset. The middle level management staff is also equipped with a company telephone and phone credit. This is essential because employees must constantly be in touch. Breaking news can be discussed in real-time by telephone or email. The New Vision is investing in new technologies to remain the leading innovative media company in Uganda. The online newspaper edition is currently being revamped so that all editorial staff will be able to blog. All the regional papers will have an online presence in the local dialects. In conclusion, the New Vision wishes to adopt the Rupert Murdoch approach by maintaining a strong presence within every media platform in Uganda.

Content

The content that the New Vision newspaper publishes everyday consists of mostly news. The most prominent news headlines are placed on the cover page and page 2. After the national news, which covers about 6 pages, there is a section for the regional news. There are specifically allocated pages for the Northern, Eastern, Western and central regions. Next comes the editorial, letters to the editor, commentaries and opinions. African news covers about three pages and the rest of the world three to four pages. Most international news is syndicated through news organizations like Reuters, Associated Press, AFP, Chinese news agency and the like. After the world news, you find business, leisure and sports. In addition, everyday the New Vision runs a different themed section, for example, on Monday there is a section for health and beauty, Tuesday has an

education segment, Wednesday environment and farming, and on Thursday a separate section covers business, finance and investment. On Friday there is a weekend pull out which mostly advises readers on what entertainment is found and where, restaurant tips and film reviews. The Saturday and Sunday papers are independent of the daily; the Saturday paper consists of mostly leisure, entertainment and sports and Sunday contains religion, church services, children's vision, insights and weekly columnists. The varied content allows for a diverse readership. The average number of pages is 60 per day, 30% of which consists of advertisements. In 2008, it earned shillings 35 billion (US $17.5 million) revenue. Its circulation is mostly in Uganda, but it is also widely distributed in Southern Sudan, Rwanda, East Congo and Kenya.

Overall, I found that the New Vision embraced ICT passionately. All the departments, whether editorial, management, administration, printing, marketing, television and radio, used ICT with enthusiasm. The employees were all looking forward to the new ICTs that the management had promised. According to the managing director, in five years time, the New Vision will be a fully digital organization. Apart from the printed newspaper, there will be no excess paper in use. The New Vision hopes to become the most modern multimedia company in the East African region.

The Monitor Publications ltd
After collecting data from the New Vision, I proceeded to The Monitor, the second biggest newspaper, to investigate and compare how this publication applies new media in its daily operations. The Monitor was established in 1992 as an Independent daily Newspaper by a group of six journalists who resigned from The Weekly Topic; the former leading weekly paper. The paper was started with zero capital and no office, just the brains of six men and the kind offer by the New Vision to print their preliminary issues. It started as a weekly paper, later changed to bi-weekly then tri-weekly and within two years became the main competitor of New Vision. Within three years, the company bought its own printing equipment, built its headquarters and recruited over 200 staff. The newspaper was truly independent because it did not have any governing body or capitalist enterprise bankrolling them. The newspaper quickly became a threat to the government because of its constant criticism, corrupt revelations and promotion of better governance. It became the most commonly quoted media source by the international press. Based on reports in The Monitor, contributors started questioning the government's human rights record and prompted for further funding to improve this record and reduce corruption.

The government was not fond of what The Monitor was publishing and therefore decided to inhibit the paper of advertisements. All government departments, friends of the government and public companies were advised not to promote The Monitor by buying advertisements in the paper. This restriction on the Monitor caused its resources to slowly diminish. However, being the clever journalists that they were, they invited East Africa's biggest media house; the Nation Media Group to buy 60% of the company. Now, the Nation Media Group partially owns Monitor Publications Ltd with six other individual shareholders. It was re-launched as The Daily Monitor in June 2005. The paper's private ownership guarantees the independence of its editors and journalists, free from the influence of the government, shareholders or any political allegiance.

The Monitor Publications product portfolio includes:

- • The Monitor newspaper, the flagship of the company
- • 93.3 K FM radio: News and talk show radio station
- • The Monitor Business Directory

The Monitor's financial reports were not easily accessible for comparison. However, I was able to determine that it sells around two thirds what New Vision sells, its income is much less because it has fewer products. The Monitor maintains a culture of freedom throughout the newspaper, which ensures an open-minded approach to all aspects of publishing. It is the only paper that reports subjectively on news stories and conducts serious investigative reporting for the public interest. Its content includes breaking news, regional news, features, opinions, business, letters, international news and sports news. It also contains different special pullouts everyday focusing on different subjects. On Monday it includes 'the Score', a pullout for Sports, an educational guide and a people and places magazine. On Tuesday there is a business news pullout. On Wednesday, farming, environment and job classifieds. On Thursday smart money, health and lifestyle magazines. On Friday, relationships, leisure and entertainment. On Saturday, the newspaper focuses on womanly topics and football. Finally, on Sunday it covers religion, decor, teens, fashion and 'Rainbow', the children's magazine. Thus, everyday there is something diverse and interesting for everyone to read.

The Monitor also maintains an online edition. Launched in 1994, it is one of the first African newspapers to have its own website. The website mostly contains the same content as in the printed edition excluding the foreign content which is exclusively written for the printed version of The Monitor. This omission is justified by the desire to provide a product that is locally produced and carefully designed to suit the tastes of the primary target audience. The Monitor's main prerogative is to build a true new media brand that combines the intelligence, imagination and style of The Monitor newspaper, with the immediacy, depth and interactivity of the Internet. A Times of London survey (November, 2000), found www.monitor.co.ug to be among the 100 most visited newspaper sites in the world. According to Netcraft, the Monitor is no longer among the 100 most visited websites as this statistic was assessed prior to the surge in Social networking sites.

The Monitor's Systems Connectivity
While visiting The Monitor, I met Gladys Buteraba who works as the Help desk Administrator. During our discussion, I learned that Gladys is a computer nerd who studied Business Computing and also holds a Cisco Certificate of Network Association (CCNA). Her job is to look out for internal clients with computing problems. She knows each specific section of every department, which enables her to provide tailor made solutions.

Over the course of her work, she logs on the Internet and makes individual checks to find out if the systems at the monitor are running properly. The systems include; the Internet, email, accounts and editorial. She also handles the day-to-day user code sections composed of networks, systems and help desk. The networks include the Local Area Networks (LAN) and the Wide Area Networks (WAN) in other words, Internet connectivity. The Systems administrator manages the editorial, digital and finance systems.

Gladys explained with pride how the Monitor is a forerunner in digital innovation. She mentioned the mobile alerts service, which The Monitor outsourced from service providers called 'True African'. They teamed up with the mobile telephone providers to provide prompts and alerts on their clients' mobile phones. The clients pay for this service and in turn receive mobile alerts which offer breaking news and headlines. A new client would type in 'monitor alert', then enter a number and be sent a specific number upon which they will be subscribed to the service. Gladys was also pleased to note that the Internet, specifically email interfaces such as Outlook have enabled further organization between the journalists by providing internal email addresses and saving contacts and appointments.

The Monitor Website

To get a better understanding of how the monitor website is updated, I was directed to Grace Natabaalo, The Monitor's Internet/online sub-editor. She joined The Monitor in 2006 after she received her graduate degree in Mass Communications. Her job involves moderating comments from online readers and mobile phone text messages. She assesses the readers' comments and publishes them if they are appropriate. She does this mainly to avoid legal issues.

Upon arrival at the office, she checks out the radio websites for stories which haven't been covered in the paper, which she then uploads to the online edition. Over the course of the day, she gathers incoming news from reporters and updates the website. Grace uploads the website manually with each individual story, she explains how the introduction of new media has simplified her work. She subscribes to The Monitor mobile alerts so that she stays up to date via SMS text messages which provide breaking news or headlines for the next day's paper.

Grace is an ardent blogger, her blog name is: www.nattygrace.wordpress.com. She also uses social networking sites like Twitter, Facebook and Skype and subscribes to CNN news alerts for international news. She also belongs to Digbsy, which combines chat forums like Yahoo messenger, MSN and Gmail. In the future, she said the team of Internet reporters will offer readers different content from the print version. However today, the whole print version is available on the Internet at www.epaper.monitor.co.ug. With the introduction of fibre-optic cables and accompanying bandwidth expansion, The Monitor's website will be put to maximum use. All editor's and writers will be expected to update personal blogs and the website will incorporate audio and video components to make it fully interactive.

Typical Journalists at the Monitor

Having looked at how The Monitor's system works, I was ready to talk to the journalists who have the most experience navigating these systems. I first spoke with Dorothy Nakawesi, who has been specializing in business reporting since 2002. She holds a diploma in journalism and media studies and a certificate in finance and economic reporting. Dorothy first attends the editorial meeting to review the daily paper where she is then assigned which events to cover. Dorothy is grateful for having started reporting in the era of the new media. She uses her mobile phone for communicating with her contacts, receiving assignments, reporting, consulting, texting, photography, recording, receiving mobile news alerts, time management and music. She mainly uses the computer for entering stories and mailing them out and also for research via Google and Wikipedia. She is a member of several social networking sites like Facebook, which she uses to com-

municate with contacts for sourcing story ideas. Dorothy uses Yahoo messenger to communicate with Ugandans in the diaspora about their views on events occurring both in Uganda and abroad.

According to Jackson Oryada, the daily Monitor's Sports Sub-editor, sports news is impossible without new media, mainly mobile telephony and Internet. Jackson joined The Monitor in 1999 and holds A Bachelor of Arts degree in Social Sciences and a Masters of Arts degree in Ethics. As sub-editor, he receives stories online, organizes photos and sends them to the editor.

Carol Beyanga joined The Monitor in 2003 and is the magazine editor. She holds a Bachelor of Arts degree in Social Sciences and a Masters degree in Journalism. Carol's job involves brainstorming with specific editors and dealing with writers. She edits submitted stories and also coordinates the People and Places magazine. She conducts daily meetings with the magazine writers and the news editors. Sub-editors send the prepared pages to Carol to check the photos, captions, headlines and general design and to see if the stories are sufficient and legible. If no corrections are required, then a hard copy of the page is prepared and sent to the pre-press. Each magazine division has a different deadline. All of these procedures require a computer with Internet access. Some magazines are electronically sent to Nairobi for printing because this specific printing house produces high quality printed works.

Carol explains how the new media is both a blessing and a curse; it provides useful tools but can also make reporters very lazy. They no longer converse with people on the street or contact experts and there is also the looming danger of plagiarism.

Discussion with a Monitor Editor
In the absence of Daniel Kalinaki, the managing editor, Fred Masiga, an associate editor, was able to stand in and answer my questions. In regard to new media usage, Fred states that the computer is now an integral part of the media business. Typing and sending stories, Emailing, the Internet, researching and many other wonders offered by the computer have made things much easier for print journalists. He recalled the incident of the terrorist attack in Mumbai hotels when he used the Voice Over Internet Protocol (VOIP) with an Indian colleague to get instant updates of the story as it was unfolding. Fred also speaks fondly of mobile telephony. To emphasize its importance, the company provides official mobile phones and credit to most journalists on the field. The phones usually have added services including SMS, MMS, camera, Internet and recording capacity.

The Monitor is a mostly independent establishment, however, at times the government interferes with its management. The paper's independent status was almost terminated in the mid-nineties when the government forbade it of advertisements. It is also rumored that the president has complained to the Agha Khan, the biggest shareholder of the Nation Group, a parent company of The Monitor, this eventually caused two managers to be transferred to Nairobi. In spite of this, I admire this company for its humble beginnings and eventual rise to success. For it was founded by just a few journalists with very little money and only a few years later, it has transformed into a multi-million dollar establishment with over 200 employees.

Gulu: Northern Uganda region

Northern Uganda, once called 'the world's worst forgotten humanitarian crisis' by U.N. Humanitarian Coordinator Jan Egeland, is now emerging from one of Africa's most brutal conflicts. Today's northern Uganda is dramatically different from 2006. The majority of displaced persons have returned to their homes or villages due to the improved state of security.

At the peak of the war between Uganda government forces and the rebel Lord's Resistance Army, villages were abandoned and people moved to towns and internally displaced camps, which housed almost two million refugees. The rebels continued causing mayhem in Northern Uganda, abducting children and leaving a trail of destruction wherever they passed. Hospitals were rummaged; gardens left bare of any crops, all able-bodied men who resisted were killed.

Gulu is the commercial and administrative centre of the Gulu District and capital of Uganda's northern region. It lies 320km north of Kampala. Since mid 2007, there has been relative peace after Joseph Kony, the leader of the LRA, moved to the Garamba National Forest, the northeastern Democratic Republic of Congo, as reported in the press. These times of tranquillity have brought much needed peace to the city of Gulu, which is beginning to thrive economically once again. This peaceful moment has also brought a lot of aid and attention from the international community.

Since 2006, when Peace talks were initiated by Paxi Christi, a Dutch humanitarian organization, there has been a semblance of peace in the region. However, the conflict was exported to Sudan and the Congo, where innocent civilians are bearing the brunt of war. In late 2008, the governments of Uganda, Congo and Sudan launched a joint lightening military strike, which dispersed the Kony rebels in the forests of Garamba in the Congo. Plenty of his arms and ammunition were destroyed and some captured. However, bands of armed rebels roam around the Congolese and Sudanese landscape, stealing, raping and wreaking havoc amongst innocent civilians.

After Kampala and Mbarara, Gulu is most active town in Uganda. Today there are signs of peace everywhere in the town of Gulu and its surroundings. NGO workers are able to fill every available hotel room while other NGO employees drive, walk or cycle around working on rehabilitation projects.

In Gulu I was able to visit the New Vision and The Monitor bureaus, where I spoke to journalists who shared their stories and experiences about using new media.

The New Vision Bureau

The New Vision newspaper regional office in Gulu is located in the very heart of the Gulu town. Chris Ocowun is the bureau chief of the New Vision in Gulu, he holds a diploma in journalism and mass communication. His typical day starts with an overview of the previous day and an assessment of whether stories can be improved or built upon.

Every day Chris sends his staff out on the field in search of news or to follow up on stories. Chris observed that the incorporation of new media has been a blessing for journalists who are out of town. It all starts with the computer, which is used for typing stories, editing them and forwarding

them via email to the editor. It can also be used for spell check and obtaining background information. Chris also uses Yahoo messenger for conducting interviews, collecting data and clarifying information, however he does not use any social networking sites, nor does he blog.

The six journalists writing for the New Vision are not permanent staff, but are mostly freelancers. Cornelius Lubangakene, for example, is a freelance journalist who arrives in the office every day at 8.30 am where he then attends a brief editorial meeting to share tips and allocate assignments. Invitations for functions are also given to different journalists to cover. Cornelius then listens to the radio to get further news stories and also visits the police station, the court or the market in search of news. He uses motorcycle taxis or 'boda boda' as they are locally called. He always carries a notebook, camera, mobile phone and a pen. After noting his stories, he returns to the office, types them up, downloads photos and mails it to Kampala.

When Oketch Bitek told me his name, I thought I heard Okot B'tek the famous Ugandan poet and novelist. However, he explained to me that he had no relation to the poet. Oketch freelances with the New Vision at the Gulu office. He holds a Bachelor of Arts degree in Education. After graduating, he worked with The Monitor newspaper as the Northern Bureau chief and was also a reporter for the Central Broadcasting Services FM Radio and a researcher for international television stations.

Oketch uses the computer for Internet, email, spell checking, retouching photos and reading other newspapers. He admitted that he does not use search engines, chatting or social networking sites nor does he blog. Oketch uses the mobile phone for communication, receiving assignments, texting and reporting. He owns a laptop, which he uses to type out his stories before sending them to the editor or bureau chief.

The Monitor's Gulu Team
Unlike the New Vision's office in Gulu, The Monitor office has several female reporters and correspondents. Cissy Makumbi is one of them, she joined The Monitor in 2007 as a correspondent. Cissy uses the Internet for communication via email, Yahoo and messenger. She also uses it to access news from other sources and to improve her stories with the help of Google. She does not blog, nor does she belong to any social networking sites, but she often relaxes by playing solitaire on the computer. The other tool Cissy uses most commonly is her mobile telephone which is equipped with a camera, recorder, radio and videocamera.

Justin Muboka is another reporter at The Monitor's Gulu Bureau. She holds a diploma in Education. She joined The Monitor in 2008 and holds the post of news reporter. After gathering the news, she types the stories and passes them to her colleagues and bureau chief on a flash disk. If the story is sufficient, the bureau chief sends it to The Monitor in Kampala. Justin's use of the new media is limited to the computer, Internet and mobile phone. She does not blog or belong to any social networking sites.

Moses Akena is a graduate of Literature and a freelance journalist who joined The Monitor in 2009. He was very excited about our interview because this was his very first time being interviewed on any issue. Akena sends stories which were generated the previous day to Kampala.

Akena also conducts field research for other news after mailing Kampala. Later in the day, he attends an editorial meeting chaired by the bureau chief and afterwards, types out his stories. There is no service at the bureau offices, so stories are transferred using flash disks. Stories receive peer review and are then sent to the bureau chief before being emailed to Kampala.

Moses makes limited use of the available new media, he does not belong to any social networking sites, nor does he blog or use a digital camera. He describes the mobile phone as the king of the media devices and explains how it has revolutionized the media world, he constantly uses his mobile phone for receiving instructions, texting, interviewing and reporting. Akena was very excited with the interview, and thanked me incessantly, reminding me that he will forever treasure this day.

Eastern Region

During its glory days Mbale (Eastern Region's capital) was rewarded for being considered the cleanest city in East Africa. However, when I arrived in Mbale in the early hours of the evening, the town was filthy, littered with uncollected garbage on the streets. I had no idea where to find the regional offices of either New Vision or The Monitor. Finally, as I searched for the hotel where I was suppose to stay, I saw a sign leading to The Monitor office which I followed to meet with the bureau chief for an interview. Upon arrival, He showed me where the New Vision offices were and also directed me to a nice restaurant.

David Mafabi is the Monitor bureau chief for the eastern region and was recruited in 2002 as a correspondent. He attained a Bachelor of Science degree in Mass Communication and is now an award winner in investigative journalism.

The Bureau oversees 24 districts zoned into Bugishu, Sebei, Tororo, Teso, Karamoja and Bugwere. David arrives at the office by 7.30 am and does not blog nor does he have any interest in social networking sites. He uses the computer to type in stories, edit them and email them to the editors in Kampala. He also uses his Gmail for chatting and interviewing news sources and uses search engines to contribute to his stories. David introduced me to Mudangha Kolyangha, who freelances for The Monitor newspaper. Mudangha's use of new media is limited to the computer, digital camera and mobile phone. Many other forms of new media were still foreign to him; he had no idea what social networking sites, blogs, Skype etc were. This did not surprise me because it was common amongst upcountry reporters, correspondents and freelancers.

From The Monitor, I proceeded to the New Vision office, which is located in a run-down building hidden away between two banks. If you are not given precise directions, you will likely miss it. The New Vision's outdated office does not fit in well with the corporate image that the New Vision is trying to portray.

I spoke to Watala Jean Paul on his use of new media and like other upcountry journalists; his usage is limited to typing in stories on the computer, Emailing and mobile telephone use. He now operates a digital camera by taking photos, downloading them and emailing them to the head office. Jean Paul is still exploring other new media tools but he has yet to use the search engine tool, doesn't know how to blog and has never taken part in online chatting. In addition, he has

yet to discover what social networking sites are but is a young man who is eager to acquire new skills and it will not take him long to become computer and technologically savvy. His eagerness to learn sometimes turns into stress because he finds the computers very slow. In order to access the Internet, one must wait a minimum of 15 minutes for intiation. The computers are not cutting-edge, but are rather large and heavy, most likely Pentium 2s.

Western region: Mbarara

After visiting the Eastern town of Mbale, I headed West for Mbarara. The bus from Kampala takes about five hours. In an ideal situation on relatively stable roads, it would take no more than three hours. The town of Mbarara has changed over the last 15 years; it is a very busy town with many people wandering about. The population during the daytime is almost 1,000,000 people. The university, dairy industry and banana farms have created many jobs and encouraged people to migrate to the town. The current president hails from Mbarara and has encouraged others to move to the town which has further promoted the town's growth.

Upon arrival in the town, a friendly samaritan directed me to the New Vision bureau office. The Mbarara New Vision office is a far cry from the Mbale one. It fits in well with the New Vision's corporate image and covers 2 floors in one of the most modern buildings in town. The complex houses the New Vision and vernacular newspaper Orumuri and the newly acquired Radio West. It is furnished with modern office equipment including flat screen computers. I later learned that it was connected onto the New Vision's internet, unlike all other regional bureau offices.

The bureau chief was out of the office but I was able to meet him the next morning. I met Deus Ruhangariyo, an affable man who explained his average day to me, typically beginning at 7:30am.

On ICT use

Deus Ruhangariyo, Ebenezer T. Bifubyeka, an environment journalist and a veteran New Vision journalist, Felix Basiime, claimed that in Western Uganda, the computer is the most commonly used technology. All stories from the outer districts are received via email. The Internet is used to gather foreign news and Google for background information. Digital photos are fed into the computer, digitally edited using Adobe Photoshop software and integrated in the story using QuarkXPress program. Previously, the PDFs used to be physically taken to Kampala for printing on a floppy or CD, they are sent as an email attachment. Ebenezer and Felix both have a blog and subscribe to breaking news alerts.

Close by at the Monitor bureau office, I talked to Joseph Mazige, the bureau chief and Jossy Muhangi, a Monitor journalist. Like their New Vision colleagues, the computer, Internet and mo-bile phone are their first choice of all technologies. There is also a docket, which is an electronic storage space where stories are kept, edited and updated and also used to send the stores to Kampala. Both Joseph and Jossy maintain blogs and use social networking sites for communi-cation with editors and other colleagues in the field.

Conclusion

Having lived in the Netherlands, a first-world country for six years, I was pleasantly surprised to find a different crop of journalists in Uganda from the ones I remembered years ago. Most of

the employees of the newspapers which I interviewed have fully embraced new media in their day-to-day work. All the newspapers had online editions, the competition for news was very high and journalists both used smart phones and were indeed smart. The dirty blue jeans and T-shirts that I had remembered were gone. In their place were ties and white/blue collared shirts, laptops, smart phones (didn't matter whether they were Chinese clones), photo cameras and digital recorders. Journalism is now seen as a highly respected profession and one of the most sought after university courses. All new private universities have a faculty of mass communications in order to attract students who are left out by public universities. I was also surprised to see advertisements in newspapers in search of new editors and subeditors with Masters degrees. The profession had indeed come a long way, from school dropouts to holders of M.A. Degrees.

Research in the media industry is not easy. One is looked at with great suspicion and must wait a very long time before granted permission to delve into certain topics. I spent around 10 days running around from New Vision to the Monitor seeking permission to do this case study, interview journalists and speak to the high-level management. However, after permissions were granted, the journalists were eager and willing to give information about their profession, passions and their use of ICT. Many of them included grievances they wished me to add in my report and also forward to their bosses in order to improve their working conditions. The two leading newspapers pay well, but many journalists from struggling media companies had to work for very little compensation before attaining their current positions.

Overall, I observed that despite the world economic downturn, both print and electronic media companies were doing quite well in Uganda. Leading media houses were among the leading taxpayers in the country and also remunerated their staff competitively. Journalists who excelled were rewarded handsomely, drove the best cars and lived in the biggest houses in elite neighborhoods.

There are many obstacles to tackle in order to conduct research in Uganda. These include poor time keeping, dusty working conditions, extreme poverty amongst the population, traffic jams and lack of public transportation. It is also a pity that many journalists and media houses decide not to cover issues relating to human rights abuse by the government, corruption, political patronage and news about the first family because of self-censorship . I found this very frustrating for journalists who after tedious months of research eventually have their stories scrapped at the editorial level. Media outlets in Uganda are far too censored and protective of their assets to cover any really subversive or progressive stories that might challenge the status-quo.

Doing research in Uganda is enjoyable. The people are nice, friendly and answer questions warmly. One trait I found in all the people I talked to was failure to criticize the management of their organizations. However openly wrong the management was, no journalist was ready to admit it. It is a fact that is appreciated bearing in mind that out of the 400,000 graduates that completes their studies, only less than 10 of them get jobs. The unemployment rate could be well over 50%. Criticizing ones employers could lead to joblessness. At the New Vision, the editorial chiefs who throw out positive stories about the opposition also frustrate journalists. It is also common knowledge that all stories about the leadership in the country spiced. At the Monitor newspaper, there is self-censorship. A number of senior journalists resigned or were transferred abroad after being critical of government.

NGO'S, CBO'S & THE POTENTIAL OF ICT'S
KAI HENRIQUEZ

Introduction

It has always been a crucial challenge for the contemporary development community to close the structural gap between the supply and demand sides of assistance. Past models of international development proved to not always be executed as efficient and effectively as planned. However, the international development community is undergoing significant changes which mark a new era of global action on poverty. An era marked by new types of development cooperation through the promising and potential uses of New Media and ICTs which empower people to access and share knowledge and information to a greater extent than ever before. In Africa more and more people gain access to electronic communications technologies like mobile phones and the Internet, making way for possibly more effective methods for delivering aid, fighting poverty and international development work in general. Africa is quickly embracing Information and Communication Technologies. The continent is experiencing a mobile phone revolution that now defines the continent's potential. In a span of ten years, more than one third of the African population has gained access to the mobile network. The mobile phone industry in Africa is growing at twice the global rate, and remains the fastest growing mobile phone market in the world. This growth is also reflected in the spread of Internet connections that have increased by 1,031.2 % between 2000 and 2008. (UN World Investment Report, The International Telecommunications Union (ITU), Internet World Stats – June 2008). Internet connectivity is growing faster than anywhere else in the world and significant investments in fiber optic cables and satellite technologies promise to accelerate the process.

The breakneck pace of development in African connectivity recognizes important changes taking place on the ground. As governments and organizations within the field of development cooperation anticipate these changes, the global aim is to ultimately close the gap between the supply and demand of assistance and significantly increase the effectiveness of development cooperation. New structures for development cooperation are thus being formed through the research, development and utilization of these new technologies; structures which are centered on the concepts of locally adapted technologies, automated information delivery systems, social networking, massive collaboration, crowd sourcing, collective intelligence, transparency and equally important, individual responsibility. Structures identified under the name Development Cooperation 2.0. With these new structures come new approaches to development and new technologies being used with the aim to leverage the socioeconomic wellbeing of the world's poor; the so called ICT4D 2.0 paradigm.

Theoretical Background

In the early years between 1960 and 1980 ICT4D could be characterized as governmental technological assistance focused around the stimulation of economies, and implied an understanding of development as technological modernization; developed countries aided developing countries with new technologies which automated and thus modernized governmental processes. With the

widespread adoption of the internet and the formation of the Millennium Development Goal, the ICT4D paradigm entered a new phase in the 90's and the first few years of the new millennium. The computer and the internet proved to be powerful forces in shaping western societies therefore development actors intertwined the older concept of 'development as technological modernization' with the newer concept of 'knowledge centered development' in the hopes that developing countries would catch up to developed countries and make their way into the information society. It was thought that putting knowledge at the center of development efforts would bring increased social benefits and better functioning markets, and ICTs were thus seen as catalysts in bringing this about (UN World Investment Report, The International Telecommunications Union (ITU), Internet World Stats – June 2008). Development guiding principles were made, from which new business models like the Bottom Of the Pyramid model arose, all with the purpose of focussing development efforts on the largest yet poorest societal groups and providing those at the bottom of the socio-economic structure with the technological means to gain access to knowledge. The telecenter became the mainstream development approach applied across the globe with the hopes of giving people access to knowledge and allowing them to acquire, absorb and communicate knowledge in order to improve their socioeconomic well being. Telecenters offer a public place for people to use computers and the internet, improving their digital skills. Many concepts of telecenters were deployed with a wide array of different technology facilitated services, all based around the philosophy that access to the digital sphere would leverage the socio-economic well being of the poor at the bottom of the pyramid. Yet this technocentric development approach was doomed to fail, and what seemed to be a nice ideal did not translate to reality. This led to an increasing body of criticism against the technocentric development approach and a number of lessons learned, eventually leading to a gradual shift towards a more social-centered development approach, where the development focus is more on the people using the technologies than the technologies themselves as was the case with the telecenter. This new social centered ICT4D approach became known as the ICT4D 2.0 phase.

The outcomes of the 1.0 phase have led to the re-appraisal of development priorities, processes and purposes. First of all, ICT4D 2.0 has a social-centered character, where individuals and especially the 'to be developed' are put at the center of development efforts because, as is argued by scholars in the development 2.0 field, it is not the technology that brings social change but rather its use (UN World Investment Report, The International Telecommunications Union (ITU), Internet World Stats – June 2008). Therefore, within the 2.0 phase, more emphasis is put on the technologies which are already in use, on application and business model innovation, and on assessing and scaling existing applications. These newly formed focus points in turn lead to the rise of new development actors and funding streams, which make way for new possibilities for technological innovations and new approaches and techniques for implementing technological solutions within a development context, ultimately resulting in new conceptions on how to help the poor, and thus a reappraised concept of development action. During this phase, development action shifts from a knowledge and access centered development focus towards focusing on providing services, jobs and mediating social interaction through ICTs.

When moving away from the key concepts of ICT4D towards the technologies which characterize this phase, Heeks' innovation feasibility model provides the framework for analyzing this. In the field of hardware new terminals and new methods of telecommunication will find their way in

developing countries; low cost, low maintenance, low energy consumption, rigid, and functional in-
formation and communication devices, mobile phones, and new forms of wireless communication
will also be increasingly applied. The most important new technologies characterizing ICT4D will
be service-orientated software applications. Open source software will greatly reduce costs and
greatly increase the applicability of locally relevant and customizable applications which support
development. Development workers will focus their efforts based on the four main 'development
roles'. The first role is focused on providing the means which will deliver relevant content to users.
The second is to support social interaction and the creation, maintenance and expansion of social
networks. The third is focused on developing informational, interactional and especially transac-
tional service applications for the poor. The fourth development role will focus on providing new
jobs and new means for generating income. The case studies which will be discussed later will
shed light on these theoretical claims.

The 1%CLUB

As a prime example for an innovative new organization applying these ICT4D 2.0 principles and
putting them into practice is the Amsterdam based international development cooperation or-
ganization, 1%CLUB. Anna Chojnacka and Bart LaCroix, the founders of the 1%CLUB, noticed
the new opportunities for development cooperation through the use of web 2.0 technologies, and
launched the 1%CLUB; a digital social platform in the form of a marketplace where people are
encouraged to donate 1% of their income, time and/or expertise to small scale development pro-
jects set-up by individuals in developing countries. The 1%CLUB centers on the philosophy that
together we can put an end to global poverty. As Bart argues, "small scale projects and people in
developing countries most of the time have the solutions to improve their livelihoods themselves;
they have very good ideas but only lack the knowledge and resources to carry them out. So if
you give them access to this knowledge and resources, they can put their ideas into practice and
improve their lives on their own." This approach is fundamentally different than the traditional
development approach to which so much critique is given. Therefore the 1%CLUB is continually
working on developing, integrating and improving the system which facilitates the means for the
realization of this concept.

Based on web 2.0 concepts and socio-dynamic structures linked to these concepts, the 1%CLUB
envisioned a poverty solving system; a structure which through massive collaboration, the collec-
tive intelligence of the group emerges, when critical mass is reached and is considered to be cor-
rect, or the best possible solution for the particular subject at hand. These dynamics will, in theory,
result in the best solutions to development problems and ultimately make valuable contributions
to the achievement of the MDGs. Therefore the 1%CLUB has developed a service-orientated
platform which supports the realization of innovative small scale development projects in a variety
of ways. It is a platform that supports social interaction between its users in its member environ-
ment, it enables donations, financial flows and transactions from users to projects in its project
space and also allows users to find jobs or employees in its task space.

Through the use of weblogs, project owners report the advances of their projects and write about
how they actually make use of the donated money. This results in full transparency. Donators
can see the direct impact of their donations and can monitor whether they can trust a specific
project or not, which enables prompt intervention upon error. In this case, the actively participat-

ing crowd and their collective wisdom takes over the role that experts and delegates fulfilled before. Crowd sourcing is used for the monitoring and evaluation of the projects, which (learning from wikipedia) will bring the best and most reliable content to the surface and will make the least reliable content equally visible. A direct communication channel is established through the use of this system, resulting in a sense of "self ownership" for project developers. There is no middle-man NGO standing between the source and recipient of donations or influencing the development plans from above. Yet, the course of the project is under total responsibility of the individual(s) who initiated it, making trust and individual responsibility an important factor within this bottom-up framework for development cooperation. Besides providing the web service, the 1%CLUB is also focused on providing training to project initiators in developing countries. They focus on educating people in Internet literacy so skills can be built in order to make good use of the website and digital resources. Training in Project Management is given which aims to enhance the project owner's abilities to manage sustainable and effective development projects. And finally, training in personal leadership supports project owners in their role as leaders and prepares them to put their own skills effectively into practice.

As a young, innovative and versatile organization applying new media and ICTs for development purposes, the 1%CLUB knows they need to keep researching and innovating their system and services for continuous improvement and positive after effects. The reason why I was sent to Uganda is to do ethnographic research and map out the factors that organizations such as the 1%CLUB need to keep in mind when applying their services in developing countries. But beyond the system, the 1%CLUB is also an active organization of committed people working hard in cooperation, both online through the use of social media and also offline through meetings and partnerships, leveraging their development impact.

ICT4 Uganda Case Study

Introduction
Over the past decade mobile phones and services have taken Uganda by storm. Thanks to the ease in which one can obtain a prepaid phone number and the relatively cheap phone prices and plans, mobile phones have penetrated the largest part of the population. According to official reports there were 8,554,864 registered mobile phone users in 2008, which corresponds to a 30% of the population. The mobile phone has provided people from densely populated cities to rural communities with the powerful means of distanced communication. With around 2200 masts and signal stations across the country, the network coverage in Uganda has reached 100%, meaning every part of the country should have access to a mobile provider.

Compared to mobile phone use, the internet is still lagging behind. The low amount of landlines makes for the high provision and availability of wireless internet connections. In 2008 there were a total of 214,293 active mobile wireless internet accounts compared to 22,000 fixed line internet subscriptions. There are 2.5 million estimated internet users in Uganda in 2009. This includes 6,4% of the population, yet 4% owns a personal computer, 3.5% of the population in urban areas and 0,1% of the population in rural areas. These developments have opened-up new doors for information access and sharing. Many organizations within the development sector have focused their efforts on making use of these opportunities. These organizational practices

form the core of my research conducted in Uganda.

During my research trip to Uganda in May, June and July of 2009, I visited 14 diverse NGOs and CBOs active within the development sector. The aim was to learn about their organizational practices, and to witness the situation on the ground regarding the potential ICT uses, mainly focusing on their challenges, opportunities and visions for the future. Data and information was collected in Uganda through informal conversations and interviews, revolving around the following questions: What are you doing? How are you doing it? What are the problems? What are the solutions? Projects proposals, organization descriptions and websites of these organizations also served as relevant informational input for the analysis.

Personal Experiences and Research Results
In this chapter I will report my personal experiences from Uganda when visiting all these organizations, and will reflect on my major findings with the theoretical notions of development cooperation 2.0 which were discussed earlier.

Before going to Uganda, a great deal of preparation was put in to identifying and connecting with people and organizations in Uganda. Upon meeting one person, I was redirected to another and so on. In Kampala I came in contact with a CBO named Kiyita Family Alliance for Development (KIFAD)[72] through John Kibuuka, an IT specialist in Uganda. He has been working on various IT projects and got in contact with the 1%CLUB, through which I contacted John. John showed me around Kampala and explained the current status of ICT in Uganda and talked about his visions for future technological developments. I travelled to the suburbs with him to visit KIFAD. This was a well-organized CBO with very driven employees who are hoping to help their community members infected with or affected by HIV/AIDS. By doing some research online, I found a few other organizations based in Kampala which would be worth a visit. Namely, WOUGNET, iNetwork and Warchild. Meeting with representatives from these organizations was simple since the development community in Uganda is very open to connecting, collaborating and sharing with others. This was reflected in the meetings which I had with them, they were very open and willing to share practically all of their knowledge. When arriving in Gulu (a city in the north of Uganda) to meet BOSCO (Battery Operated Systems for Community Outreach) which I also found through Google (two months earlier in Amsterdam), I had forgotten where to go, with no accommodations or map. I approached a man in what seemed to be a print-shop and asked him if he could take me to an internet café or nearby Telecenter. This man was very kind and escorted me to the place. After having a conversation with him it turned out that he was the director of a newly established CBO, SOVCO, located in an IDP camp just outside of Gulu. Two days later he would take me to the village where he operated and gave me a tour through his community. After walking for hours through the thick bush miles from the nearest streets and bodaboda we arrived at the location of this organization, an extremely fertile piece of land where they grew fruit and other crops. It was here where only a few years ago all of the inhabitants of the village where driven away from their land by the Lord's Resistance Army rebels, only now, in the past year have they returned to their home ground. Being exposed to this really opened

---

72. http://www.kifad.org/

my eyes to the reality of life in these outer corners of the globe and how difficult it is for people living here to catch on to all the developments taking place in the more populated areas. Upon returning to Kampala I gathered other contact information for various organizations. Meeting with all these organizations was a great experience which I have learned a great deal from in connection to the subject matter of my research.

Common Beliefs About 'Why ICT4D?'
The first week I was in Uganda, I visited the CBO KIFAD in Kampala. There I had a talk with Bob Bongole and John Kibuuka who explained to me all about the work KIFAD does and the problems they face. They underlined the importance for their beneficiaries, and of Ugandans in general, in having access to information and to be able to share information. Bob works with KIFAD to care for and support the people in his community who are infected and affected by HIV/AIDS, just like many other organizations in the country. This work involves counseling, guiding and providing important information to people in the community. He explained that unfortunately, this aid and information is currently very limited. By means of conversation, knowledge is gained about the problems that these people face and the needs that they have. According to this verbally gathered information, relevant information is provided back to the people, and support is given through referring and directing them to the corresponding procedures which will enable a better life. In a sense, the workers of KIFAD act as human information providers to their beneficiaries and therefore they argue that access to ICTs and other technological information access methods are of great importance for achieving their organizational goals.

KIFAD has a paper-based library where staff and members of the community can find information (often not in local languages). This information is gathered by a KIFAD staff member from an internet café in central Kampala, then printed or downloaded onto a USB stick, and brought to the office to print. This paper based library is the central source of information which KIFAD uses to educate and council their beneficiaries. The disadvantages of this system are felt within the organization. Searching for relevant information is time consuming, printing the information is costly, it takes plenty of human effort to gather the information in the city and then bring it back to the office, storage space is limited, information is most often provided in foreign languages not spoken by the beneficiaries etc. ICTs hold the potential to change this traditional way of storing and providing information and will open up new doors for KIFAD in carrying out their duties.

KIFAD also hosts a meeting every month where all the beneficiaries of KIFAD come to the office to get informed on important issues and to share personal experiences with each other. When visiting one of these community gatherings a woman explained how, with the guidance and information referral service of KIFAD, she learned how to start a business selling items at the market. Now she is generating income with which she can support her family, buy medication and live with a higher quality of life. It is these type of motivational talks and sharing of experience that the rest of the community needs to become mobilized and to start fending for themselves, Bob from KIFAD adds. However, providing information and verbal guidance in this way is very inefficient and the sharing of information between the community members and the KIFAD staff is an exhaustive process, "people still have many questions, seek information and have much to share", Bob adds. He views ICTs as the tools that encompass the potential for these needs

to be met more effectively. Bob describes the urgency in training his community members to use the computer and the internet so that they can find this information themselves or KIFAD can provide it digitally, on-demand to them. He has already started devising a tele-center with internet access in the KIFAD office. The next step would then be, according to Bob, to start giving computer skill workshops to the beneficiaries. When I visited a community meeting on a Saturday morning, I asked who out of the group of beneficiaries (approximately 40 adults) used computers or internet. It was interesting to hear that none of them owned, used or knew how to use a computer. People are either too poor to buy one, don't see relevancy in learning something new, or are outside the electricity zones. They did ask me how their children could start using these technologies. For me, this was a typical and important finding which clearly reflects the status of ICT use throughout rural Uganda.

Bob and John also envision the implementation of social networking and innovative mobile phone applications so that people can actively access and share information and experiences with each other and can connect in real time. These ICT solutions would save money (transportation, printing costs etc), offer quicker aid (when someone is sick, they could communicate digitally and guidance could be given instantly regardless of geographic location) but most importantly provide the means for people to express themselves and become empowered through ICTs. The nature of KIFAD and the activities that they execute relate directly to the potential provision and use of new and locally innovative technologies for information collection, distribution and sharing. As shown above, ICTs are thought to enhance the communication between organization and beneficiary, improve the organizational support given to the beneficiaries and enable more effective means for sharing relevant information. From these findings and this 'common belief on why ICT4D?', it is clear that there is a demand set up telecenters, educate beneficiaries in computer skills, and to start utilizing ICTs that support knowledge and information access, distribution and sharing.

The Need for Telecenters and ICT Skill Training:
There is a common belief that an increase in the level of knowledge of the people would greatly contribute to the sustainable development of the country. Providing people with computer skills increases their ability to access and share information and to communicate and collaborate with each other, thereby mobilizing and empowering them to improve their living conditions. Just like Bob and John from KIFAD, many other NGOs and CBOs see relevancy in utilizing ICTs for their development work. Yet a major problem facing this, with the situation at KIFAD as a prime example, is that there is a very low level of ICT use and literacy throughout Uganda, apart from the basic use of mobile phones. Therefore a large focus is put on setting up telecenters throughout the country and providing ICT skill training to the people.

When I visited Milton Aineruhanga from Wougnet[73] he explained to me that Wougnet supports the use of ICTs among Ugandan woman as tools to share information and address issues collectively. In Uganda there is a large educational divide between boys and girls. Girls are more likely to drop out of school to start working for the family at home or on the land. Overcoming

---

73. http://www.wougnet.org/cms/index.php.

this divide is therefore a focus point for Wougnet, because it will promote better educated women and a more prominent role for women within the Ugandan society. With this underlying philosophy, Wougnets set up telecenters to provide people with computers, internet and all the technical means to allow access to digital information and communication. They also provide ICT skills training to women in order to empower them. This type of training mainly focuses around using ICTs for sharing information, reporting, accessing information and networking with others. While the focus is primarily on the use of ICTs and internet based technologies, WOUGNET also looks at how these technologies can be integrated with traditional means of information distribution like community radio, citizen journalism, video, printed materials and telephones. The advantage here is that it's possible to operate in local languages. These issues and focus points are reflected through the large online forum Wougnet hosts and the face to face meetings that they organize for women who want to discuss topics involving the use of ICT for sustainable development.

After a talk with Ans de Jager from Warchild Holland which has an office in a Kampala suburb and is actively involved in development projects in many third world countries including Uganda, I noticed that Warchild conducts development work in a similar scenario than that of Wougnet, only within a different context. Warchild Holland lifted a project named ICT4Peace, which revolved around utilizing ICTs to grant children in war affected areas of Northern Uganda increasing access to education. With this project, Ans argued, Warchild has noted shifts occurring in the mentality of the participating youth. Access to ICT and education increases the children's will to learn and go to school and a considerable decrease in violence, drugs and alcohol.

Problems Facing the Effectiveness of Telecenters and ICT Trainings
The formula is simple: set up a telecenter, provide computer skills training, and improve information access and communication to thus contribute to the increase in the level of their knowledge, the empowerment of the people and the development of their country. However, there are problems encountered that should be noted when following this, now mainstream, approach.

Encouragement
An important issue that rose in the above mentioned conversation with Milton and Ans, was the actual lasting effects that the ICT skills training provided. What has commonly been identified is that after following ICT skill training, people rarely feel encouraged enough to put their newly learned abilities into practice. People often tend to fall back into their day to day lives without using their acquired skills. Milton from Wougnet and Ans from Warchild have both noticed that people require outside motivation and encouragement to make use of their skills after training. This kind of motivation will enable the individual to integrate ICTs into their daily lives so that they can eventually benefit from them.

Physical Restraints
Physical restraints such as high prices for internet access, slow internet connection speeds and the absence of computers and the electricity grid also play a large role. Overcoming these factors will, as I heard repeatedly, increase the effectiveness of the skills training and integration of ICT into peoples' daily lives. The following table gives an overview of potential factors which give

negative developmental impulses, which in turn become focus points for applied technological solutions. The next chapter gives examples of specific approaches in overcoming these factors.

Absence of Services

Next to overcoming physical restraints, people need to be introduced to or provided with an information delivery service or a knowledge sharing platform to encourage these people to use ICTs and to stimulate the integration of ICT's into their lives.

The Need for Innovative Technological Solutions

Wougnet hosts a forum and a mailing list on their website which provides the means for people to share and access information and knowledge. They also try to maintain a database of documents, supplying users with relevant information. The activities of Warchild Holland mainly focuses on providing the kids with basic email skills to communicate with each other. Even though these basic services (forums, mailing lists, email etc.) do provide the basis required to bring information access and sharing through ICTs into their lives, the needs for innovative and sustainable solutions are still required to encourage ICT use following the training, to provide better means for accessing and sharing information, and to overcome the physical restraints which stand in the way. When I visited BOSCO in the Gulu district of Northern Uganda, I got an inside look on their approach in tackling the problems mentioned above in an innovative and sustainable way.

Innovative Hardware

BOSCO[74] stands for Battery Operated Systems for Community Outreach. They research, develop and implement innovative and collaborative ICT technologies specially adapted for rural areas, and specifically designed to encourage ICT use, overcoming physical restraints. Along with Kevin Bailey, I visited the Coope IDP camp outside of Gulu to see the system which BOSCO has set up. Upon arrival I entered the office equipped with a desk and a highly durable and low maintenance Inveneo computer mounted onto a desk. This machine was powered by a battery that was charged by a solar panel attached to the roof. The computer was connected to the internet and an intranet through a WiFi system set up in the area. Next to the desk there was a telephone which used a VoIP (Voice over IP) system, enabling direct and free telephone communication between BOSCO stations and with the BOSCO staff.

The solar panel and the battery solve the major electricity problem which I heard about throughout the country, at other organizations and at telecenters. The Inveneo computer solves a technical/maintenance problem due to their low maintenance and high durability. The telephone allows for free and quick communication between the organization and beneficiary allowing the organization to support its beneficiaries directly. Finally, the WiFi system solves the problems of internet access, speed, costs, and the absence of fibre optic cables and telephone lines.

Interestingly, during my visit at Coope, the internet connection was cut because the site manager, a community member working as volunteer for BOSCO, in the IDP camp couldn't gather the money for the monthly internet fee. This illustrates how business skills are equally important as

---

74. http://www.bosco-uganda.org/.

acquiring ICT skills and social factors are also important in order to overcome physical restraints and sustain such development projects locally.

Collaborative Software

Besides providing hardware solutions, BOSCO also encourages the use of collaborative web2.0 software. First they provide training to community members who are willing to participate. These people are trained to be trainers (this is the Train-the-Trainers or Teach-the-Teachers concept in which a trainee is encouraged to pass on his acquired knowledge and skills to a fellow community member) so they can train and guide others in their community. During this training, basic computer skills are taught, and also the use of wikispace is introduced. This wikispace is the knowledge and information sharing platform where users of the BOSCO system can access, share and request information, report events, put project proposals online, discuss topics, connect and communicate with people (inter)nationally and simply just put their acquired skills into practice. Hereby leveraging the development of the people and communities which BOSCO sets out to help.

As an example, Aliker David Martin, a pioneer at BOSCO, explained to me that people in the war-affected and rural areas of northern Uganda have a strong drive to retain justice. On the way to and from schools, girls are raped daily but their family and community members have no idea how to report this, how to handle the situation and how to restore justice. Therefore, teaching them to use the technologies provided by BOSCO allows them to access judicial information so that they are aware of their rights. In addition, it can be made possible to report these situations through BOSCO's technology. A major advantage of such a system is that it will provide measurable data on these kinds of cases in rural Uganda, something that until now hasn't been possible.

> "We would like this site to contain pages dedicated to facilitating contact with each of these areas as they come online: providing images, communication links, project ideas, etc. We want to build community, not just a computer network, with our brothers and sisters in these villages". I found this element, an innovative web 2.0 platform for community-building, to be an important missing link at Wougnet and WarChild.

The Need for Content Management Tools

Developing and utilizing a knowledge and information sharing platform, or innovative web 2.0 platform for development purposes as seen at BOSCO, is a common occurrence within development practices. Yet, this solution has its pitfalls, which I saw firsthand at an NGO called i-Network.[75]

i-Network also hosts a knowledge and information sharing platform. They have built an online platform where development stakeholders and others interested in utilizing ICTs for development can share knowledge and information with each other. Through a very active discussion board and mailing list, information and ideas are expressed and a large community of people has been built over the years. Elisha Wasukira, a staff member of i-Network, described their work to me in

---

75. http://www.i-network.or.ug/.

great detail. He told me that i-Network seeks to provide advisory services to people expressing needs through their web service. They also aim to facilitate development processes by bringing development stakeholders together and connecting them. From all of the information shared on the discussion group, i-Network works to extract lessons, needs and other relevant information in order to better assist in the above mentioned organizational activities.

The biggest challenge for iNetwork that Elisha expressed to me was effectively organizing and managing all of the knowledge and information generated through the platform. Because of the structure of the discussion board and mailing list, and the information overload generated, extracting and detecting the needs of the users and gaining significant insight in to relevant discussed topics has been a painstaking process. Providing advisory services to the iNetwork users is therefore greatly hindered. As I signed up for the mailing list it quickly became clear to me what Elisha was concerned about. Within a week, I received over a hundred emails from people following certain topics and discussing these issues through the mailing list. With countless topics being discussed simultaneously, it became very difficult to follow specific topics that interested me. This illustrated that developing and utilizing new technologies for knowledge and information aggregation and communication is a good initiative, but the need for effective content management and need extraction tools is crucially important.

What I learned here was that, in order to be an organization facilitating a knowledge sharing platform and working to address the needs expressed by its users and extracting valuable meaning from it, you must have a system structure that supports these activities technically. Advanced extraction tools and other automated information analysis tools fall in to this category.

Mobile Phone Services for Development
As I continued my research, I met Jessica Osborn from AppLabs and Bas Hoefman from Text To Change. What these organizations were doing was researching, developing and implementing applications that use mobile phones and SMS as a medium to provide and gather information to and from the public. Jessica told me that giving people the possibility to access and share information digitally, requires using technologies that are already very prominent in society and penetrate the largest part of the population, which is very logical. In this case, which is the case for almost the entire continent of Africa, mobile phones are the communication devices owned in 2008 by 8,554,864 people which is equal to 30% of the entire population, thus being a digital gateway to the population for organizations that want to provide and gather information for development purposes and work to increase access to information for the empowerment of the population. By talking with Jessica and Bas I gained significant insights in to innovative mobile services and technologies which stimulate information access and development on a large scale and how to best develop these applications.

Information delivery on demand
AppLabs, which works in partnership with Google and MTN Uganda, is carrying out various activities that embrace new media. Before developing mobile applications, they do extensive

ethnographic and needs assessment research.[76] The results of this research supports and guides the development of applications tailored to the needs of the would-be users. What their research has shown is that there is a high demand amongst the least informed people of the country for accurate and dependable information on health, agricultural, market, weather and transport issues. After acquiring these findings, AppLabs goes into a rapid prototyping phase in which they quickly develop and test mobile information delivery applications that cater to the demands and needs expressed in the research. The advantages of their mobile approach to improve information access is that people aren't required to have extensive computer or ICT skills, but make use of the devices and skills that they already have. More importantly, the information they seek is delivered to them on demand through an automated engine, meaning they don't have to be actively engaged in the exhaustive process of searching for the information themselves. Addressing the needs of the user is automated, as is the case on most web-based knowledge sharing platforms discussed earlier.

Until now, AppLabs has developed five functional implemented applications. A weather forecast application with localized up-to-date weather information. A clinic finder and health tips application which facilitates a searchable directory of local health facilities and answers questions submitted through SMS concerning sexual and reproductive health. The 'farmer's friend' application which provides users (farmers) with information on the current market prices for their crops and gives agricultural tips and advice and finally, a trading platform in the form of E-Bay, where people can put their items up for sale or find items that others are selling.

Based on the technologies that AppLab is engineering, many strong beliefs have already been expressed about its impact on society:

> "Widespread adoption of farmers friend will lead to lower transaction costs, greater efficiencies and higher price transparency across various markets, bringing increased incomes to smallholder farmers".

> "Scaling the application nationally across Uganda will lead to increased knowledge of farming techniques and more informed agricultural decision making based on access to weather information".

Open Source / Free Software Solutions
Like AppLabs, Text To Change[77] also develops mobile applications built for the dissemination of information. By engaging with people in an SMS based quiz, they spread information regarding health and HIV/AIDS issues. With this information, the aim is to educate and inform the users on these issues and mobilize them to take action in getting tested or seeking medical care. A major problem that Text To Change encounters is that mobile providers aren't well-equipped enough to provide the technical means to sustain social SMS applications or applications with extensive functionalities like personalized information feeds and interoperability with knowledge sharing platforms. Developing and implementing these technologies is therefore difficult. Because of this,

---

76. http://www.grameenfoundation.applab.org.
77. http://www.texttochange.org/.

there is a need to further develop better open source solutions in the area of telecom and SMS applications. Hereby stimulating collaboration between organizations, broadening the domain of possible applications and extending the functionalities to personalized and web based services.

Besides providing information to the users, another important asset of these applications is that calculable data and information on the population is gathered through them. This input serves as crucial information on which the organization can act to improve their applications and services. This does lead back to the issue noted at iNetwork that, within these types of organizations, there is a strong need for effective content management/needs extraction/data analysis tools. In the case of AppLabs, working together with Google provides a tremendous technological advantage because of the technological knowledge that Google possesses.

Scaling Mobile Phone Use for Development, Peripheral Devices
AppLabs and Text To Change addressed the importance of scaling their technologies in order to stimulate information access and development on a large scale. This involves using large telecom companies as partners to get access to thousands of mobile phone users and partnering with major organizations such as Google in order to address and solve technological issues concerning information delivery. However, even though a high percentage of the population uses mobile phones, its use (and the use of other ICTs) still hasn't penetrated the critical mass for these type of initiatives to spread nationally. Using mobile phones and SMS as a medium for information delivery, access and sharing, holds great potential for supporting national development, but as Daniel Stern from UConnect made clear to me, additional technologies and services need to be developed to work in unison with these mobile applications.

Daniel explained his visionary solutions to two large problems that he noted in rural Uganda, which will leverage the use of ICTs nationwide. The first problem being the lack and high costs of electricity to charge mobile phones, and the second being that most people don't have bank accounts to regulate financial flows. By introducing low cost and highly durable solar charges for mobile phones, anyone can charge their phone whenever they like. Daniel showed me a prototype of a solar mobile charger that he bought for 10 US dollars each. By dropping it a few times on the ground, connecting it to my phone to charge it and pouring water over it, he demonstrated the functional use and durability of this device, especially for conditions in rural Uganda. Along with deploying the solar mobile charger, he explained that mobile banking needs to be available for everyone in order for them to have access to bank accounts and money wherever they go. This will stimulate financial processes, business and eventually the national economy.

Take the trading platform developed by AppLabs as an example. People could use this platform to buy or sell items from others. Through their mobile bank accounts they could have access to and transfer money, thereby easing the trading process. Another example could be that a person could set up a development project and rely on funding from an international source. Through a mobile bank account, the international donor could transfer money and the project owner could access this simultaneously.

The Need for Mediating Services:

Two organizations I came in contact with, MCA (Music and Culture in Africa) and ICU (International Contact Uganda), shared similar organizational properties. Both of these organizations were acting as the mediating organ between (international and local) development workers or organizations and community development projects. I learned of the interesting possibilities inherent in their use of ICT. MCA offers local youth as well as international volunteers, the opportunity to contribute to community development through involving them in community projects and work camps, which aims to bring the community together and teach kids and teens valuable life lessons through music, dance and cultural activities. The hope is to enhance local development work and international cooperation. ICU provides services to international organizations with development projects in Uganda and acts as a trusted partner between the organization and their projects. They also provide a guest house for volunteers and travelers visiting Uganda and host safari trips which support local community projects.

Because of the characteristics of these organizations there is a strong need to connect and communicate easily and effectively with people both locally and internationally. ICT tools and new media are very relevant in supporting this international orientation and the developmental cooperation characteristics of these organizations. I met Abasi Kanyike from MCU at a party in a Kampala nightclub, he told me of his organization and his problems. Because of the international orientation of his organization, he said his main problem was to find and connect to international volunteers willing to work with him. He knows there are many people worldwide who are willing to participate in activities organized by him, but finding them or for them to find him has been a major challenge. Sander from ICU described a similar situation to me. His organization is also internationally orientated, and the service that he provides requires people from abroad to gain insight in to activities happening in Uganda.

An integrated web service that links Abasi, Sander or other local development projects to the international worker/volunteer and the other way around, provides the technological means that these organizations need in order to enhance their abilities and broaden their capacities. This service would work in two ways; providing the possibility for international exchange, funding and exposure for development projects and the means for monitoring, evaluating and advocating for development projects.

The Need for a Centralized Organization Registry System

Finally I visited two CBOs called SOVCO (Support the Orphans & Vulnerable Children Organization) and PGGOS (Patience Great Glory Orphanage School) which shared similar characteristics. The organizations were set up by good willing members of the community in a rural part of Uganda. Their activities involve improving the living situation and livelihood of community members, they were established because of a desperate situation on the ground which needed attention, involving the well being of orphans and vulnerable children in the community. They are mainly characterized by providing physical development assistance without the use of ICTs or other technological methods. What I found interesting about these organizations was that these two CBOs didn't make use of ICTs at all for their development work(apart from typing project proposals with a spreadsheet and communicating through email). After visiting them several times to gain insight in to their needs and the possibilities for the use of ICTs, I learned of specific ICT tools that would

be beneficial for them, their beneficiaries and many other grassroots organizations like them.

While talking with Tonny Opiyo (who has made me chairman to represent SOVCO in Holland) from SOVCO, and John Bosco from PGGOS a few points became very clear to me:

> They spend much time and energy looking for partners locally and internationally.
> They spend much time and energy to find funding and donations for their organization.
> There is a need to gain exposure to publicize their activities.
> They make no use of ICTs for their development work.
> These points, and the cases of SOVCO and PGGOS provided the means for me to connect the ICT solutions and applications mentioned in this entire chapter to each other, in order to form practical ideas for ICTs that encourage development cooperation.

Tonny Opiyo explained to me that he needed to register his CBO at a government official's office. All organizations in that region had to visit the same office for registration. I realized that there must be many organizations, just like SOVCO which are carrying out the same activities and encounter the same obstacles which I identified. When Tonny explained to me this issue of registration, it occurred to me that a knowledge sharing platform where organizations like SOVCO and PGGOS could register would be of great assistance. Through this platform, their organization and its activities could gain exposure. The platform would give insight in to the whereabouts and activities of all organizations registered in a specific region. It would enable them to find each other and to seek local partnerships. It would also be a gateway to gain international exposure and fundraising. This service wouldn't have to be web based, if you take the applications developed by AppLabs into account. In the case of the 'clinic finder', an application could be developed that would offer insight and information on other relevant organizations in the region other than clinics. This application would then be made especially for NGOs or CBOs instead of directly for their beneficiaries.

Because these organizations have yet to integrate ICTs means that they also most likely don't possess ICT skills. A skills training course would then be beneficial in order to solve this issue. The knowledge sharing platform on which they register would also be a helpful tool to assist with this. It would give them insight in to other organizations, like Wougnet, ChangeIT! or BOSCO providing skills training near them. Since these organizations have to register at a central point, this central point could be used for the organizations to engage within this system.

Conclusion

During my research trip in Uganda, I found that physical and social factors are the main challenges that organizations must overcome in order to utilize the full potential of ICTs and new media for development purposes. The main approach taken in Uganda for NGOs and CBOs, is to set up telecenters and offer skills training to overcome ICT illiteracy. I've found that to encourage and integrate ICT use into the daily lives of people, organizations have the opportunity to provide innovative hardware solutions for overcoming physical factors and web 2.0 software solutions to overcome social factors. Yet, the challenge that these organizations subsequently meet is managing the content generated and provided in their web service and to later extract and address the needs expressed by users of their platform.

Mobile phones have shown to be a highly effective tool to provide and gather information to and from the public. Using mobile phones and SMS as a medium to support information access and sharing is a great opportunity for NGOs and CBOs. Challenges standing in the way of this are the development of the applications (many organizations don't have the capacity or know how to develop, implement and utilize mobile information services), the technical capacity of major telecom providers (the providers have a limit in what type of applications and data traffic they can support, developing mobile applications is thus subjected to the technical capacity of the telecom provider) and the availability of open source applications (many organizations develop applications which could be effectively used by other, smaller NGOs and CBOs but they tend to keep their applications proprietary). Bringing mobile phone use to more effective potential would mean further developing and utilizing mobile banking and solar chargers. Another opportunity is that NGOs or CBOs become a mediating organ between development work and development workers. This service will go hand in hand with an integrated web service through which communication and coordination should be possible. The challenge would be keeping the service up to date and developing the proper systems structure to support the service. Finally the need for a central web space where NGOs and CBOs can be registered in order for them to find each other and seek partnerships would be immensely beneficial. Developing this centralized organizations registry system has thus emerged as a useful opportunity for organizations seeking to develop ICTs for development.

SOFTWARE STUDIES
BEN WHITE

Introduction

The field of computer science builds on the lifetime work of people like Vannevar Bush and the Western industry, military and government interest he represents. Most of what has been developed post 1940 is built to serve these basic interests.[78] Modern day computing has almost wholly emerged out of a western context and with a western user in mind. The subsequent 'computing age' is thus an artefact of the same culture, embedding its values at different stages of development. Recognizing the historical roots of the computing phenomena, and the culture it embodies, helps us to understand its odd shape when placed in other parts of the world. Only by recognizing these points of intersection are we able to recognize viable alternatives.[79]

At the same time, software's growing role in society makes it an important component of any ICT4D debate. Software increasingly acts as the glue that holds society together. It is the middle layer that collects, organizes and distributes our data and information. It is the organization of code that increasingly controls our systems and manages our actions. As Mathew Fuller explains in his book Software Studies: a Lexicon, "as software becomes a putatively mature part of societal formations (or at least enters a phase where, in the global north, generations are now born into it as an infrastructural element of daily life), we need to gather and make palpable a range of associations and interpretations of software to be understood and experimented with."[80]It is the pervasiveness of software and its critical function that makes it an important point of study. At the same time, its relevance is not exclusive to the North but is increasingly part of African life too. It is only a matter of time before each person on the African continent owns or has access to a mobile phone and is thereby subject to the same 'infrastructural element of daily life' experienced elsewhere. Software is increasingly pervasive throughout the world, including Africa, and it is in the fringes of the global information society that these questions need to most importantly be addressed.

As Matti Tedre and Ron Eglash explain in their article 'Ethnocomputing', "there are two central arguments: a design/social justice argument and a theoretical/academic argument. The first argument is that a better understanding of the cultural dimensions of computing can improve the design of computational devices and practices in disadvantaged groups and third world populations. The second argument is that an understanding of the cultural dimensions of computing can

---

78. Vannevar Bush, 'As We May Think', New Media Reader, Cambridge: The MIT Press 2003, p. 35.
79. Mathew Fuller, 'Introduction', Software Culture, a Lexicon, Cambridge: The MIT Press 2008, p. 3.
80. Ibid.

enrich the disciplinary self-understanding of computer science at large."[81] Both arguments open up a new space for analysis that not only better serves the needs of marginalized populations but demand a better understanding of computer sciences at its core.

This line of thinking aims to break down the historical mantra, the idea that solutions come from the north and problems from the south. The challenge in creating a 'paradigm of equals' stem from our own definitions and the intrinsic belief that knowledge is localized in developed countries.

Tedre and Eglash make the point that, "one of the most difficult barriers to the research of Ethnocomputational ideas is the unequal assessment of knowledge in locations of high social power (e.g., Western, first-world, high-tech) and knowledge at the margins of social power (e.g., indigenous, third-world, vernacular)".[82] Only through careful ethnographic approaches at the margins of social powers can this imbalance be improved. Ethnocomputing can harnesses the potential to encompass both worlds where neither is given preference over the other. To this extent, there is reason to believe that cultural variation should be celebrated as opposed to the technology that too often precedes it. There is a failure to recognize our cultural differences as important sources of ideas, alternative lines of thinking that lead to new forms of problem solving. If anything, it is cultural diversity that puts oneself, and the technology we use, into its proper context.

Andrew Pickering argues that science builds upon a history of adaptations. This is not a process of complete replacement. Through experiments, society receives necessary critical feedback to improve a given design or modify a system. He makes clear that this process builds on technical, social, and natural relations. As cited in 'Ethnocomputing', 'there are undoubtedly universal physical laws that govern the operation of computational devices, but only through a multiplicity of experiments – whether carried out by silicon chips, carved African game boards, or the generation of theorems and proofs - can one learn those disciplines.'[83] It is this learning process that is critical to understanding, using, deconstructing and building effective technologies. Unfortunately, and as seen with the OLPC project, this process too often occurs without the proper input of the very stakeholders whom ultimately depend on a particulr technology. Greater value should be placed on the cultural feedback loops which are otherwise often ignored. Whether it is a computer hacker living in the global north or a young net artist living in the global south, it is clear that knowledge builds from the scientific process all over the world.

---

81. Matti Tedre and Ron Eglash, 'Ethnocomputing', Software Culture, a Lexicon, ed. Mathew Fuller, Cambridge: The MIT Press 2008, p. 98. Ethnocomputing, is the study of the interactions between computing and culture. It is carried out through theoretical analysis, empirical investigation, and design implementation. It includes research on the impact of computing on society, as well as the reverse: how cultural, historical, personal, and societal origins and surroundings cause and affect the innovation, development, diffusion, maintenance, and appropriation of computational artifacts or ideas. From the ethnocomputing perspective, no computational technology is culturally 'neutral', and no cultural practice is a computational void. Instead of considering culture to be a hindrance for software engineering, culture should be seen as a resource for innovation and design. (Wikipedia, http://en.wikipedia.org/wiki/Ethnocomputing).

82. Tedre and Eglash, p. 93.

83. Ibid, p. 94.

Ron Eglash offers such an example when he describes a project that began with modeling traditional African architecture using fractal geometry. Field work in Africa showed that these architectural fractals result from intentional designs, not simply unconscious social dynamics, and that such iterative scaling structures can be found in other areas of African material culture – art, adornment, religion, construction, games, and so forth-often as a result of geometric algorithms known (implicitly or explicitly by the artisans).[84] His research and approach demonstrates the need to look beyond the purely technical and to place a new focus on the individuals behind these innovations instead. By understanding the ways in which these individuals are modelling their surroundings, we can better appreciate their connection to the global information society.

By studying the role of software in a place like Africa, it becomes possible to reflect on the subject of software itself, and in a dialectic turn, steer it toward further progress. It is important to look beyond its immediate use and into its local production, where applications are deconstructed, repurposed, designed and built for a local context.

The individuals who have the knowledge, skills and motivation must translate modern technologies to fit the needs and desires of their local communities. It is through this process that the global information society can meet the needs of new users and introduce new contributions that shape software at its core.[85]

Given the rapid spread of mobile communication and growing Internet connectivity, it is only a matter of time before the entire global population is connected. The reality is that most of the new users live in the developing parts of the world. This phenomenon requires us to rethink computing and forces us to recognize a rapidly changing context in which it is applied.

More specifically, it means we need to appreciate the perspective of new users and thereby broaden our historical perspective. As these new digital populations become part of an increasingly powerful economic base, as seen in countries such as China, India and Brazil, alternative versions of the information society are bound to appear.[86]

Software in Africa
Whether we talk about the global north or south, it is clear that for any society to effectively apply technology, it must actively engage its own software. Richard Heeks, a professor at University of Pennsylvania explains, "Information technology (IT) overall is one of the most critical technologies affecting economic growth in Africa and within the overall set of technologies that make up IT, software is vital since other technologies cannot function without it."[87]

---

84. Ron Eglash, *African Fractals: Modern Computing and Indigenous Design*, New Brunswick, NJ: Rutgers University Press, 1999.
85. Ibid.
86. Ibid.
87. Richard Heeks, 'Promoting Software Production and Export in Developing Countries'. *Information Technology, Development and Policy*, E. Roche & M. Blaine (eds), Avebury, Aldermaston, UK, 1996.

As African countries recognize their growing dependence on technology, and foster an increasing desire to modernize their societies, the role of software is made ever more apparent. F.J. Gaio says, "Software is increasingly becoming a pervasive technology embodied in a vast and highly diversified range of products and services."[88] In a 1993 report, the World Bank states, "Computer software has become the 'lifeblood' of business, industry, and government."[89] The fundamental role of software makes it an essential component of any ICT strategy.

It is important that African countries develop their local software industries if they are going to be able to adapt and create solutions that meet specific local needs. K. Fialkowski explains, "Software production is nowadays an industry, essential for the growth of the economies of the developing countries; and the launching of programs to promote strong and indigenous software industries is a priority task."[90] At the same time, software production serves as a practical entry point to the 'IT production complex.' Heeks explains, "For example, compared to hardware production, software production has much lower entry barriers because it is less capital-intensive, more labour-intensive, with a lower rate of obsolescence, and (at least for certain types of software) it has far fewer economies of scale. All of these factors work in Africa's favour, and software's labour-intensity of production combined with low African labour costs offer a clear opportunity."

But how does an African country or the entire continent go about making this transition? Africa faces a broad range of social, economic and political challenges. A serious lack of resources, ICT skills, educational systems and government commitment all serve to hinder its development. A continued failure to recognize the importance of local ICT producers, and the wholesale implementation of products from the west, illustrates some of the forces at work. Part of the issue stems from African countries and their continued struggle to fully implement their own ICT policies.

Although significant progress has been made in countries like South Africa and Tunisia, Sub-Saharan Africa remains the real challenge. The countries that fall outside of these exceptions better exemplify what Heeks describes as the "economic and socio-political problems facing the industry." Despite the rapid expansion of ICT infrastructure, and the quick uptake of mobile and Internet technologies, it is important to remember that the continent is starting from a very low base. Africa lags seriously behind both developed countries and other developing regions in terms of ICT penetration and its use.[91]

Southeast Asia, China, India and Brazil have all received considerable amounts of foreign direct investment. The size of their local markets makes them viable for business and helps attract

---

88. F.J. Gaio, *The Development of Computer Software Technological Capabilities in Developing Countries* – a case study of Brazil, PhD thesis, University of Sussex, Brighton, UK, 1989.
89. World Bank, *Turkey: Informatics and Economic Modernization*, World Bank Publications, Washington, D.C., 30 April 1993.
90. Konrad Fialkowski, 'Software Industry in the Developing Countries: The Possibilities', Information Technology for Development, 5(2), 1990: 187-194
91. Soenke Zehle, 'FLOSS Redux: Notes on African Software Politics', 23 November 2005, http://www.metamute.org/en/FLOSS-Redux-Notes-on-African-Software-Politics.

much needed capital. The reality is that Africa remains a diminutive market when compared to North America, Europe, Asia or the Middle East. Africa still only contributes less than 1% of gross revenues for the global ICT sector. This takes into account continental heavyweights like South Africa, Nigeria, Ghana, Morocco, Tunisia, Egypt and Kenya. As a result, most multinationals have yet to set up dedicated African operations and lump the continent into their 'emerging markets category' or as part of the 'EMEA' (Europe, Middle East and Africa).

It's not uncommon to find the person responsible for Africa at the regional headquarters in London or Dubai as opposed to offices in Johannesburg or Lagos. These companies don't treat Africa as a separate market and they can't justify spending the resources needed to offer it tailor-made solutions. The result is that the ICT industry in Africa is too often used as a simple point of sales. This leaves little interest or room for local capacity building. On the other hand, it makes the continent vulnerable and forces it into a position in which it must accept any offer. In turn, this opens a lucrative space for NGOs looking to gain new ground.

In such a small sector, where government's face limited budgets and depend on partners willing to invest, preferential relationships crowd out independent ICT development. This adversely increases the cost of information goods and services. In the report, Opening the Door to State ICT Development Agendas, it explains that these tactics, "Typically cut out the local software developers, and underwrites a pattern of instability for independent initiatives." The result is that over time, African countries have found almost a complete reliance on foreign companies and NGOs for their products and services.[92] Local businesses face an unequal playing field and lose against foreign actors. They don't have the same level of resources needed to effectively lobby their own government for contracts. This disparity works to maintain the status quo and gives foreign actors complete control over public sector initiatives. The report goes on to explain that, "this is evident from some recent government initiatives to partner with proprietary vendors in the education sector and agreeing to expose pupils and students to a single proprietary vendor product. This has the effect of creating a community of users at the national level with minimal effort directed to creating capacity for local software developers." Some Government tenders even stipulate that they require certain proprietary vendor products despite potentially better and cheaper open source alternatives.[93] Corporations like Microsoft and NGOs like the OLPC effectively lock in government contracts that make the entire student population subject to its 'self designed' programs. Tactics from both the commercial and non-profit sector effectively phase out the rise of local actors. Arguably, it is these local actors that are needed to make these efforts sustainable.

This approach, rooted in the historical notion that local producers don't have the skills or capabilities to deliver professional ICT services, now hinders their growth and development. As a result, most of the technologies in Africa are imported. Yash Tandon of SEATINI explains, "most of the so-called technology transfers are essentially excuses for transnational corporations (TNCs) to take over local companies, or to carve out a share of the domestic markets." Instead of fostering local industry and capacity, multinational organizations seek to tap market opportunity instead. The development sector works in the same way and undercuts local players by donating capital,

---

92. Ibid.
93. Ibid.

ICT tools and expertise. They hire the best talent away from local firms with above average pay and benefits that the local market is unable to support.

Offering services for free makes it near impossible for local organizations to compete at cost. In the process, local government's develop a dependency on foreign partners as opposed to 'stripping naked' in the effort to attract foreign direct investment (FDI). Tandon goes on to argue for the 'creation of a home based Domestic Scientific and Technology Capacity (DSTC), including capacity to undertake relevant research and development, the actual purchase (as opposed to transfer) of appropriate technology from the open market, and a transfer of technology, preferably between South-South, only under certain conditions.' But Tandon's argument stops with the need for more intelligent purchasing and the better application of technologies produced elsewhere. It is now interesting to see how the continent can move beyond this process to not only becoming the active users driving these systems but also the creative producers of the technologies which they need.[94]

At the same time it is important to recognize some of the barriers that stand in the way i.e. the rules that have changed and now present wholly unique challenges. For example, intellectual property rights have become embedded in the World Trade Organization (WTO). Tandon argues that under the Trade Related Aspects of Intellectual Property Rights (TRIPS) a few thousand multinational corporations and NGOs have successfully worked to monopolize scientific knowledge. They actively protect this capital and inadvertently control the economies of the third world which they increasingly dominate. As a result, Africa is forced to develop within this extremely restricted framework. He explains, 'It is in this context that Africa must develop its own DSTC, including a policy on relevant research and development. The R&D policy must be based on the production conditions in the region, the need first to produce for the domestic/regional market (only secondarily for the export market), and Africa's location within the global value chain.'[95]

Tandon goes on to argue that the options for local production have to some extent already been exploited by the 'Asian Tigers,' meaning these options are no longer available to African countries. His argument continues, "Countries such as Korea and Taiwan, as all other now advanced economies in history, were able to do it because they disembedded the technology from its capital base (by, for example, copying intellectual property, and through reverse engineering), and by creating a 'national' base for capital." He makes the case that some countries were able to make this transition during the Cold War years. This was during the time that the West was looking for allies in their fight against Communism, mainly in China and Vietnam. He explains that since the end of the Cold War, this avenue for growth has closed.

But do we seriously believe that this is not happening in Africa today? Do we believe that programmers on the continent aren't actively 'disembedding the technology from its capital base' in any way they can? It was at the ICT Africa conference in Kampala, Uganda in 2008, where local government officials complained about the cost of software and the reality that even the ministries are forced to use pirated alternatives. Charl Everton, Microsoft SA anti-piracy manager,

94. Ibid.
95. Ibid.

explains in a recent ITWeb article, "In SA, one in every three copies of our software is used il-legally." The company responded by raiding a business in Port Elizabeth, South Africa. The owner is being prosecuted for selling 'hundreds-of-thousands of Rands worth of counterfeit Microsoft software which is packaged to look like the real thing and featuring simulated holograms and counterfeit certificates of authenticity.' The article goes on to explain that, 'evidence uncovered during the raid points to the supply of products manufactured by a global counterfeiting syndicate from the Far East.'[96]

This is South Africa in what is by far the continent's largest market, otherwise a consumer base which Microsoft seems eager to protect. What about the rest of Africa? Do we assume that this scramble for technology isn't happening everywhere and on a scale that would be hard for most to fathom? If people don't have the money to pay for expensive software licenses, they are forced to secure alternatives. It is unfortunate that the software business has ventured into illegal endeavours, this only adds to the continent's negative image, but this is only because the counterfeiters make the effort to respond to a market that the rest of the world chooses to ignore. This demand for access is the same reason that Africa is one of the fastest-growing markets for open source in the world.

Tandon makes an interesting argument by explaining that the rules have changed and the sys-tems in place certainly do work against Africa's development, but increasingly there are signs that show this process is growing regardless. It is hard to ignore the thousands of computer science graduates on the campuses of the Makerere University, the fact that Africa remains the fastest growing telecom market in the world and the rapid rise of mobile banking. Even Facebook sees its African shares rising faster than any other part of the world. It doesn't matter what kind of scenario we sketch out for the future, it is clear that a billion individuals possess an insatiable desire for technology.

These individuals are quickly becoming part of the global information society and seek out the network, skills and tools needed to fulfill their needs. The real question is to what extent the con-tinent chooses to be involved. Is this process going to take place without African participation? Or can the African government and society find their own way to connect with the information society in a new effort to secure an equal spot at the table?

Establishing a local software industry in a place like Africa remains a real challenge. It is clear that the cards are stacked against the continent's promising software engineers. At the same time, and given the increasing significance of software, this is a process which African countries would be foolish to ignore. Given that the developed countries have an incredible head start, and their governments, donor agencies and multinationals continue to secure their competitive advantage, Africa has to look inwardly, to its own people for solutions. Given this context, local African capac-ity is a critical component towards making progress. If the continent is ever to take control of the technologies which it consumes, it will need people intelligent enough to know how it works. I will argue that this is where we need to focus our attention. It is within this space that we can see a

96. ITWeb, 'High-tech Pirate Nabbed,' ITWeb, Johannesburg, 10 Sep 2008, http://www.itweb.co.za/index. php?option=com_content&view=article&id=10893:hitech-pirate-nabbed&tmpl=component&print=1.

glimmer of hope emerging that could potentially shift the balance and change the status quo. I travelled to Kampala, Uganda with the interest to learn more.

Potential Market for Software in Uganda

Challenges aside, I was curious to know what the potential market would be for Ugandan produced software. I learned of an initiative in Jinja (East of Kampala) that aimed to promote off shoring to the country. On their website they presented a clear overview of Uganda's market potential and explained that the global market for IT services was worth one trillion US Dollars. The IST-Africa conference taught me that many people believed Uganda had the potential to attract some of this business as the country offered a number of advantages i.e. preferential access to the European Union, United States of America, Canada and Japan for the 'generalized system of preferences.'

Bilateral trade and investment agreements had also been signed with the United Kingdom, Italy, Kenya, Tanzania, South Africa, Egypt, India, China, Germany, the Netherlands, France, Denmark, Mauritius and Switzerland. These agreements were an initial framework that established a viable market opportunity for IT products from the country.

At a regional level, Uganda was also a member of a number of economic bodies. Uganda was a member of the East African Union and of the common market for eastern and southern African states (COMESA). This represented a market of 20 countries and over 380 million people. The trade volume of COMESA alone was in excess of US$ 90 billion (2005). 47% of this market value was comprised of exports. Uganda had worked to reduce barriers to entry, tariffs and other legal hurdles that increasingly made the country conducive to investments.[97]

This climate made Uganda a potentially interesting destination for Business Process Outsourcing. At the IST-Africa conference on May 9th, the Ugandan government took the opportunity to present their initial thoughts on the subject (the presentation did not serve to alleviate the critique that I had heard the previous day). Dr. Turahi David K, Ag. Director for Information Technology and Information Management Services, Ministry of Information and Communications Technology (ICT) said, "BPO includes those activities that require greater skill, knowledge, education and expertise to handle. BPO may be referred to as obtaining services from outside vendors to reduce costs using Information Technology Enabled Services (ITES)." Simple definitions aside, he valued BPO as US$1.1 trillion/yr business dominated by India. He said the Republic of South Africa was the leader on the continent but argued, "Uganda has the potential to position itself as a dominant BPO destination in the East and Central African region." The government sought initial investment into 30 firms over an incubation period of 3 years. In turn they hoped to create 20,000 jobs and generate over US$345.6m in wages. This strategy would also boost tax revenue and infrastructure development.

What the audience lacked was an explanation of how the government planned to achieve these results. Did they see opportunities for call centers or did they want to focus on software devel-

---

97. Lavit Park, August 2009, http://lavitpark.com.

opment or something else altogether? Did they see projects coming from Europe or were they looking to support partners in India? How would they differentiate from places like Kenya or Rwanda and did they have marketing and policy in place to support the effort? Despite the lack of information, many at the conference believed there was a considerable opportunity to produce software in the country. Uganda's low cost of labor, proficiency in the English language and favorable time zone with Europe offered suitable conditions, conducive to outsourcing development projects. At the same time, developing a local industry would help improve the country's image and successfully connect Uganda to the global ICT complex. All that said, putting the lack of government planning aside, these opportunities were only relevant if the country had the necessary skill sets in place. My interest was to learn more about the individual software developers and programmers that made up this space, those who actually made all of this happen on a day-to-day level.

Silicon Valley to Bukoto Street

Upon arrival at the airport, I was delighted to see the billboards promoting the new Orange network, the fifth operator to enter the Ugandan market. Waiting to have my picture taken by customs (digitally) I could see these were only early signs of things to come.

Walking out into the arrivals hall, we found our local contact waiting for us with sim cards in hand. While exchanging greetings we tried a couple of the networks before we could find one with reception. I thought it was interesting that he had three sim cards (none with any credit) and two mobile phones. The driver, we met a few minutes later, had 5 sim cards (one for each network) and three mobile phones (two prepaid). He explained he still had to activate the Orange account but he had it in hand just in case. I later learned that most people in Kampala had multiple phones so that they could take advantage of the networks and whatever service was offering the best deal at the time they wanted to make a call. Others divided their professional and personal lives keeping different calling lists on different sim cards. These strange user habits were the first signs of technology and culture coming together in ways that the foreign 'telcos' and I couldn't possibly have expected.

Only 20 minutes later, we were in a bus making the short trip from Entebbe airport to Kampala. After learning about the purpose of my visit, our local contact handed me a Nokia N95. Looking at the phone I realized that it was bigger than the versions I had seen in Europe. I was surprised by how lightweight it was. The size of the screen was also larger than the N95 I was used to. I didn't quite realize what was going on until the owner started laughing. He told me the phone was actually what he called a 'Nokia N95 China,' otherwise a complete knockoff of the original. He was able to buy it second hand and mentioned the retail price was about 100USD. I asked about the quality and he mentioned he had some problems with the phone, sometimes people called him and the phone didn't pick up the call, other times they were simply dropped. Still, the phone offered full functionality. I wondered how many phones on the streets of Kampala were fake imports like this one and how big of an issue this was for a company like Nokia. Later on, the same contact showed me another Chinese phone that he used to watch television. He explained enthusiastically, "why buy the real thing when you can get something for a fraction of the price that also works?" Needless to say, I was pleased to be watching TV on his mobile phone as this is something that I wasn't even able do in the Netherlands.

Looking out the window, I could see billboards promoting the different telecom networks, mobile phone shops, Internet cafes and small kiosks to buy mobile phone credit everywhere. As in many other African countries, Zain had attacked Uganda with a vengeance. They were on a serious mission to paint as many buildings in the country with their bright fuchsia and turquoise paint as possible. I learned later that Zain and the other telecom companies offered to 'brand' a house or building in 50 return for a substantial fee. It was an offer that people living in rural parts of the country could not afford to refuse. People were considered lucky to be living on such an important road (determined by the level of traffic) and the money helped to cover expensive school fees or a required trip to the doctor. Jumping at the opportunity to live and work 'behind the billboard' of your service provider was only scratching the surface of where technology had found itself within the day-to-day life of every Ugandan. This place was being flooded with technology and I knew my time in the country would be full of surprises.

Kampala was a sprawling city that rolled over 17 hills. The traffic was brutal as some 2 million people find their way through roads littered with meter-wide pot holes. The thousands of minibus taxis released black smoke which kept the smog thick. At the end of the day you could wipe the dirt off your forehead with a simple stoke of a finger. Boda Boda drivers weaved their motorcycles between trucks as people struggled to get both in and out of the city. Some days Kampala was hot and humid. An early morning rain helped to cool things down and did their part to settle the clouds of dust. On every street corner you could find small stalls where people sold roasted corn, avocados, tomatoes, onions or a fresh rolex (a chipatti rolled with egg). There was someone who shined shoes and someone who sold them second hand. There was someone who repaired bicycles and someone who sold cigarettes (for many people a pack was too expensive, this helped explain why mobile phone credit was successfully being sold in such small amounts). Waiting for the Matatu, the local minibus, you could get a copy of one of the country's newspapers. The Red Pepper was the most popular and was certainly filled with the most controversy and gossip.

Everywhere you went you could buy a sim card or top up your phone with mobile phone credit. Outside the city center was an ever-sprawling mass of shanty towns and slums where most of the city's population resided. It didn't take long to remember that half of the country lived below the international poverty line of US$1.25 a day and helped to explain the some 4000 NGOs active in the country.[98] [99] In the morning, afternoon and evening you could find music blaring across residential neighbourhoods while people sipped Club beer. It wasn't surprising to learn that in 2005, the World Health Organization ranked Uganda as the leading consuming country of alcohol in the world with a per capita consumption rate of 19.5 liters per year.[100]

At the same time, the city was somehow peaceful and safe. People on the street were friendly, open, warm and gracious. They were eager to meet people from other parts of the world and

98. Global Poverty and Research Group, 'Institutions and Development in Uganda', August 2009, http://www.gprg.org/themes/t5-govrn-norms-outcms/inst-dev-ugan.htm.
99. Wikipedia users, 'Uganda', August 2009, http://en.wikipedia.org/wiki/Uganda/.
100. Jane Nafula, 'Uganda: Special Report: Heavy Alcohol Consumption Causes Mental Illness', December 2007, http://allafrica.com/stories/200711301128.html.

quickly opened up their homes, telling stories of their lives and families. The people I spoke to were well read and able to update me on the latest travels of US President Obama or the latest developments in the global financial crisis. From the taxi driver to the security guard at the ATM, I was taken aback by both the amount and depth of information that seemed to be floating through the streets of Kampala. Whether Uganda was prepared politically, socially or economically it had clearly entered the information super highway. MTN's Zone Pricing and SMS banking were only two of the latest services being rolled out across the country. People could get discounts on their calls depending on the networks capacity or send money transfers to their families back home via their mobile phone account. In Internet cafes, restaurants and schools, teens compared their mobile phones as they constantly switched between three and four sim cards. People from across the country called in to radio stations to express their opinion while others texted in their answers to recently broadcasted polls. Some hoped for a chance to win a car. Mobile phones and computer hardware imported from China could be found everywhere. Young people flocked to Internet cafes to update their status on Facebook and the local bar was named 42A after the group they started on the social networking site. Communities had started their own groups online and participated in heated political and social debates online.

It was rumoured that many of the new buildings in the city were financed by the fraud that once made Nigeria so famous and it wasn't uncommon to meet people who had been ripped off by online con artists. In one instance, a local trader (a brother of one of my Ugandan friends) made regular monthly payments for goods which he imported from Dubai. On one such occasion, he received what looked like an e-mail from his Dubai contact asking him to switch accounts and as a result of a change in banks. Before he knew what happened he had deposited 10,000USD into a faulty account only to realize his mistake when the goods never showed up. By this time, it was no surprise to hear young people asking each other if they had the 20th episode of Prison Break, a popular TV series in the US that was downloaded and distributed between friends, or when the security guard at the local ATM told me he was studying to be a software programmer because, in his words, "technology is the future and programmers get paid better than lawyers."

These things aside, this was not the first place I expected to find a lot of people who were passionate about software development. Especially when I traveled outside the city of traders and shopkeepers and saw first hand how more than 80% of the population maintained itself on agricultural related activities.[101] Taking the time needed to acclimatize myself to my new surroundings and making the effort to process my initial impressions, I was both anxious and eager to set out on my task of finding young people working in software development. I wasn't sure to what extent this was possible, but reservations aside, I wanted to meet native Ugandan programmers and developers. If I could find these individuals then I could find out how they felt about technology, their connection to software and where they thought their place was in society. Perhaps they had ideas about how technology could be used in Uganda or even in other parts of Africa and the world. If I was lucky, they might even tell me about their own ideas and how they were working to build tools and applications for the local market. It was here amongst a new generation of software developers and programmers that I wanted to focus my time in the country. The billboards at the

101. Wikipedia users, 'Uganda', August 2009, http://en.wikipedia.org/wiki/Uganda.

airport, the widespread use of mobiles, the increasing presence of the Internet, these were all signs of a digital revolution underway. The rise of an information society in Uganda was very real and apparent. The question was not when this would happen but how.

A Passion for Software

Software developers clearly faced a myriad of challenges. Despite the difficulties inherent in software development in Uganda, I met countless programmers excited by their work. I wanted to understand where they got their energy to move forward relentlessly.

Walking into an office in Kampala on April 15th, it felt strange to hear western music like Coldplay blaring from laptop speakers in the background. Every developer had a mobile phone (old and new) on the desk. CD's, USB sticks and external hard drives were lying around along with old issues of magazines like Fast Company and Wired and books about programming languages. These young talents sported nice watches, polo shirts, baseball jerseys, black shoes and trendy sneakers. Most of the programmers remained pretty focused on their work without recognizing my presence and only seemed to respond to the world around them when something came up. Relying on laptops forced the developers to work with small screen sizes and poor lighting. The work was hard and the hours were long. I was amazed that carpel tunnel syndrome wasn't a bigger problem given their poor posture. I was surprised not to hear a single complaint during the entire time I was in the country. I assumed that the employees were aware that they had the rare chance to be connected to what was probably one of the best wireless Internet connections in the country.

Each precious minute was an opportunity to access vital information, otherwise unavailable elsewhere in Uganda. Most of the programmers that worked at these companies were young men, but there were also a surprising amount of women in their twenties and early thirties. I went out of my way to interview female programmers, curious to know if their situation was in any way different.

On May 25th Doreen Watela Sakwa, a 23-year-old developer explained, "it doesn't matter I am a girl but people don't expect it. There are not so many. People think it's a male field. But most of my classmates when you tell them you are programming they are surprised and are impressed. 'You're programming!' At school everyone thinks it's so hard. So people think oh, you are doing that. But once you learn and can do it gets very interesting."[102]

That same day, Carol Awachango, a 24-year-old developer explained, "I was curious and had to get in touch with friends I knew and learn from them. They would give me assignments and I would do them. Anyone can do anything. Girls are so much into technology. Girls who are curious, enthusiastic, and ambitious and want to know what is going on in the world are into technology. Out of ten people four are girls. Some are better than the boys. I know I am better. The girls are really dedicated and know what they want. Men make it look like it's their field so the girls have to be serious."[103]

---

102. Personal Interview, Doreen Watela Sakwa, 25 May 2009.
103. Personal Interview, Carol Awachango, 25 May 2009.

When I asked Roza Badaza what she would be doing in five years she said she would like to own her own business and didn't mind proving herself as a female developer in an otherwise male dominated industry. She made clear with a smile, "we're just as good."[104] To this extent, software might have acted as an equalizer in that programming was about a person's understanding of code more than anything else, most developers respected intelligent applications and cared less where they came from or who had made them. Either way, these female developers were clearly looking to run their own companies and projects. I wondered if Ugandan women in other professions were as optimistic.

While spending time with developers and programmers, I also found it remarkable to learn that most didn't own mobile phones or the Internet until they reached their 20's or entered University. If they did have access, it was because they could borrow a phone or computer from a parent, older brother or sister. On May 20th Emmanuel Toko, a 26-year-old programmer explained, "I first used a mobile phone at the age of 14. It was my dad's."[105] A few started to use the Internet in café's or participated in a workshop at secondary school. When they did gain access to a computer or Internet they used it for e-mailing friends, social networking and exploring content online. On May 25th Carol Awachango, a 24-year-old developer explained, "In 2001, I started using a computer at home, a desktop from my sister. We didn't have Internet. Around that time I would go to Internet cafes, surf and check mails and music."[106]

It amazed me that many developers I met probably enrolled in the University program before they even had the chance to really understand how a computer worked. I thought it was remarkable that the time spent using these technologies was so short as most of the programmers and developers were only a few years older. Then again, reflecting on my own experience, I knew I didn't really use computers on a daily basis until I had entered college, at the same time I hadn't applied for a degree in software development. It was not surprising to learn that many developers actually had other career aspirations. They originally applied for programs in engineering or law. They were rejected when they didn't qualify for the government scholarship program and only then considered a degree in computer science.

Doreen Watela Sakwa, a 23-year-old developer explained, "I started at campus at the Makerere. It was compulsory. I didn't apply for IT but for medicine and didn't get in. I went to school in Lesotho for one year in medicine but my results came out late and so I had to go to IT. Otherwise I would have chosen environmental science." She went on to say, "But once I started I liked it. I had the option to change but decided to stay. I wasn't looking forward to seeing patients anymore. The students who take up Computer Science a lot of them don't want to do programming. It's hard and there is no market. So you need to educate them the value of programming and encourage them to do it. In the future they will develop the firms."[107]
Given students had such little exposure to mobile phones and computers, I could imagine this

104. Personal Interview, Roza Badaza, 25 May 2009.
105. Personal Interview, Emmanuel Toko, 20 May 2009.
106. Personal Interview, Carol Awachango, 25 May 2009.
107. Personal Interview, Doreen Watela Sakwa, 25 May 2009.

wasn't their first career choice growing up. At the same time, it seemed easier to secure money for studying ICT and the sheer size of the Makerere University Faculty of Computing and ICT always ensured an open spot. I wondered if these developers might inspire their younger brothers and sisters to think differently.

Not everyone I spoke to went to University or received any formal education. In fact, many of the serious programmers and developers whom I met were actually self-trained. On the afternoon of May 25th, I sat down with Revence and King Solomon over a cup of coffee. Our meeting turned into an hour-long conversation about the future of the semantic web. Specifically, Revence argued that the current structure of the Internet didn't make it suitable to users from all parts of the world. He referenced the blind as one specific community of people marginalized by Internet technologies. He passionately argued that new systems had to be developed that were more inclusive of these kinds of users.

Another example he gave included the rural communities in Uganda who were not used to the languages and symbols that made up the modern computing language. He strongly believed that there were better systems that could meet the needs of these users. For him it was about making the effort to give these potential users an opportunity to participate. Solomon agreed but pushed Revence to recognize the practical challenges of changing a system that already had so many legacies behind it.

He would smile at Revence's idealistic outlook and then react with sharp critique and reminders of how much had already been achieved. The two clearly enjoyed the debate, which wasn't their first or their last. This was an inspiring conversation which I had not yet been apart of. It was interesting for me to learn that both Revence and Solomon King were developers, both completely absorbed by their work and entirely self-trained. Revence was a young 20 year old who was a self-proclaimed philosopher and well-established entrepreneur. His father used to work with MySQL and had a CD in his computer bag. Sometimes, Revence would play around with his computer and one day he found the CD and started teaching himself to build databases. His interest grew from there and he started buying books and reading about different languages. Soon after, he was programming his own applications and setting up his own web-based services.

Solomon was another example of a young entrepreneur who started by working in an Internet café. In his down time he learned about computers and how they worked. At a certain point, he realized that he knew more than the owner and came to the conclusion that he could do better on his own. He started doing graphic design and his business ventures have grown from these humble beginnings. He is now the founder of NodeSix and his proudest achievement, BlogSpirit, the first blog aggregator dedicated to Ugandan publishers. He explained that his focus was to help strengthen Ugandan voices and help them from being hidden by the rest of the web. Both developers seemed to have more experience than the programmers I met at the University or in some of the small Software companies. At the same time, it was clear they were both entrepreneurs and started out on their own from day one.

Daniel Kayiwa, the 30-year-old lead developer at the Makerere University, was another interesting example of a self-taught expert. He actually learned by doing work for students at the Makerere.

He started his career by doing laundry for rich students in exchange for time on their computer. He slowly learned how they worked and took the time to learn different programming languages. At a certain point he started helping students with technical questions and would complete some of their programming assignments. Before long he was a sought after contact. He was getting paid to do his work and was someone who would pick and choose his assignments. It was ironic to find him as the lead developer of the Makerere team of software developers. I wondered why they hadn't been able to find someone who had graduated from their own program and to what extent these talents could be cultivated outside the confines of a classroom.

It was encouraging to hear that most developers seemed to get involved because they knew someone in the field or looked up to someone who seemed to be doing interesting work. On May 25th, I asked Emmanuel Toko, a 26-year old programmer, how he got involved. He replied, "Around 19 years of age. Because someone brought up the idea and it seemed interesting. A friend told me I could make something that could actually control a computer and I liked that idea."[108]

That same day Herbert Byamukama, a 26-year-old developer explained, "what got me interested was the Millennium bug. Is it going to happen, is everything going to crash? If they do, what does this mean? I read about the recession. This was going to be the crash of the financial sector. If this happened we would feel it here in Uganda like the recession now. Do I need to take steps to protect myself? It's an assumption. So I asked a friend, what are these computers? Are they easy to control and manipulate? Can they do my laundry? He told me it depends on the computer and how it is built." With a smile Herbert concluded, "that is what led me to programming. To see if I could tell a computer what to do."[109]

I could see that this connection to software also fostered a growing culture of learning together. Rashid Kamoga, a 23-year-old programmer explained, "My role model is James. I have worked with him for a long time and he started before I started writing code. I came up as one of the best students at the Makerere and the campus wanted to reserve me for networking. But when I saw what he was doing I wanted to switch. He saw I was inquisitive so he started teaching me. When I went to campus I knew C Sharp at my fingertips. He mothered me and brought me in. He is my role model."[110]

Many of the programmers I met with had a mentor or friend who helped them into the field. I found that they learned from one another and relied on their social network for help when solving problems. It was also the only time that I would see developers in the same room interacting with each other. In many ways it seemed like it was the code that connected them and provided a common interest. I remembered eating lunches with the faculty at Makerere University and that the developers would always be sitting together deeply involved in their own conversations about technology or the world that otherwise inspired them. Often this included mentioning movies, such as the recent release of Transformers or a discussion about one of the bloggers who

---

108. Personal Interview, Emmanuel Toko, 20 May 2009.
109. Personal Interview, Herbert Byamukama, 25 May 2009.
110. Personal Interview, Rashid Kamoga, 25 May 2009.

had gone astray on a topic. Many developers recognized this collaborative dynamic and also expressed an interest in making their own contributions.

Rashid explained, "You know, I want to see many other people coming into the programming section and to help them. I hope that new people who join IT will then solve other young people's problems."[111]

It was also interesting to learn about who inspired these individuals and I wasn't surprised to hear the names of the same people and organizations that are also recognized for their success in the west. James Okalebo, a 27-year-old developer stated, "Bill Gates inspired me. Because we grew up hearing a lot about Bill Gates and the way he started small and today is one of the Billionaires in the world. He inspires me not because of his money but because of his achievements. I like his marketing strategies. Sun existed before Microsoft but he still managed to take it over."[112]

Afya Norbert BigiriMana, a 27-year-old programmer explained, "I am self-driven. But I guess Linux Roberts. One of the guys here has a talk on him and I have to download it. I like his lifestyle. It keeps most of my friends going.'[113]Carol Awachango, a 24-year-old developer, explained, 'the people who work for Google. As a team they just do their work in a super way. I have looked at some of their things and it's amazing how they do things and change the way it looks from one day to the next." Looking like she forgot to add something she concluded, "and I am not talking about the homepage"[114]

Herbert Buletwenda, a 27-year-old developer said, "JQuery is a cool project and I like what they do. This is a JavaScript library where coders contribute, bring problems and show what to do. I am not inspired by the guys who make millions of dollars, I am only looking for people who can help me solve a problem."[115] Some found local colleagues or family more instrumental influences.

Doreen Watela Sakwa, a 23-year-old developer explained, "my father is who inspires and encourages me. He is more career oriented and wants me to study more. Go after new opportunities. Micheal Nyitigenka and friends who know when it's time for networking and when it is time for programming. They really develop their skills in different areas and this is what I would like to do."[116]

It was clear from my conversations that the individuals whom they respected were more recognized for their technical achievements than for the amount of money they earned. For most programmers, it was about being able to build something useful. It was clear that programming was more than a job for everyone, but also a very rewarding passion. On May 20th Daniel Kayiwa explained, "People think its so hard that normal people can't do it. It requires dedication. In pro-

---

111. Ibid.
112. Personal Interview, James Okalebo, 25 May 2009.
113. Personal Interview, Afya Norbert BigiriMana, 25 May 2009.
114. Personal Interview, Carol Awachango, 25 May 2009.
115. Personal Interview, Herbert Buletwenda, 25 May 2009.
116. Personal Interview, Doreen Watela Sakwa, 25 May 2009.

gramming you really have to read the books and try it out. You have to get it right. I used to fool around and make it, but not with programming."[117]

So what made these developers tick? From my conversations with different developers I was sure they had each spent hundreds if not thousands of hours reading, developing code and learning by doing. Testing some of these ideas against Paul Bagyenda, the founder of Digital Solutions, one of the oldest and most established software companies in the country, he confirmed on April 21st, "you have to be smart. A lot of dedication and focus above what the average person can provide." When asked if the developers were introverts or extroverts he explained that is was actually a mix and that personality traits aside, the common denominator was, "a real drive." He expanded, "Becoming a developer is a level beyond, a real effort. They just like programming and don't have these other things in their head. You do it because you like it."

When asked to explain their connection to technology, and the source of their dedication to software development, the answers were inspiring at best. The developers recognized the power of technology and its ability to seemingly improve life. On May 25th, Mark Gerard, a 23-year-old programmer explained, "I like the way it works. It makes life easier. A microwave, a coffee maker, TV, the I-phone. They make life simple and interesting.' But it wasn't just about making the lives of consumers easier as Mark put bluntly, 'Technology is the only thing that makes progress in Africa."[118] He argued that software was able to perform and advance while the rest of the continent seemed unable to move forward. For him it was the idea that he could actually control the language and make it do what he wanted. This was possible regardless of what happened around him and offered an opportunity to make progress in a world that otherwise didn't always make sense.

One programmer recognized that this wasn't just about Uganda or the African continent, but that this idea applied to the world as a whole. Roza Badaza, a 23-year-old developer explained, "Technology is the one thing that keeps the world advancing to new levels." She went on to say, "Technology is what is driving the world. It gets better with modern times. It is similar to the key to your car. Technology is the key to modernity."[119] Her comments hinted to the growing importance of technology in society, the potential to harness development and the increasing role it plays in day-to-day life. It was a chance to leapfrog into the future applying the same rules used around the world, an opportunity to transcend economic situation or geographic location.

Many of the developers I interviewed recognized the power they had to make a positive impact on their society. Rashid said, "now that Uganda is a developing country, developers that come up can boost the country. When we develop applications they help sectors like farming and financial services. They boost the fast movement of this country and can move it towards technology. For Africa, developers can bring up a lot of growth to the levels of developed countries. They base a lot on technology and IT knowledge is important to bringing Africa to this level."[120]

---

117. Personal Interview, Daniel Kayiwa, 25 May 2009.
118. Personal Interview, Mark Gerard, 25 May 2009.
119. Personal Interview, Roza Badaza, 25 May 2009.
120. Personal Interview, Rashid Kamoga, 25 May 2009.

Herbert Byamukama, a 26-year-old developer explained, "We didn't think it would happen. It started small with no Ministry. Nobody cared. But in three years almost every street you pass you see something with computers. It is really important to have this industry here. Uganda has been burdened a long time, but with computing, the country as a whole and its people improve. We have better access to information. Without computers we wouldn't have this information. Farmers deep in the village. In every district you have cooperative union and a scheme where farmers can find out their prices directly as opposed to being hassled by middlemen. Software is what works around this. For Africa, today and eventually, if we get up to speed with South Africa we can definitely contribute. We just have to figure out what we can bring to the table."[121]

The programmers made clear that they possessed a sincere interest in technology and believed in the power of software to change the environment around them. All of the developers I met shared this idea and it served to connect them as part of a new generation of people actually able to shape the technology being used in the country.

It was also clear that for a government or a company, a smart piece of software could make a world of difference. On May 20th Charles Tumwebaza, a 25-year old programmer explained, "when I look at the problems we are facing as a country it is clear that some of them can actually be solved with software, for example, the backlog of cases in the court system or the countless files that have disappeared from the official records. Software could help in such scenarios. We don't have to rely on all of this paper work."[122] Charles made a good point and I could relate to the stuffed file cabinets that I had seen in countless Kampala offices.

I could identify with the need for some better organization. At the same time, the programmers made clear that these paper-based systems were easy targets for corruption. Herbert Buletwenda, a 27-year old developer explained, "the first project I worked on was for Umeme Limited, an electric utility. They had a lot of paper. They needed to automate their system so we could eliminate some of the fraud. People would play with their electricity bill. When you go to the field you find someone cheating for electricity and later you see them paying off the official when they get a fine. Now the person puts the note into the system and then everyone can see it. Next time they can't come in and bribe someone to erase it."[123] From this story, and many others, it was clear that something as simple as a registration system or database could have considerable effects on the current system.

Corruption was certainly a popular topic on the streets of Kampala, although I didn't think they would be able to completely rid the country of corruption, they could certainly promote further transparency. When asked why software should be developed in Uganda Mark Gerard explained on May 25th, "It has to be done here. It's about personal solutions.[124] You need to talk to the end user and you need to know their needs." When asked for an example he explained that he had

121. Personal Interview, Herbert Byamukama, 25 May 2009.
122. Personal Interview, Charles Tumwebaza, 25 May 2009.
123. Personal Interview, Herbert Buletwenda, 25 May 2009.
124. Personal Interview, Mark Gerard, 25 May 2009.

worked previously to develop a software solution for a company in Uganda and most of the con-
tact was via Skype and e-mail. In the beginning this was fine but eventually he delivered a final
product they didn't want. He decided to go to their office and spend a week with the team. He
explained, "only then did I start to understand what it was they wanted. I could get to their need.
This is something you can't do from Skype in Germany. You need that physical contact. You need
to know what the person is saying."[125] Other programmers confirmed that software solutions used
in other parts of the world didn't always take local market conditions into consideration, knowl-
edge you can only be gained by really being in the market and working with the user.

Doreen Watela Sakwa, a 23-year-old developer explained, "It is important because you are able
to customize and make solutions to fit your environment. If you have local programmers they un-
derstand the environment better than others. When you approach the industry, you need to show
them how the applications will help them. You can make Uganda better in small parts. Develop
applications that deal with real world situations."[126]

Dennis explained, "Local companies need software too. But usually their systems are old and
the user has less experience using advanced management tools. This means designers have to
lighten the interface and make their programs compatible with some pretty old machines." He
went on to explain, "Working for local companies is not so easy. The biggest challenge here is
when something sounds so easy but takes so much work to complete. For example, someone
can tell you to create an app that runs certain functions on the mobile phone but you have to
consider the limited memory. It really helps to know a lot about the architecture and you have to
know about the hardware you are dealing with." He made clear that he takes the limitations of
the hardware into consideration as well as any feedback from the end user in order to make his
projects succeed.

It was clear that where the software differed was in the end user requirements specific to Ugan-
da. I sought out developers who could make this more concrete. One example given repeatedly
was language. One programmer explained how there are 50 different tribes and each had a dif-
ferent language. It was in this localization process that local talent could add the most value. Even
within the same tribe there were many differences which one must take into account.

Mark Gerard explained on May 25th, "end users worldwide are the same. When the I-phone
came out anyone could use it all over the world. But what actually matters is the fact that we are
just now starting to adapt and adopt this kind of technology. People here aren't willing to pay the
same as they do in the West. So people here don't really value IT in the same way and do not
have the money to buy similar technology. The Ugandan population doesn't necessarily accept
the power of technology."

He expanded, "software has to be easy to use and cheap. A lot of times users reject a program
because they simply can't figure out how it works. Sometimes great software is created but it's
too expensive for people to adopt." The programmer went on to say, "Great software has to find

---

125. Ibid.
126. Personal Interview, Doreen Watela Sakwa, 25 May 2009.

the sweet spot between the two. When working on a project there is always a lot of focus on how to create something really cheap. Every kilobyte of data costs money so the more you can do with less the better."[127]

What was different was the back end and the actual implementation. Outside of being useful to society, software also seemed to represent a specific social image. Many programmers I spoke to told me that having the latest mobile phone or a nice laptop was part of their identity and reflected their social and economic status. Mark Gerard, a 25- year-old developer explained his dream was to have an I-phone. He would feel, "on top of the world." When asked if technology was partly a status symbol, he responded, "if you have an I-phone you are the winner against someone with a Nokia. It reflects knowledge, wealth and status." He went on to say with a smile, "black people like to spend money; anything fancy and flashy is good.

Someone who has an expensive car is likely to be wealthier than someone who doesn't. People want to show they can spend and that they have wealth." He mentioned that he was saving to buy a Macbook and that he loved Apple because in his words, "they just make nice stuff."[128]

At the same time software development seemed exclusive and made these programmers part of a special community. I could see that these developers were part of something that most of their parents and friends most likely didn't fully appreciate or understand, let alone the government or other traditional power structures. This was an exciting prospect in a place where everything seemed so controlled, almost everything seemed to depend on knowing the right person or having access to the right connection. To some extent, software worked with different rules only in so far that the code works.

This was irrespective of who you were or where you came from. Success in software was measured by pure intellect as opposed to getting a high payed job because you had the right connections. I also remember being surprised to learn that most of the University projects were made possible by government organizations.

These included building systems for the parliament, the tax revenue authority, court system, military force and police department. These projects included basic software applications for payroll, inventory management, tax administration and a host of services for a list of the country's most important institutions. These developers were on the inside of the government structures which most Ugandan's feared. It was access and insight they seemed to relish, part of a secret that nobody seemed to understand, and it gave them the energy and drive to move forward.
The most significant idea mentioned in all of my various interviews was the idea that software helped to create a feeling of independence. Otherwise, a personal space where a person could release their ideas and be instantly rewarded. The fact that software is grounded on a set of rules that anyone can learn and live by is a powerful possibility. On countless occasions, the developers I met would say things like:

---

127. Personal Interview, Mark Gerard, 25 May 2009.
128. Ibid.

Technology is based on logic.
*   If you identify a problem, find a solution and it works.
*   Technology forces you to think and allows you to be creative.
*   Technology allows you to do your own thing.
*   Technology allows you to take an idea, read about something, find a solution and build it into
    something concrete.

Charles Tumwebaza, a 25-year-old programmer seemed to sum it up best, "I have this idea and I want to express it. The languages of software give me the tools to express what I have."[129]

Finding a Job on Bukoto Street
To try and better understand how these students operated in the real world, on April 20th I attended a Deloitte Career Event hosted at the Makerere University campus. I was surprised to find the room packed with 250 students. I took a seat in the back as the recruiter, in the midst of his sales pitch, the speaker expressed that "within the first three months you will be able to buy a car. Seriously, you will make enough money to live in exile." The room erupted in a roar of laughter as he went on to explain that the students would be making 'A LOT' of money and that they needed to have both a passport and an open mind if they wanted to apply.

Looking around the room I noticed how interested and attentive the audience was, no sleeping heads on desks were apparent. Later in the speech, I learned that they were hiring for 1 position meaning that the other 249 students in the room would be left disappointed. But the pitch was effective. Listening to the recruiter, I nearly wanted to apply myself as I left feeling confident that this was the best job that Uganda had to offer. Deloitte aside, getting work was a major challenge and it was clear that both finding and securing a job gave most young people a headache. Some students had sent countless resumes to companies without getting a single response or phone call.

Bukoto Street, otherwise a residential area cluttered with IT companies, was where a lot of these young people wanted to work but where only a few would actually score a job. Without some form of income, these students would not survive. 75 The few students I met with seemed to manage this post-graduation transition successfully by simply looking for any kind of job. However, once a position became available, it was difficult to negotiate a fair salary.

Doreen Watela Sakwa, a 23-year-old developer who had secured a job at Software Factory Uganda, explained to me, "on a small scale there are companies that take advantage of the developers. They employ students from campus and under charge them. It's cheap labor." She made clear that its better to work for a foreign company and said, "Most who do real programming in Kampala are foreign. Raymond (the founder of Software Factory Uganda) is a Ugandan but originally came from Denmark. MYC4 downstairs is from Denmark. Force 4 Rent opened as a Danish company." She went on to say, "Digital Solutions is Ugandan and they don't pay their people very well. Foreign companies pay better than the local companies who otherwise exploit the talent."

---

129. Personal Interview, Charles Tumwebaza, 20 May 2009.

When asked why there was a difference she pondered, "Maybe this is because the local market doesn't value software development."[130] She went on to say that the foreign companies sourced their projects from abroad and might be able to pay their developers more for their work. But whether the job was with a local software company or one run by a foreigner she made very clear, "If the programmer doesn't jump on the opportunity someone else will." Her story reminded me of the hundreds of Indian students who struggled each year to secure jobs in India's call centers.[131]

The scramble for work meant that few could risk negotiating better contract terms. It also meant that the developers were forced to work on any project that came up, receiving poor pay and little credit for their ideas. James Okalebo explained, "the challenge in Uganda is that the jobs are few. This forces us to diversify and work on whatever comes in. Not just on coding but on other things."[132] Carol Awachango, a 24-year-old developer explained, "First job that comes you, take it. I graduated in October and found this job February 2008. It's not about being smart, you have to have the grades and a friend." I wasn't surprised to learn that Carol had an Aunt who worked as a secretary for MSUganda (now ActionAid) a Danish NGO that recommended her to her current employer, Raymond.[133]

The industry in Uganda was small and there were few positions available. In my own research, I was unable to find a solid overview from people in the market, it was a difficult task to even locate companies which were active in software development and I imagined that this simple lack of visibility made it hard for students to know what was possible or whom they should contact. When a young programmer finally found a position, the private sector entrepreneurs often complained that they didn't have the necessary working skills or experience. They would tell me the students who graduated from University simply lacked the drive and ambition needed to become great software developers. At dinner with Raymond on April 15th, the founder of Software Factory Uganda, he told me that he actually had to completely retrain most of his programmers. From my contact with Raymond and others in the private sector, it was also established that some of the best developers were entirely self-taught and never even stepped foot on an academic campus. At the same time, these mavericks were few in numbers and hard to employ. They were most often running around with their own companies instead. So despite the hundreds of students, it was clear that real talent was still hard to find.

Sourcing talent remained a challenge. Despite costing as little as 500 USD every six months it was clear that graduates from the University still lacked real programming skills. Specifically, one of the key challenges was to get the young developers to think analytically when trying to solve a problem. The traditional speak/repeat learning styles of the local Universities inhibited outside of the box thinking. This critical and analytical problem solving approach was developed only after the programmer had worked on several real world projects. Many of the programmers also struggled with communication and lacked general business skills. Dealing directly with clients was an

---

130. Personal Interview, Doreen Watela Sakwa, 25 May 2009.
131. Wikipedia users, 'Infosys', August 2009, http://en.wikipedia.org/wiki/Infosys.
132. Personal Interview, James Okalebo, 25 May 2009.
133. Personal Interview, Carol Awachango, 25 May 2009.

issue and most companies had to invest considerable time, energy and resources to get them to a level where they could be productive.

Paul Bagyenda, founder of Digital Solutions expanded, "too many students don't know how to be entrepreneurs. How do you apply the skills that you have learned in school?" He went on to say that the major challenge was not on the software programming side but on the entrepreneurial part. He said, "It's about understanding how to frame solutions. Working through a scenario where ICT can play a role and then applying the skills needed to address the issue. This can only be developed by fresh real world experience."[134] On site experience came at a cost to the small software companies. When a programmer reached a professional level they would sometimes switch to a new company or would go off to start their own project.

At the same time, the individuals who did have the talent were often times offered jobs with multinationals or moved to other countries where they felt they had more opportunity to develop their career. Richard B. Lutalo, Senior Science Officer, Uganda National Council for Science and Technology said, "Deficits in opportunities, research & education, are causing younger Ugandans to seek expatriation."[160] Although these individuals were sure to contribute to the country's development in other important ways, the loss hindered the sectors short term development. It was clear that the country needed to provide opportunities if it wanted to keep at least some of the local talent in the country.

Surprisingly, and despite their difficulties finding work, most programmers and developers re-mained confident about the future. All of the individuals I met believed there was a lot of potential for software development in the country. Most felt as if the opportunities were only now starting to emerge and all believed the sector would get better. Daniel Kayiwa, a 30-year-old developer at the Makerere University explained, "I developed a desire when I saw my bro make lots of money out of programming. I see applications from the US that probably work great for the US market. But this doesn't mean it works perfectly here. So you need someone who can adapt these appli-cations to the local setting." Looking to the future he said, "There is always software development. Where is the world moving? It's moving to a digital age and you need software to run it. Even in a small county like Uganda. In five years most of the things we will be using will require software." When I asked if we could just import the solutions, he disagreed. Daniel made clear; "It's cheaper to produce it locally."[135]

The programmers and developers I met were undeniably optimistic. I shared in their enthusiasm and could see that hundreds if not thousands of students with degrees in computer sciences could have huge implications for the development of the local tech sector. So many individuals tapping into the global ICT complex were bound to have consequences and it was only a matter of time before people would notice. I remembered that at the IST Africa conference on May 8th, I had met an Indian entrepreneur from the US who was looking to set up a 200-seat call center. When asked why he thought Uganda was the place to do this and he told me Uganda had the labor cheap enough to make it happen. I knew from my conversations with the faculty at the

---

134. Personal Interview, Paul Bagyenda, Founder Digital Solutions, 21 April 2009.
135. Personal Interview, Daniel Kayiwa, 25 May 2009.

University that organizations like IBM, Microsoft and Google thought the same.

Entrepreneurs Against All Odds

I was inspired to meet individuals who were determined to make it on their own. In Fast Company's article entitled, 'Uganda, the Entrepreneur's Paradise', the country was ranked as the most entrepreneurial based on interviews in 40 of 113 countries between 2002 and 2003. Although it was an outdated article, it was interesting to read that Uganda ranked at 29.3% of individuals, age 18 to 64, who were active in either starting up or managing a new enterprise.[136] It was clear that a lack of jobs forced most into starting their own company. Without the proper connections, job or money, they still believed they had a place in the world of software.

On May 19th, I took a 30 minute Boda Boda ride to the outskirts of Kampala, towards the east of the city on the main road to Jinja, and ended up at Banda Station.[137] There at the intersection of a marketplace and two dirt roads I called Tony. Before I could turn around I saw the young man come up to greet me. He was wearing black leather shoes, slacks and a striped button up shirt. He had a big smile and walked me to his shop several buildings down the street. I could see the building had several stories each containing a hallway lined by small business shops on either side. On the ground floor, at the end of the hallway on the right, I found Kampala's newest software company Altoje Computer World.

The AL stands for Alex, TO stands for Tony and the JE stands for Joseph. Slightly confused, I asked why there was an E at the end of the company's name as opposed to an O. They told me it was because they wanted to incorporate Jesus into the name of the company. So JE stands for Joseph and Jesus. The company was started by five friends who got to know each other during their time at the Makerere University. They finished their studies in July 2008 and graduated from the Makerere University in January 2009. Unable to find a job, they decided to try and start their own business. Alex explained, "we were searching for jobs but in Uganda that can be difficult. Why can't we create our own? We knew it would take years and years to find a job so lets start a company, provide some services and earn a living." They went on to relate that the jobs that were available were unattractive for someone passionate about software. Tony said, "you could do data entry for 100,000 to 200,000 shilling a month, but this is not the point. We want to build our own business and we have a vision now."

The office consisted of one room with flyers on the wall explaining their different services. There was also a poster of Obama centrally positioned on the wall. When asked why, the team explained he was a role model and proved that there were good African leaders. They hoped that Africa could learn from his example. Interested to learn more, I asked how their project had started. Tony explained, "after we finished, I had a room at a hostel where we could meet and have a chat. Did you find a job? projects? girls? whatever."

---

136. Fast Company, 'Uganda, the Entrepreneur's Paradise', 1 May 2004, http://www.fastcompany.com/magazine/82/uganda.html.
137. Personal Interview, Tony Wamala and Alex Tumuhairwe, Founders Atoje Computer World, 20 May 2009.

This turned out to be a group looking for something to do. Alex and Tony went on to explain that they started from a combined savings of 600,000 shillings.[138] They paid the loan needed to rent the office for two months (200,000 shillings a month). The remaining amount was spent on chairs, tables and office supplies. In the meantime, the rent had increased to 300,000 shillings a month, as a 100,000 a month had been added for electricity. The extra overhead made it difficult to make their monthly payments on time. I was surprised to learn that they didn't even have Internet access. When asked how they worked around this, they explained that they travelled 45 minutes to the University to use the computer labs. They would bring flash disks so they could download whatever they needed and then make the trip back to the office where they could work.

They chose the location because it was the cheapest piece of property they could find. They hoped that it was still close enough to campus that students would be able to make use of their services. They explained that they still lived with their parents so the money they collected went to paying the rent. But Tony assured me that they were focused and would make it through. When asked if they had already experienced some signs of success, they explained that January was their best month and they made close to 700.000 shilling.[139] Curious to know why they had done so well in January they explained to me that it was graduation that made the difference. They had friends that came to them for printing graduation cards, something students surprisingly spent a lot of money on. Composing the layout and printing out the cards turned into a surprisingly good business. But graduations aside, they had fallen behind in their rent payments by three months. They were planning to talk to the landlord to see how they could come to a new agreement and explained that she usually trusted them.

As we spoke, a customer came in with several pages of printed data. He wanted to update the prices for the goods he sold in the local market. The prices had changed and he wanted Alex to update everything in excel. They agreed to do the work for 7.000 shilling but under the condition the guy returned back with more work.[140] He promised to do so as he had a lot of data that still needed to be updated. Seeing how much the Ugandan shilling fluctuated during my time in the country I could imagine that prices changed on a regular basis. The team explained that a lot of the work they did was simple and had nothing to do with software. At the same time it brought in much needed revenue and allowed them to focus on their software projects, with belief that their future would be in their applications.

Joseph, one of the original partners, had recently become less involved because he lived farther away and the travel costs were steep. There were two other individuals who they called on for freelance work. This meant that Tony and Alex were running the show. They made sure the shop was always open from 7 am to 7 pm six days a week. On Sunday, they assured me that they didn't work very hard. Alex explained that at the Makerere, groups of four students would spend six months developing a pilot project. All of their time and energy would be spent on developing

---

138. 600,000 Uganda Shilling = 295.567 US Dollar, 16 August 2009, http://www.oanda.com/convert/classic.
139. 700,000 Uganda Shilling = 344.828 US Dollar, 16 August 2009, http://www.oanda.com/convert/classic).
140. Ibid.

a system that didn't even work. Alex called them 'funny prototypes' and went on to tell me that they had to build a project in a month and get it into the market at the same time. It was clear that these guys were hungry for business and they didn't have a lot of time to waste. They were far more focused and serious about what they were doing and seemed to be working harder than any of the programmers I had met. The two entrepreneurs explained that when you had a job working for someone else you could do whatever you wanted. You would go home at five and you would have the freedom on the weekends. Alex expanded, "they actually want you to rest on holidays. But for us we always have this rent over our heads. We have to work every day and try to get in as much business as we can." The challenges they faced were immense, but so too was their drive and determination to succeed.

Final Thought

The individuals willing to work around the challenges inherent to software development clearly shared a real passion for their work. It was the only way I could see how someone justified the risks. To be clear, the fact that these individuals were involved in software development at all was actually quite remarkable. Simply learning code required an incredible amount of dedication and perseverance, often requiring developers to go to great lengths in order to obtain the basic resources and information needed to advance their programming skills.

Against all odds, new software companies were popping up by the day. It was exactly because of these challenges that so few people had tried to develop software in the country and this left an empty space where new actors started to emerge. For the dedicated individuals willing to work around the challenges and those that did not have a choice, there seemed to be good odds moving forward.

The individuals I met were also optimistic about the future and strongly believed in Uganda and the potential to develop the local market. This interest extended well beyond business and seemed to grow out of a more primal desire to create something meaningful. The developers I met looked to software as an open gateway into a world full of opportunity. To this extent, they were empowered by its capabilities. Code was unrestricted by the systems and the politics that too often hindered the country's development. To this extent, the freedom of code afforded young developers a unique uninhibited space where they could fully exploit their intelligence. Each application they built was yet another expression of their identity, otherwise a tribute to the rise of Ugandan talent and their ability to innovate on its behalf.

The young entrepreneurs whom I met clearly had their own visions for the future and were certain of their personal potential to impact, shape and transform the world around them.

ICT4ACCOUNTABILITY
WOUTER DIJKSTRA

12th of May 2009

I arrived around 2.30 at club Obligato, where the massively popular radio talk-show 'Ekimeeza' was about to start. I was welcomed by a group of middle aged men, who directed me to a man sitting at the head of a table. The table was about 12 meters long with 16 people seated around. An audience of about 150 people surrounded this central structure. 'Ekimeeza' is the Ugandan word for 'big table', it is the place where Ugandans can give their opinion concerning specified social and political issues and where their voices will be heard, not only by the other participants, but by thousands of people tuned in to Radio One FM 90. In short, Ekimeeza is described as the people's parliament. The man sitting at the head of the table is dressed in a casual polo with a bright orange and green stripe. He is the only one eating and is clearly the man in charge. He is James Wasula, founder and chairman of Ekimeeza. After introducing myself to him and clarifying my presence as a social researcher, I took a seat in the second row where people discuss an article in the newspaper, and some others sit silently and wait. The man behind me hands me a printed paper where the topic of today's discussion is set out. 'The Constituency Development Fund: how effective can 10 million Shillings be in developing a constituency'? After half a page of information concerning the 'CDF' the letter notes: "Remember, Ekimeeza is a forum for intellectual discussion and not unqualified emotional outbursts, kindly observe this fact and debate accordingly."

After the microphone has been connected by Mr. Wasula, deafening all attendants with an extremely loud and high pitched beep, we hear commercials aired on Radio One, signaling that the show is about to start. Everybody gets quiet. Mr. Wasula starts by welcoming everyone and introduces the topic as written down on the paper, after this he asks the first speaker 'Mrs Masala' to come up to the microphone. A big woman, casually dressed in a Zain T-shirt, comes up to the microphone and starts a furious speech on the mismanagement of the Constituency Development Fund and tells the audience how Members of Parliament are eating the CDF money given to them. She seems to have carefully watched the way in which official members of parliament express themselves; constantly adding to her sentence, 'So Mr. Speaker!' referring to the chairman. It seems that the audience (90 % men) is not very happy with this woman and start murmuring and joking. After 3 minutes a man sitting next to Mr. Wasula holds up a note saying 'TIME'. The woman rounds up her speech and goes back to her seat. The next speaker is called to the stage by Mr Wasula.

45 minutes into the Ekimeeza, a big man with a neat suit shows up at the venue, he approaches the table and is immediately offered a chair and a drink. It turns out that this man is a Member of Parliament (MP) and when he is given the stage a few minutes later he gets all the time he needs to make his argument. The audience respects this and listens carefully to what he has to say. After his contribution, he stays to listen to the other speakers and gets a second chance to give his view on the CDF. Two hours go by with speeches from a wide range of participants, young, old,

rich, poor, ruling and oppositional party members, all of which are broadcasted live on the radio.

With every speech, my view on freedom of expression in Uganda is altered, is this political debate actually going on in a country where politics is a synonym for corruption, state propaganda and censorship? Are these people involved in an ingenious plot set up by the ruling party to fake freedom of speech? Or are these people actually having an open and well organized political debate about one of the many problems facing their society? When speaking with some of the participants after the show, I realized that this was real and that participants were as excited as I was about this oasis of free speech and popular politics. Ekimeeza on Radio One is a pioneering show in its genre. It expands the boundaries of the popular radio talk-shows in Uganda. Many Radio Talk-shows feature a talk-show host and some selected guest speakers, Ekimeeza offers open access to anyone who wishes to contribute.

One thing that struck me during the Ekimeeza was the absence of dialogue and structuring of the topic as a whole. Mr. Wasula, who was equipped with the second microphone, refrained from summing up the argument, engaging in critical remarks or demanding clarification of what was said by the speakers. An occasional joke or a sporadic question was all he added to the forum. This resulted in the repetition of arguments by some speakers. He did sum up some messages he received from listeners sent to him by SMS or from the audience who could write their contributions on a piece of paper.

When I talked to Mr. Wasula after the show he explained that the Ekimeeza structure is aiming towards maximum openness and minimum liability for the organizers of the talk-show. People are responsible for their individual accounts and this is what keeps the Ekimeeza unbiased and thus acceptable for everyone, even government officials who are often the subject of criticism. Mr. Wasula is instructed by Radio One not to direct the debate or express interest in certain arguments brought to the table. In this way, Ekimeeza can evade allegations of being politically biased. Within a society, at times associated with political disparity, the Ekimeeza seems to create a window of opportunity for free speech and political integration of the people's perspective.

Introduction

In April 2009 I went to Uganda to do three months of fieldwork research. My main interest was interactive radio talk-shows and the ways in which these media platforms were able to stimulate public debate and enhance transparency and awareness among Ugandan citizens concerning politics and public service delivery. The mobile telephone boom in Uganda allows much more citizens to participate in these radio talk shows and as a consequence, you can see interactive talk shows springing up all over Uganda. I visited several radio stations and attended various political radio debates. Furthermore, I spent one month analyzing the traditional information and communication flow between the central government and citizens living in remote parts of Uganda. For this purpose, I travelled to Uganda's Eastern regions to study communication structures at the local government level.

Together with a Ugandan researcher, I interviewed local government officials at district level and citizens of small and medium sized villages. I observed the technologies used to gather and distribute information within the various levels of local government and observed the main

challenges which people face to get their concerns and complaints through to the responsible officials. Radio proved to be the most vibrant platform for government-civilian dialogue, especially through the various popular talk shows hosted on FM radio. Based on my observations and extensive theoretical research, I coined the term 'ICT4Accountability' to describe a specific way of civic media[141] that would be suitable for addressing challenges related to transparency, awareness and consequent accountability.

The slow pace of development in several African countries can in many cases be attributed to the failure of governments who rule over the country in a way that fails to benefit the entire population. Citizens who are affected by the actions taken by their leaders have difficulties in assessing whether they are satisfied and expressing their dissatisfaction when needed. The lack of accountability that rests on the actions taken by the ruling elite forms the breeding ground for corruption and mismanagement. To prevent the ones engaged in governing the country from using their power for their own benefit, monitoring these people is a must. 'Quis custodiet ipos custodes?' (Old Latin saying meaning: 'Who will watch the watchers?'). The answer to this question is: Everybody. Although Information and communication technologies (ICTs) will not provide food, clean drinking water, medicine or sturdy roads to people living in poor nations, they can be used to monitor the leaders who promise to provide these basic needs. My research and consequent coining of the term 'ICT4Accountability' revolves around this reasoning and looks at Ugandan society to identify how ICTs can help citizens to hold governments, NGOs and other organizations, accountable for their responsibilities to serve the people of Uganda.

Civic Media in Uganda

I conducted research in Uganda from the 12th of April to the 24th of July. After various visits to Dutch Donor agencies during my preparations, I was happy to receive unmediated insights on the reality in Uganda which proved to be many times more valuable than the overview given by these organizations. Upon arrival in Entebbe, the driver of the Makerere University Business School (MUBS) picked me up. After a short night, I was taken to the school campus to be personally introduced to nearly 25 different professors at MUBS. I sensed some disappointment when clarifying that I was not an IT-technician or code crunching whiz kid but that my research looked into the social impact of ICTs on Ugandan society.

During my research in Uganda I used methods which I was familiar with through my undergraduate degree in Anthropology. I employed ethnographic research methods, which are often based on participant observation. This basically implies establishing rapport with respondents, conducting interviews, both long and short, observing and talking with a wide variety of informants. The first few weeks in Uganda were crucial in beginning to understand the basics of Ugandan politics. Becoming familiar with the city of Kampala, meeting with some contacts, and reading Ugandan research papers, newspapers and magazines provided me with the essential foundation on which

---

141. Civic media: One of the container definitions describing the wide variety of ways in which New Media can be used to help people to make informed choices. The MIT Center for Civic Media defines the term as: 'Civic media helps provide people with the skills they need to process, evaluate, and act upon knowledge in circulation and insures a diversity of inputs and mutual respect necessary for democratic deliberation'. (See http://civic.mit.edu/about. Read more on: www.th!nkaboutit.com/wouterdijkstra).

to frame my inquiries. Seriously talking to people about Ugandan politics requires knowledge on the main parties, history, key political players, top stories, and so on. Researchers, students and professors from the Makerere University Business School (MUBS) provided a fundamental background to Ugandan social, cultural and political life. With this knowledge, I was able to engage a wider group of people and to understand the context of different accounts that were given. This was beneficial to my interviews and conversations. This became especially apparent during my weekly visit to the radio show 'Ekimeeza' where, as I learned more about Ugandan Politics, I could participate in more discussions after the Talk-show.

In order to narrow down my search for ICT4D practices empowering civil society, it was essential for me to identify what exactly I was looking for. In order to find out how new media technologies were strengthening mechanisms of accountability, I had to look for spaces where public awareness and government transparency approached each other. In these spaces, a valuable dialogue between government and civil society would begin to emerge. The two most important places that feature the requirements mentioned above proved to be at the district-level of government administration and at political radio talk shows. The radio talk shows were much preferred, for they had a clear link with new media and are a new and dynamic phenomenon in Uganda. The popularity of these talk shows clearly indicates the demand by citizens to express themselves and vent their frustrations and concerns about political, social and cultural affairs. However, before studying this emerging talk show phenomenon, I had to learn about the situation that preceded the massive popularity of talk radio. Learning about the traditional state of affairs in the information and communication flow between citizens and their administrators helps to explain the huge demand for a radio platform to discuss public matters.

The Status Quo

The most important information that I got out of my first few weeks in Uganda was learning of the two locations in which Ugandan politics exists: the urban and the rural areas. The urban city of Kampala is the economic and political heart of the country, which houses the multinationals, parliament, state house, the courts and other main government institutions. Decisions are made in Kampala, yet eighty percent of the population lives in the rural areas. It does not suffice to only look at Urban Kampala in order to get a reliable view of the information and communication gap between the population and government. Because of the distinct rural-urban political settings and the importance of the rural majority in the democratic process, I considered it important to extend my scope to the rural administration of Uganda.

Civic media and the information and communication flow between government and citizens cannot be studied without knowledge of the political, historical and cultural administrative structures in both rural and urban settings. These structures must be considered to a certain extent, but it is impossible to take all parties into account due to the complex and multidimensional relationships and personalities which compile Ugandan society. As an indication of the complexity and intertwined interests, one should understand that apart from the central government, with its indescribable bureaucracy, local districts are built in a complex hierarchy of five counsels. On top of these government structures there are ten traditional kingdoms, all ruled by a king, chiefs or, like in the Busoga region, a rotational set of several kings. Furthermore, there are around four major ethnic groups and several religious groups including Muslims, Hindus, Catholics and

Protestants, all holding stakes in the political realm. At the base of the power structure are the families, all with strong traditional ties and hierarchies. The families are clustered together in clans. It becomes obvious that considering too many factors while studying certain aspects of Ugandan politics will lead to confusion, therefore it is important to zoom into a more specific and manageable component.

For this research I decided to focus on government- citizen communication at the local government level. The local government structure is upheld throughout the country and touches the lives of every Ugandan citizen. Within the central government of Uganda, the ministry of local government is responsible for administration of government policy in the countries subdivisions. The ministry of local government structures districts around Local Councils (figure 1). Councils go from 'local counsel one' (LC1) to 'local counsel five' (LC5). District level (LC5) is the highest organ of local government. The LC4 county level seems to have faded with time. Most LC4 counties formed their own districts under the decentralization policy. There are 1340 LC3 sub-counties with about six LC2 parishes per sub-county. On average there are thirty LC1 villages of around three thousand people in a sub-county.
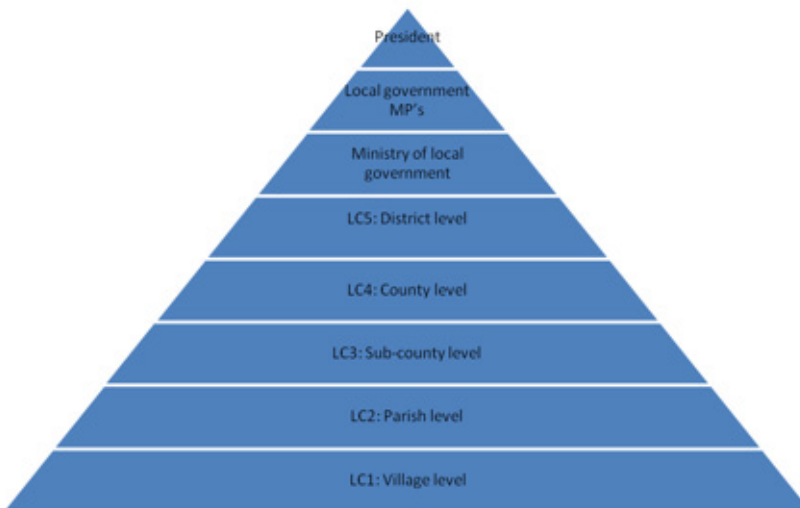

Figure 1 Hierarchy of Local Government

Government-Civilian Interaction in Theory

My first meeting I had with a local government official was in the district of Iganga with LC3 chairman Hadj Balunywa who is sub-county chairman of the sub-county of Bulamagi. For our first meeting, I met him in his typical sub-county office, dating back to the times of Milton Obote.[142] The LC3 chairman has a spacious office at the back of the building, a secretary and a government car with a driver. Looking around in the office, the first thing that caught my eye was the

---

142. Milton Obote was Ugandan political leader who led Uganda to independence from the British Colonial administration in 1962.

amount of posters hanging on the wall, all with seemingly important information on the district. All posters are handwritten with markers in English on big sheets of paper (figure 2).

Figure 2 LC3 headquarters

Verbal Communication

The chairman began speaking about the communication structure, explaining that most public information on the local level of government is passed on verbally. Loosely planned monthly meetings with the lower local counselors of the LC2 and LC1 are called by the LC3 chairman to discuss policy passed on from the LC5 office. The LC3 Chairman channels the information from above to the LC2 and the LC1, who on their turn will try to pass the information on to the villagers. For immediate address of the people in a certain village, the LC3 chairman will contact the head teacher of the school and the chairman LC1. Head teachers and LC1 chairmen are expected to gather people on the school grounds to attend the meeting. Feedback from the people should take the same route as information from above. Handwritten letters qualify as the medium for this interaction (figure 3). As an alternative, villagers can go directly to the village LC1, which is in most cases a member of the village. The LC1 representative is then responsible for raising the issue to the LC2 or to go directly to the LC3. In some circles, this form of verbal communication is referred to as 'the Adidas line', for it requires a lot of walking to spread information.

Notice-boards

Notice-boards act as the most important and widely used instrument by the government in providing information about the community. These wooden frames, which are only accessible by officials, should be in place at every sub-county office and school and display all funds coming into the sub-county, the names of the officials holding office and other matters of pubic interest. A special 'communications officer' is assigned in most districts to coordinate and make sure that the notice-boards are up to date. Most documents displayed in the notice board are printed documents mostly in tables with abbreviations (figure 4).
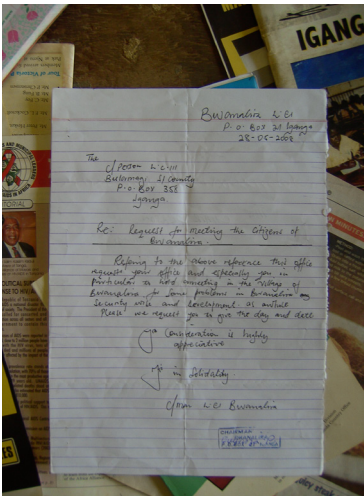
Figure 3 Letter to Sub-county Chairman

Figure 4 Notice-board

Radio

Radio is also used as a communication channel by the government to inform citizens about public affairs. The radio was used for the first time by the Ugandan government to create bottom-up scrutiny by enabling citizens to monitor the allocation of public funds to primary schools. This scheme is described in 'The Bottom Billion' as an example of a revolutionary strategy which should be utilized to devise a charter for budget transparency.[143] The strategy for the use of local

---

143. Paul Collier, The Bottom Billion, Why the Poorest Countries are Failing and What Can Be Done About It. New York: Oxford University Press, 2006, p. 149.

radio broadcasts was devised by the former permanent secretary to the minister of finance Emmanuel Tumusiime-Mutebile and one of Collier's students Ritva Reinikka. In its first years, according to Collier, this scheme brought back the funds lost in transaction from eighty percent to ten percent. Unfortunately, this encouraging initiative failed in the long run as it was overshadowed by interests contrary to enhancing the transparency of public spending. I will later elaborate on this issue.

Government-Civilian Interaction in Practice

In theory, the use of local radio broadcasts, notice-boards and face to face meetings seem to constitute a fair system of government-civilian interaction, especially when considering an African country trying to work with limited resources and little infrastructural capacity. In theory, this system could suffice in creating a reasonably transparent and informed society. The problem, however, is the implementation of all that looks so great on paper. Underneath most African bureaucracies lie effective power structures based on a different form of government that merely hide behind western institutions dating back from colonial times. To understand these power structures is the first step towards understanding why in the long run, Africa will neither benefit from development aid nor foreign investment (As in China). Nobel Laureate Douglass North has made a great case describing this model and explains how the political system based on personal ties holds a tight grip on social change.

According to North, Uganda is a limited access society. Elite coalitions instill order by acquiring rents, which are distributed among them to stabilize their base while the mass of the population has limited or no access to property rights and political power. To ensure stability among the elite, it is imperative that access to the markets and political power is denied to people outside the elite. If more parties would gain access to a substantial component of the market or politics, several power blocks could be formed which would result in a struggle at the top. When looking into the practical implementation of the communication structure in the remote regions of the country, it becomes clear how the mechanism of the restricted political and economic access works.

Personal ties form the foundation of rural Ugandan politics. No one, not even politicians themselves, will deny it. In the pyramid hierarchy of Ugandan politics the only way to move up in the political hierarchy is by strengthening personal ties with the ones above. Descending in the hierarchy is a consequence of unsuccessfully challenging the ones above. The personal ties among the government officials create a deadlock that is enforced by a 'prisoner's dilemma'.[144] In a prisoner's dilemma, all partakers would be better off if there would be no one to participate in for example, patronage. However, the worst outcome for anyone with an influential position is to refrain from patronage while the others continue. Generally speaking, this leaves the country with politicians who refrain from challenging their superiors and punish dissidents who try to make changes. Citizens cannot demand the adherence to the democratic constitution of Uganda if they do not know what this constitution consists of. The ignorance of especially rural people on democratic rights or even on basic forms of service delivery is capitalized on by big men who battle for a better position among the elite, whether they are at the sub-county level or in parliament.

---

144. Collier, p. 23.

Looking at Ugandan history, citizens have never been aware of the way in which democracy is supposed to function because they have never fully experienced it. In contrast, civil society has always been familiar with the notion of elites and dominant rulers who have little democratic aspirations or interest in the people's concerns. Uganda is traditionally built on family structures where the status of a family is measured by its primary males. Extended families require a strong man at the head who is to answer to an even mightier individual. Historically, this was the chief or king. The largest kingdom in Uganda, Baganda Kingdom, is still headed by a powerful king (the Kabaka), who may take any woman at will, is above the law and will not address any civilian directly due to his executive status. The only way people will hear from him is through his prime minister, the Katikuro. Another inheritance supporting the notion that ordinary people have no place in politics is British colonialism, which, although not as strongly embedded as in other former colonies, has engrained the concept of elite and lesser humans in Ugandan society up until 1962. The barring of citizens from political involvement denies them valuable knowledge on their democratic rights and obligations. In the coming paragraphs, everyday stories will illustrate the challenges which citizens encounter when using the available communication channels in their effort to contribute to the political debate.

Mr. Kiberi (Figure 5), owns a grocery store in the new district of Namutumba. He used to be a member of the local school committee, where his job was to monitor the school head-teacher. When he found that money was missing, which was budgeted for footballs, textbooks, chalk and other utensils, he followed the protocol for this situation and informed the LC3 Chairperson. According to Mr. Kiberi, the LC3 chairman had a conversation with the head-teacher in which the latter told the official he had spent the money on personal matters. The head-teacher did not lose his job and was not in any other way punished for the affair. A few weeks later, at a general meeting on the school grounds, the head-teacher verbally attacked Mr. Kiberi in public and told the people attending the meeting that Mr. Kibiri was not doing a good job as a monitor. Mr. Kiberi was embarrassed in front of his community and decided to quit the school committee.

Figure 5 Mr. Kiberi

Figure 6 Sub-county Chairman Balunywa

Figure 7 Woman of micro-finance group and chairman Balunywa

These are just three examples of the difficulties people encounter when trying to perform their democratic obligation of scrutinizing leaders at the grassroots of Ugandan society. Millions of these stories remain unheard and, as we can see with the women of the micro-finance group, all confidence in the system is lost. Not only ordinary citizens fail to have their voice heard in society, politicians, like the LC3 chairman Balunywa, are also silenced by the system. Complaints about the functioning of government are either penalized by power holders building their status on the patronage system or lost in the bureaucratic jungle. When traveling through rural parts of Uganda with an interpreter, tons of these stories can be heard. These stories often remain confined to the local community and are rarely reported on by the media.

Notice-boards and counsel offices facilitate entry points for complaints and monitoring by concerned citizens. Citizens can choose to get involved in politics and directly cross check the state of affairs through written documents in the notice board or directly visit the counsel office. In practice, however, this possibility for citizen agency is hardly functional. Although no official numbers are available on the functioning of local administration practices, the information on fourteen out of seventeen notice-boards I observed was at least one year out of date. The notice-boards that were updated provided information that was crammed with incomprehensible abbreviations. During my stay in Namutumba, one of the most remote districts in south-eastern Uganda, I found three of the four sub-county headquarters totally empty; No desks, no chairs and certainly no civil servants. At the newly built LC5 district-headquarters of Namutumba, there were a few officials in office. However, instead of placing the head-quarters in the largest village of the district, the officials had decided to build it 8 kilometers away from the nearest settlement, easily reachable only by the LC5 district authorities with their state sponsored cars.

During my visit to Iganga District, I managed to visit one of the representatives of the President's office. Mr. Jefferson Wasala is directly appointed by the president for the function of 'Resident District Commissioner' (RDC) of Iganga district. Mr Wasala received orders from the president's office to inform citizens, through radio broadcasts, about the amount of money allocated to primary schools by the Universal Primary Education program (UPE). The UPE program is paid for by foreign donors and provides every child in Uganda with free primary education. By informing citizens about the UPE program, the government tries to prevent headmasters from demanding school fees from primary school children after UPE funds are transferred to the school, a practice that is quite common among headmasters. When overhearing the broadcast over the radio, I noticed that instead of the RDC giving an overview of the allocated funds, the emphasis of the broadcast was clearly directed towards propaganda for the National Resistance Movement. During the one-hour broadcast, only the total amount of money allocated to the district was mentioned together with all the schools in the district, leaving no opportunity for citizens to effectively monitor their local school. What did become very clear from the broadcast was that his excellency president Yoweri Museveni of the National Resistance Movement provided the UPE funds. The potentially empowering initiative was reduced to state propaganda.

Conclusion
By describing the information and communication system within local government, I wish to point out the nature and the place of the divide between government and citizens. Through highly bureaucratic and non-transparent communication channels between central governments and

citizens, the communication flow and consequent mechanisms of accountability are obstructed. Political accountability, which basically is the ability of citizens to monitor their leaders and to make sure they adhere to agreements, is nearly impossible because of the limited access and because citizens are not aware of their democratic rights and obligations.

Local government structures make up for the bulk of the failing communication and accountability mechanisms. Bureaucracy and patronage form an impenetrable wall for citizens to make their voices heard. The central government is either reluctant or incapable of sorting out the failures in this system. Personal ties, running from the president all the way down to the village chief, form dependent relationships between administrators and seem to deadlock politics from within.

Guy Berger, Professor of media studies at the Stellenbosch University in South Africa, reminds us that freedom of expression in the media has been recognized as having a much greater significance. Their fulfillment is essential to the fulfillment of all other rights.[145] The Inter-American Declaration of Principles on Freedom of Expression notifies that: 'freedom of the media is essential for the full and effective exercise of freedom of expression and an indispensable instrument for the functioning of representative democracy… Media is the nub issue when it comes to accountability' (Ibid.). Colm Allen, the director of the Centre for Social Accountability in South Africa argues that the state needs to have specific functions in society. On the basis that poverty is best addressed by individuals acting in their own best economic interests, a neo liberal approach should be combined with an adherence to human rights(Allen: 2008).[146] Allen argues that the mode of accounting adhering to these human rights should shift from an institutionally based monitoring system towards agency of social groups. Instead of official government structures providing feedback mechanisms for citizens to scrutinize their leaders, the people of Uganda should be the ones to lead the way in holding their government accountable.

We can conclude that in order to gain headway in the implementation of a wide range of constitutional and basic human rights, which are now stuck in the political deadlock, the actions of the leaders of Uganda have to be subjected to scrutiny. In order to effectively reach this goal, the media must be pervasive in both the urban and the rural areas of Uganda and the duty to hold leaders accountable should shift from institutionally based monitoring towards agency of social groups. The current state of affairs does not provide the necessary means to reach these goals and, consequently, widens the gap between citizens and the Ugandan government. As we will see, ICTs are offering new opportunities for people to find a way around the malfunctioning communication channels offered by the state and with the help of their mobile telephones, have taken their concerns to the radio.

Radio talk-shows
'Radio is one-sided when it should be two-. It is purely an apparatus for distribution, for mere

---

145. Guy Berger, 'Putting Media at the Centre of Accountability', New Media Lab Blog, 22 May 2009, http://nml.ru.ac.za/blog/guy-berger/2009/05/22/putting-media-centre-accountability.html.
146. Allan Colm, 'A Critical Reflection on Current Civil Society Anti-Corruption Strategy and the Principle of Accountability', Introductory input at roundtable entitled 'A Review of Anti-Corruption Strategies – The Role of Civil Society', organized by The Open Society Foundation, 2004.

sharing out. So here is a positive suggestion: change this apparatus over from distribution to communication. The radio would be the finest possible communication apparatus in public life, a vast network of pipes. That is to say, it would be, if it knew how to receive as well as transmit, how to let the listener speak as well as hear, how to bring him into relationship instead of isolating him.' (Bertolt Brecht: 1986).[147]

So far I have given an overview of the channels available to citizens to interact with their governments and described the major disadvantage of weak implementations that limit their usability. In my search for home-grown solutions for the lack of accountability, I found an active and critical dialogue between government and citizens on FM radio. Radio stations invite government officials or discuss political issues and allow citizens to phone in to the studio and voice their concerns in regard to a wide range of topics. Political talk-shows are massively popular and the mobile telephone is revolutionizing the way in which ordinary citizens are able to get their voice across to government officials and others within their community.

During my stay in Uganda, I visited several radio stations and conducted structured and semi-structured interviews with a wide variety of individuals, ranging from station managers to guest speakers and from officials at the Uganda Communications Commission to citizens contributing to talk-shows. At some of the radio stations, I conducted several hours of participant observation during radio talk-show programs. Stations that provided insights and data are: Radio One (Kampala), Kapitol FM (Kampala), Eye FM (Iganga), NBS (Iganga), Bamboo FM (Jinja) and Kiira FM (Jinja). I also visited the Ugandan Communications Commission (UCC) in Kampala for the official government approach towards the talk shows. Furthermore, attendants at the Ekimeeza provided me with a wide range of accounts from the citizen point of view. In the past eight years, the number of independent radio stations in Uganda has been growing rapidly from five in 1997 to hundred and twenty in 2005 (figure 12). With around fourteen million Radios in Uganda, around eighty percent of households have access to an FM radio. As the following graph shows, most Ugandans get informed through the radio.

Almost every radio station in Uganda hosts dozens of talk-shows per week. Talk-shows take up more time on the radio than music and are used to discuss a wide range of topics ranging from relationship advice to gossip to business talk and so on. According to David Weddi, Editor of Uganda's biggest newspaper 'The New Vision', Political talk shows generate the greatest interest among citizens.[148] Popular political talk shows invite government representatives and other influential people to attract listeners and to provide the guest speaker with a platform to address the general public. Significant guest speakers result in more topical and influential discussions which lead to more listeners and consequently more advertisement revenues for the radio station. Guest speakers, listeners and the radio station will all profit from a good talk show, thus, a win-win situation is created.

This profitable business drives radio stations into healthy competition with each other. Driven by this profit-based competition, the boundaries of traditional controversy are touched, which leads to the careful exploration of the possibilities within the public political debate. Talking about the president or even mentioning political figures like Idi Amin on the radio have been a taboo for years and could only be publicly discussed by members of the ruling party. Some pioneers in talk-radio, like Kapitol Gang on Kapitol FM and Ekimeeza on

147. Bertolt Brecht, 'The Radio as an Apparatus of Communication', Video Culture, ed. John Hanhardt, Layton, UT: Peregrine Smith Books, 1986.
148. David Weddi, The New Vision, June 2009.

Radio One, have challenged these taboos and made unmentionable topics to some extent available for public debate. So-called common people, local activists perhaps, but not public figures, have learned to articulate and defend their opinions in public without fear, and simultaneously reinforce the traditional African oral culture, respecting debate and narration.[149]

Figure 8 Radio Talk Show in Jinja

Political talk-radio comes in many forms, languages and styles. The competition for listeners stimulates the creative process and ensures the growth of the most popular shows. The simplest political talk show is structured around a basic premise suggested by the talk-show host and discussed by listeners, with minimal interference by the host. Guest speakers may be invited to discuss comments of listeners or to give additional background information. The most sophisticated talk-shows are found in Kampala and called 'Ebimeeza'. These will be described in later paragraphs.

Transcript from field-notes in Iganga, 'A simple political radio talk-show' (Figure 13).
Eye FM radio station (Iganga). Talk-show host: George Williams. (20.00h – 21.00h) I had the chance to propose a topic for Mr William's talk-show. I asked him to discuss whether service delivery had improved with the creation of new districts. The talk show host, a young man with a high-speed tongue, explained the topic in a 7-minute introduction after which the first calls came in. There were three telephone lines at his disposal, which, for the whole hour the show lasted, were constantly busy, flashing again as soon as the previous call was done. Contributions lasted for an average of 3 minutes. The predominantly male callers stated their name and their village before delivering their point of view on the proposed topic. The talk show host hardly ever interrupted the speakers or directed the discussion. The show was in 'Lusoga' so Salim translated the comments given by the callers. From this translation, I got the impression that the contributors

---

149. Ullamaija Kivikuru, 'Top-Down or Bottom-Up?: Radio in the Service of Democracy: Experiences from South Africa and Namibia', International Communication Gazette, 68 February 2006: 27.

delivered a structured, well-mannered monologue on the topic discussed. People were not joking around and took their contribution really seriously.[150] (Transcript from fieldwork notes: May 2009)

The integration of markets and the competition to attract listeners in this sector of the media is pushing radio stations to work progressively. Most of the radio stations rely on an internet connection to receive advertisements from the bigger companies in the country. The essential internet connection also provides the stations with links to the BBC, CNN- and Al Jazeera websites, which allows them to broadcast international news. These homegrown developments offer the global news headlines to millions of homes in the smallest villages of Uganda, translated in to local languages and selected based on cultural relevance. Most radio stations have correspondents throughout the country to report on national news stories over the phone, furthermore, citizens participate in reporting on local events through the various radio hotlines where they can suggest and report news stories as they unfold. Innovative and homegrown developments in the radio sector are made possible by the financial incentives which underly those viable talk-shows which attract many listeners.

Limitations for Talk-Radio
The previous paragraphs have described radio talk-shows as dynamic and growing platforms, hosting public political debates and government-civilian interaction. One could say that the dialogue between citizens and leaders is more apparent and open on the radio than it is through the official state channels. It is no wonder then that the government is very sensitive when it comes to these shows and is devising multiple strategies to limit the impact that they have on their hegemony. This sensitivity indicates vulnerability from the side of the regime and as far as this research can tell, creates the most limitations for the medium.

Every government needs a media policy. There is a lot of power in media and, therefore, it should be handled with care. Media laws are made to 'guarantee freedom of the media within reasonable confinements that state that the freedom of expression should not jeopardize the peace of the general public or national security through libel, slander or defamation, incite violence or harm inviolability of one's private life and family'.[151] The Ugandan media laws and its different acts are extensive and I will not go in to them in detail. In any case, it is the interpretation and implementation of the law that is the vital element determining the ultimate design of the media landscape in which radio talk shows have to settle. If used irresponsibly or by the wrong people, radio broadcasts can result in tragedies. The most relevant example of this is the genocide in Rwanda that was coordinated and directed through hate-speech transmitted on Radio Libre des Milles Collines.

In Uganda there are cases where radio talk shows have resulted in so called mob-justice, where citizens take the law into their own hands and jointly lynch, and often kill, an alleged criminal. Mob justice does not require major offenses and are often a response to collective hysteria, set off by wild accusations. It is the ability to persuade the mob of the criminal's guilt that initiates the lynching. It has been reported that mob justice lynching has occurred following radio broadcasts where

---

150. More fieldwork notes are included in the appendix.
151. he Independent, 'The Ugandan Media law', The Independent, July 2009.

participants of a talk show accused others of a crime. It must be said that mob-justice is a conse-quence of the failing justice system in Uganda. Nevertheless, it cannot be tolerated by the central authority and should be prevented by media laws, preventing the use of talk radio as a platform for inciting violence. The obvious problem with media laws is that they can be used selectively for censorship of politically sensitive information. There are numerous ways in which the government uses laws to align the opinions of the media outlets to those of the established power.

Selective Implementation and Interpretation of Media Laws
The Ugandan Broadcasting Counsel (UBC) is the government body monitoring all media com-panies in the country. This media watchdog is able to suspend broadcasting licenses or punish deviant radio stations by applying media laws in a selective manner. One of several ways of doing this is to demand copies of recordings of a show for review by media authorities. Every hour of a requested show will take the radio station at least one hour to copy. A demand for several weeks of a certain program can serve as a punishment as it requires the radio station to spend a lot of time and money on providing these copies. Limited storage capacity, due to the use of cassettes by the stations, often results in the failure to produce all of the requested copies. In this way, radio stations run the risk of getting their license suspended. Another way to use media laws in a selective manner is to demand the official journalism certificates of all employees of a certain radio station. It is generally known that not everybody working at a station will have these papers. Nevertheless, this law can be used to subtract the broadcasting license and close the station down. Numerous and ever changing ways to apply media laws to get radio stations in line with the government are constantly being formulated.

Financial Starvation
Another method used by the government to control the media outlets is financial starvation. Most big companies are either owned by government officials or at least dependent on them. Vital revenue flow to a station can be affected by terminating advertising contracts. Government officials can also pressure companies to stop advertising on certain radio stations. 'Government is the biggest advertiser in Uganda, if a media company is too critical of the government, the government will stop advertizing in it. It will also push private advertisers to stop their cash flow towards the media company'.[152]

Physical Threat
Although not as common as before, physical assaults to anyone who poses a threat to the elite is not unusual. Very difficult to confirm and in a totally different league from other measures taken by government, is the existence of so called 'safe houses'. These are plain and simple torture houses where extreme skeptics of those who form a threat to the regime are 're-educated'. Especially in Kampala, fear of the safe houses and what goes on inside is a major component of censorship. The urban legend surrounding the safe houses prevents people to publicly express their discontent with the regime. Especially young urban people say that even their best friend could turn them in for a hefty reward from the secret police.

---

152. Personal interview, Ssemujju, 2009.

Dependency Relations

As with every business that has prominence in Uganda, politicians are stakeholders. The great majority of radio stations are owned by MPs, ministers, the state or other people closely related to the elite. Radio talk-shows, that harm the reputation of relatives within the owners circle, risk termination. However, if a talk show can bring enough revenue to compensate for the loss in social capital, it has a chance to persevere on the financial benefits it is generating for the owner. This balance is often a key factor in determining whether a show is suitable for broadcasting. The increasing competition among radio stations, the growth of the industrial sector (and with it the possibilities for advertising revenues) and the demand for quality talk shows, is shifting this balance towards more openness and a little controversy. This seems like a positive development for free speech. However, liberalization of the media channels and consequent public debate should go step by step to prevent major crackdowns by the central government on radio stations or revision of broadcasting laws.

Selective application and interpretation of media laws, financial starvation, physical threat and dependency relationships form the major barriers for open political debate on the radio. Much more than financial or technological issues, these top-down, government initiated limitations count as the principal restraint in the development and impact of radio talk shows.

Conclusion

Talk-radio is a homegrown form of civic media with a potential to integrate various forms of new media to promote public engagement with politics and thus stimulate the democratic process. Although some critics question the democratic effect of talk radio and argue that the power of phone-ins remain with the moderator in the studio, radio talk shows provide an open access space and an effective platform for public discussion within the limited access society.[153] Political engagement on this public platform is not confined to members of the elite or their spokes persons but allow for access based on impersonal rules. The only requirement for access is a mobile telephone and airtime. The recent boom in mobile connectivity in Uganda opens up the political space for more and more citizens. Although the effect this phenomenon has on society as a whole is very difficult to measure, ICTs are providing new communication channels that enable the common man to participate in the public debate. This opens up the debate and allows the middle class to feel involved in the political future of the country, furthermore, it creates transparency and awareness among citizens.

The popularity of call-in political talk shows indicates a demand from citizens to participate in the political debate. People are willing to invest airtime in this participation, which makes radio talk show hosting a competitive business. Competition propels development and indicates a healthy and sustainable, homegrown development niche. An important factor in the development and continued existence of political talk-radio is the growth of the industrial sector of the Ugandan economy. The democratic effect of radio talk shows can only be sustained and expanded if the secondary sector grows to generate new demand for information services. African economies still rely on the primary sector of the economy (mining, agriculture, fishing and forestry). Failure

---

153. Andrew Crisell, Understanding Radio, London and New York: Routledge, 1994, pp 181-199.

to develop a significant industrial sector directly undermines the potential for the service sector, which radio belongs to.[154] Only a competitive national economy, where businesses compete for the customer's attention, will stimulate a market for advertising, and thus, media competition and diversification.

Because radio talk shows are a potential threat to the status quo, most resistance to the development of this open access platform comes from the ruling elite. Through various restrictions and obstructions, the phenomenon is limited in its development. Endeavors by the ruling class to minimize the effect of radio talk shows indicate that their hegemony is vulnerable to more and better informed citizens. Talk-radio has created a space for mass participation in sharing knowledge and discussing political issues with politicians and citizens alike. This transparency helps to monitor and scrutinize the actions of the central power and with this, may challenge the ruling power. It is important to be aware that the use of media should, instead of attacking the elite head-on, be employed to positively influence the behavior of the elite. Public debate and awareness will educate citizens in distinguishing positive and negative political conduct displayed by their leaders and help them to make informed choices. In this way, talk shows can provide incentives for people in power to take account of public opinion. The endurance and development of political talk-radio therefore considerably depends on the involvement of politicians in the radio debates.

We can conclude from the analysis that the combination of radio and mobile telephones provide an alternative platform for debate amongst and between citizens and the governing elite. This platform is more inclusive and direct and less prone to domination by government forces. It is also creating a competitive market providing job opportunities and cash flow. Talk-radio is providing transparency and incorporates the rural population in community based monitoring of leaders. Resistance to the proliferation of this form of media comes from the ruling class through a variety of ways. The cautious way in which talk shows are exploring and expanding the boundaries of the political debate seem to withhold the elites to engage in stringent measures. As we will see, new forms of civic media, based on the principles of talk radio, are already emerging in progressive urban areas and signal the possible direction in which this phenomenon will evolve.

Ekimeeza

In Kampala, Radio talk shows have evolved into public events where citizens and politicians meet in person at an appointed venue and debate on a wide range of issues that are broadcasted on the radio for thousands of listeners. People can send SMS text messages to the talk show host during the show, who then discusses these remarks on air. Every week, hundreds of people gather to attend Ekimeezas and politicians frequently attend in numbers.[155] During my time in Kampala I never missed the Ekimeeza on Radio 1 (figure 9). It is the best place to meet individuals from all walks of life, eager to share their views on a wide range of political topics.

---

154. Ruiinga, M.T., 'Strategies for Managing Obstacles to Entrepreneurship Growth in Africa', Kampala: University of Limpopo, 2006: 74-92.
155. The correct plural form of Ekimeeza is 'Ebimeeza', (Luganda language).

Figure 9 Ekimeeza

The first Ekimeeza was established some five years ago, when a radio producer from Radio One discovered a group of intellectuals, who discussed politics in their free time. Mr. James Wasula hosted the original debate, where everyone was allowed to join. By broadcasting the debate on Radio One, the debate soon picked up popularity and grew to become a weekly event where around 300 people, including members of parliament, businessmen, scientist and citizens from around the country joined in an open debate about specific political issues. As a form of debate, 'Ekimeeza' has grown into an institution of its own, and currently there are seven active Eki-meezas which all take place in Kampala.[156] It must be said that the Ekimeeza on Radio 1, which runs every Saturday from 15.00 to 18.00, is generally recognized as the most popular, influential and intellectually grounded talk show in Uganda. It is said that even President Museveni regularly listens to this talk show.

Where the normal talk-radio programs only allow people to phone in to the studio to interact with an expert or talk show host, Ekimeeza is exceptionally progressive in leveling the status of its participants, allowing all participants to physically meet in the same space. In this way, the ambivalence of reciprocity and consequent deficiency of genuine interaction cannot serve as the obstruction for democratic debate, as is the case when only 'one to many' communication chan-nels are established.[157] The inherent power relationship between the transmitter and receiver, which is characteristic of mass media, is not present at Ekimeeza. Instead of creating a virtual open access space for debate through the telephone line, a real open access debate is emerging in the progressive urban setting. Ekimeeza seems to be the follow up of talk-radio, with the same groups involved, but with more profound 'open access' characteristics.

---

156. Ekimeeza is the Ugandan word for 'big table' and is often referred to as 'The People's Parliament'.
157. Jean Baudrillard, 'Requiem for the Media', in Noah Wardrip-Fruin, and Nick Montfort The New Media Reader, Cambridge: MIT Press, 2003 [1972].

The Ekimeeza at Radio 1 (FM 90) is the only talk show of its kind that is conducted entirely in English. This feature gave me the rare opportunity to thoroughly analyze the discourses and argumentative structures used within the radio debate. Through my visits of Ekimeeza, I was able to witness the public debate on a wide range of issues concerning Ugandan society and the perspectives of the participants that join in this debate. This chapter touches upon the basic form of Ekimeeza, its relationship with ordinary talk-radio and its role in Ugandan society. However, instead of looking at the procedure and the network underlying this particular form of radio talk shows, this chapter will primarily elaborate on the content of the debates circulating on the platform.

Accountability may not be regarded as merely procedural, since the accountability process often depends on how social actors define events, how they assign blame to wrongdoings, and how they attribute responsibilities for perceived problems.[158] Talk-radio, made possible by a combination of radio and mobile phone, provides a platform for public debate. However, the technology behind the platform will not guarantee government accountability towards the people. To investigate the power and the limitations of this media phenomenon, it is necessary to look into the content of the radio debates.

Content of the Debate

Some critics question talk radio as a medium for constructive debate and argue that the power of phone-ins remains with the moderator in the studio, others argue that talk radio is merely a medium to shout out opinions for the personal relief of the caller.[159] Although this may be true in many cases, Ekimeeza provides living proof that these arguments are anecdotal for low quality talk shows. Like every debate, rules are required to allow for a balanced and fair flow of argumentation. If a debate is not held within a framework defining how participants will interact or if there is a disproportional input from either the moderator or participants, the debate will quickly dissolve into chaos or lose its purpose of creating valuable insight into the debated issue. Ekimeeza has approached the ideal circumstances to open access radio debating. A discreet but strict moderator and a well-defined set of rules for participants allows for constructive sharing of thoughts.

My observations at Ekimeeza started out of interest in the form and procedures of the phenomenon. My weekly informed me that, although the form was very interesting, it was also a great opportunity to analyze the content of the debate. A relatively high level of freedom of speech is guaranteed and both politicians and citizens have access to the platform. However, I came to the conclusion that at the Ekimeeza the debate is not limited by access, but by the strength of the arguments raised in it. It is not the enthusiasm and vigor with which participants raise their concerns when given the microphone; it is the lack of quantitative knowledge of statistical facts, essential to any discussion, which obfuscates an effective political debate.

The lack of numbers in the political discourse can be attributed to either the absence of statistical data or the inability of participants to interpret the available data. First, there seems to be a shortage of basic mathematical and analytical skills. A simple calculation of for example two

---

158. Rousiley Celi Moreira Maia, 'Media Visibility and the Scope of Accountability', Critical Studies in Media
159. Crisell.

thousand minus five hundred proves to be quite a challenge for a lot of Ugandans. This can be witnessed in everyday life where money transactions, which involve decimals or numbers above 10, require calculators. People presented with, for example, the amount of money coming in to the country through development aid can have great difficulty in comprehending the magnitude of these donations. Amounts of money like forty million dollars or seven hundred thousand euros cannot be imagined or calculated. Percentages may seem evident to people in developed countries, however, a lot of Ugandans lack the basic mathematical knowledge to understand what is actually meant by '40% of the state budget'.

Notes: Saturday 9th of May, 2009. Ekimeeza, Kampala:
I remember the first Ekimeeza I visited was about the constituency development fund, a rather unfortunate name for a grand of 10 million shillings (€ 3600) a year. It was perceived by most of the participants as a fund that should build the roads or start up business in the districts. That this money was hardly enough to pay for the fuel used by an MP's car annually was only mentioned by a visiting MP, later in the Ekimeeza. A substantial amount of people were angry at MP's for not bringing change with their 10 million shillings and accused them of using the money for personal gain. Although this is in certain cases definitely true, the essence of the discussion was lost because of the inability of participants to place these numbers into the wider picture.

Another explanation for the large amount of subjective and unfunded arguments in the political discourse at Ekimeeza, is the sheer absence of statistical data and verifiable facts on important issues in the country. There are very few statistics available, and in many cases where this data is available, it is not accessible to the general public. Arguments in a discussion consequently refer to incidents and memorable events. The Uganda Bureau of Statistics (UBOS)[160], which is the national center for statistics, only provides statistics on Consumer and Producer price indexes and some statistics on exchange rates of the Ugandan Shilling. Apart from the fact that most Ugandans do not know about UBOS, cannot interpret the long and complicated tables, this institution does not have the capacity to facilitate an informed debate on Ugandan society.

As James Scott argues, when discussing ways in which peasants can contest the power of landowners and the bourgeoisie in general, "the mode of communication is by no means decisive to the democratic process, but the content is'".[161] The lack of statistical data and verifiable facts in the public debate proved to be one of my key findings during this research and led me to conduct more research on the content of the debate. This interest and my consequent investigation into this peculiarity, helped me to formulate the conditions for ICT4Accountability as an effective form of civic media.

According to Emeritus professor in adult learning and education Jack Mezirow, the key to civic emancipation is the development of people's ability to think critically and independently, i.e. how critically he/she approaches issues, continuously re-evaluating evidence and rational arguments,

---

160. Uganda Bureau Of Statistics (UBOS): www.ubos.org.
161. ames C. Scott, Domination and the Art of Resistance: Hidden Transcripts, New Haven, CT: Yale University press, 1990.

and identifying and disputing bias.[162] In addition to this fundamental ability to think critically and independently, people need profound sets of substantial knowledge to backup their claims. The broadening of an individual's frame of reference requires substantive knowledge, which is a prerequisite for critical reflection.24 The frame of reference and the accompanying critical reflections are contained within 'discourse', which Professor Mezirow defines as 'a dialogue devoted to assessing reasons presented in support of competing interpretations, by critically examining evidence, arguments, and alternative points of view'.
[163]

Following Mezirow's definition of 'discourse', I argue that because of the lack of evidence, rational arguments and alternative points of view, the discourse at Ekimeeza limits the quality and effectiveness of the public debate at hand. Instead of limited access to the debate, it is the subjective content that limits Ekimeeza as a platform for public debate. In order to effectively change the way people conceive and engage in valuable debate it is not only imperative to provide channels for interaction between leaders and civil society, moreover, participants of society should possess, or at least be able to acquire a basic set of substantial knowledge. People should be able to inform themselves and each other on the amount of public money spent on healthcare, literacy rates in Gulu District, the amount of HIV infected women, major national export products, the amount of teachers absent in class, and so on. Only through the support of relevant and reliable substantive knowledge will citizens be able to effectively challenge leaders and engage in critical debate. With assistance and through my observations at Ekimeeza, I believe that the lack of substantive knowledge is the biggest limitation for the effectiveness of the debate at Ekimeeza and in the wider public sphere.

Conclusion

Ekimeeza has gone from an interesting alternative in conventional talk-radio, to an institution in Ugandan society. Radio stations only provide the platform for the Ekimeeza and minimize their input in the content of the debate. In this way radio stations can divert responsibility for what is said to the individual speaker and minimize liabilities for controversial statements. This is not to say that Ekimeeza is totally free from government pressure, the government, especially around election time, has closed down Ekimeezas (Bimeeza is the Luganda plural form of Ekimeeza). Hosts at the Ekimeeza are restrained from elaborating on certain topics by their station managers, who are limited by government forces. Furthermore, Ekimeezas can currently only be held in the city of Kampala. Radio station managers outside the capital indicated that hosting an Ekimeeza would be too controversial. During the Ekimeezas in Kampala, an 'open access public sphere' is created where status is disregarded, common concerns are discussed and inclusion is the norm.[164]

Ekimeeza is the most progressive form of civic media in Uganda today and is increasingly using new media to deepen its impact. The newest forms of Ekimeeza have online forums, which follow up on the discussions after the talk show. These developments bring crucial public debate

---

162. Jan Angstrom, 'Transformative Learning through Globalization of World Politics', Cooperation and Conflict.
163. Angstrom
164. These are the three institutional criteria for the emergence of the public sphere as a space for critical discussion according to Habermas.

to a wider audience and fortify the position of the platform towards conservative leaders. Instead of initiating new innovative media projects in Uganda, upscaling the ones that seem to work, like Ekimeeza and talk-radio, would be more efficient. Probing and stimulating Ekimeezas in the smaller cities of Uganda or supporting initiatives to improve Ekimeezas in Kampala would adhere to the requirements of 'sustainability and scalability', which is recommended in the ICT4D 2.0 Manifesto.[165] Evidently, this Ugandan initiative is able to organically grow through grassroots initiatives and at most requires acknowledgement from influential people to enforce the position of Ekimeeza in society and protect it against censoring government intervention.

Ekimeeza and the Public Sphere

Democratic public life only thrives where institutions enable citizens to debate matters of public importance.[166]

Ekimeeza approaches the three 'institutional criteria', which are set as preconditions by philosopher and sociologist Jurgen Habermas for the emergence of a 'bourgeois public sphere'. The public sphere is an area in social life where people can get together and freely discuss and identify societal problems and through that discussion influence political action. In this sense, Ekimeeza could be compared with the London coffeehouses, French salons and German tischgesellschaften. In absence of a functional parliament and a municipal counsel which ceased to speak for the citizens, people gathered in public spaces to discuss politics. At these public meetings, critical discussion among citizens propelled the emergence of the bourgeoisie and their influence on state authority in 18th century Europe.

The three institutional criteria for the emergence of the public sphere as a space for critical discussion state that first, a disregard for status within the debate should be present. Secondly, the discussion should revolve around common public concerns. Thirdly, the debate should be inclusive to all readers, listeners and spectators wanting to contribute to the discussion. In conventional talk-radio all three criteria set by Habermas are approached but not fully realized. Ekimeeza on the other hand, fully opens up the opportunity for genuine public debate to support civil society in overcoming the representational culture of the elite and in stimulating the monitoring role of citizens in society. The three criteria set by Habermas are present for the first time in Ugandan society through Ekimeeza and indicate a political debate outside the domain of the political elite.

In his book 'Strukturwandel der Öffentlichkeit' Habermas gives an extensive historical-sociological account of the brief appearance of the 'bourgeois public sphere' and the consequent civil society that emerged from its rational, critical debate. Driven by growing rates of literacy, accessibility to literature and a new kind of critical journalism, common concerns were discussed by a domain separate from the ruling class. "Opinion became emancipated from the bonds of economic dependence". There are many instances where the evolution of information and communication

---

165. Richard Heeks, 'The ICT4D 2.0 Manifesto: Where Next for ICTs and International Development?' Development Informatics Working Paper, Manchester: Centre for Development Informatics, working paper no. 42, 2009.

166. Jurgen Habermas, *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society,* Cambridge: MIT Press, 1989 [1962].

technologies propelled social change in different societies. In this regard, the Ekimeeza phenom-enon displays many similarities to English coffeehouses and can be related to a specific social need by citizens resembling the enlightenment period in European democratic development.

In contemporary Africa, a functional public sphere is yet to emerge. Leapfrogging into the 21st century, the emergence of a public sphere in Africa will involve new media technologies. At the same time, we have to be aware not to overlook the discrepancies between the cultural, historical and political context of the public sphere in Uganda. ICT4D discourse and consequent practices should be conscious enough to avoid being blinded by developments in Western societies and should not automatically apply Western solutions to African problems. What is suggested is to look at the needs of people (in this case a political discourse outside of elite circles) and the way in which they can apply a form of organization to meet these needs. The three criteria for the emergence of a public sphere as suggested by Habermas are still relevant in an African context today.

Ekimeeza allows the people of Uganda to form 'public reason', where people of different moral or political backgrounds can justify a particular position, which eventually enables them to put a check on state power. However, public reason can only build on premises that feed rational discourse and eliminate conflicting evidence, conceptual indeterminacy and other forms of 'bur-dens of judgment'.[167] The factors limiting Ekimeeza in emancipating civil society is found in the lack of the essential elements required to build an informed and potent discourse as described by Mezirow.[168] The potency of evidence and arguments in particular, and alternative views to a certain extent, present the challenges for this form of civic media to successfully promote ac-countability and advance the democratic process. Further research on civic media should deal with the creation of reliable and potent information, which can fuel an informed debate and allows for transformative learning and critical, independent thought.

ICT4Accountability

From what is written so far in this thesis, a few summarizing statements should be made. Uganda is a society where sustained economic growth is obstructed by a lack of competition, which is the result of an economic and political system based on personal ties. In order to secure democratic development and economic growth, power should be decentralized to allow for a system based on impersonal rules. This transformation can only take place when citizens provide the right in-centives for leaders to make this shift. This process will accelerate when more citizens are able to make informed choices, which enable them to hold leaders accountable. Citizens should engage in political discussion amongst each other and with leaders. This discussion should have a disre-gard for status, revolve around common public concerns and be inclusive to all. Furthermore, it should be based on substantive knowledge, like statistics, in order to provide discourse which fa-cilitates public reason and transformative learning. Because the information and communication flow, necessary for the public debate, is increasingly accessed through ICTs, these technologies should be applied in ways that promote these forms of debate. This particular way of utilizing ICTs

---

167. John Rawls, Political Liberalism: The John Dewey Essays in Philosophy, 4, New York: Columbia Univer-sity Press, 1993
168. Angstrom.

for the promotion of democratic development should be seen as a specific form of civic media, with specific methods and goals.

In this concluding chapter I will go into the use of ICTs in promoting accountability and in doing this, I will define the term 'ICT4Accountability' as a specific form of civic media. As mentioned before, defining this concept requires a clear delineation of its meaning on the one hand and enough space for allowing different groups, in different settings, with different means and cultures, to make use and develop the concept in their own particular way.

ICT4Accountability essentially looks to create transparency, awareness and consequent accountability. The demand for adherence to agreements made between the government and the people living in a country should shift from a government based monitoring system towards agency by civil society. As we have seen in the case studies of talk-radio and Ekimeeza, it is citizens providing transparency of information to a certain platform, which provide awareness to the wider community. As they try to pierce through the shell surrounding the elites, which is preventing the general public from political participation, these media platforms carefully open up the public political debate. A frontal attack by civic media activists on the elite will certainly not yield the desired effect, as it will trigger more stringent regulations or destabilize the established peace. The way forward seems to be a sensitive but effective scaling up of the existing networks, using, for example, the homegrown radio talk shows as a springboard for further awareness and transparency.

Accountability starts with transparency and awareness, which perpetuate each other. Increasing transparency creates more awareness and more awareness demands more transparency. How can this theory work in practice? To start, one must identify the problems facing Ugandan society. Instead of a public debate based on personal opinion, the perspective should shift toward statistics. As we have seen in the previous chapter, the current political debate suffers from a lack of independent statistical data, which makes most of the arguments used in the debate rather subjective. Subjective arguments will ineffectively build a more informed debate and will create breaches instead of unifications amongst the population. Stimulating the development of trustworthy and reliable sets of data, which are spread amongst the population and leaders, could be used to strengthen the political debate and increase public participation, unification and awareness.

Because producing these statistics and making them available to the general public is costly, time consuming and in some cases out of the direct interest of most leaders in countries like Uganda, citizens should be actively involved in producing them. With the help of media technologies, the Ugandan population can play a central role in providing statistical data for transformative learning and effective civic engagement. The people who are closest to the source of the problems in Uganda have gained, through the mobile telephone, access to a piece of technology with which they can actively participate in objectifying the problems in their society. These people are more than willing to share their information for the good of society, as seen in talk-radio. If the bulk of information generated by citizens through the radio talk shows, could be tapped and channeled for the use of creating reliable and statistical data, then awareness, transparency and finally accountability would be the result.

As a practical effort to support this theory, radio platforms could be set up specifically for the purpose of collecting this kind of data. A large pool of respondents in African countries could, for instance, respond to questions sent to them by SMS. The data collected through this method should be analyzed, processed into an understandable format, and distributed in the wider community. In this way, the public discourse would be strengthened, civic participation would increase and awareness would be raised, without being dependent on, or directly attacking the elite.

Enrico Giovannini, chief statistician of the Organization for Economic Co-operation and Development (OECD) argues for so called 'key indicators' which are basically a shared space of objective statistical data referring to the overall progress of a nation, delivered to citizens and used by all who participate in the policy debate. 'If such data space existed, the political game would change from a game with imperfect information to one with perfect information, resulting in unprecedented improvements in facts-based civic dialogue'.[169] Citizens as well as politicians need data on which to base their decisions. Indicators permit citizens to hold leaders accountable for their promises.[170] The key indicators suggested by Giovannini illustrate the importance of statistical knowledge for accountability and the concept behind these statistical indicators is closely related to the concept of ICT4Accountability.

ICT4Accountability, as a form of civic media, can engage a great part of the population in stimulating democratic processes and will prevent a cacophony of opinions. Whereas citizen journalism focuses on news gathering and distribution, ICT4 ccountability focuses on the acquisition of knowledge in terms of unbiased and statistical data. This distinction indicates that in order to maximize the intended effect, methods for ICT4Accountability should aim to collect, process and distribute information according to certain values.

As a rule of thumb, ICT4Accountability requires accurate, comprehensible and direct information in all three stages of collection, processing and delivery of data. These requirements will ensure potent knowledge to circulate among civil society and enable them to hold leaders accountable in an effective manner. The use of ICTs and new media practices is central to this form of civic media. By using methods like the collection of meta-data and the use of data visualizations and fast wireless networks, collected information can be looped back into society in a comprehensible, direct and accurate way. Radio talk shows can be seen as a prototype for the use of ICTs in promoting accountability. Short accounts from a wide range of citizens are broadcasted over the radio, which give direct listeners the knowledge to form a broader and better informed conception of their society and hands them tools to hold their leaders accountable. Stripping this down, we see citizens generating data, which is processed to serve others to critically analyze their society. The population would raise awareness through their own transparency. This could arguably be called 'social cybernetics', where constant feedback loops will raise awareness and based on that awareness will generate a new demand for transparency.

---

169. Enrico Giovannini, 'Statistics and Politics in a "Knowledge Society"', Social Indicators Research, v86 n2 April 2008: 177-200.
170. Alberto Alesina, 'Credibility and Policy Convergence in a Two-Party System with Rational Voters', American Economic Review, 78, 1988: 796-805.

The factions aspiring to govern the country could possibly benefit from this data, problems could be addressed following statistics generated by the general public. Information and communication technology in the hands of independent data providers can create the facts on which to build a society which is based on impersonal rules and objective data instead of personal ties and subjective opinions. In Uganda, talk-radio and Ekimeeza are but two platforms that can potentially promote ICT4Accountability. To gain more insight into the practical implementation of ICT4Accountability, further research and experimentation with practical tools needs to be conducted. The final sentence of my thesis consists of the first definition of its title: ICT4Accountability is a distinct form of civic media which uses ICTs to systematically collect, process and deliver accurate, comprehensible and direct data with the intention of assisting citizens in making objective assessments of the performance of whoever is making decisions on their behalf.

Based on this research, I have taken it upon myself to go back to Uganda and to set up an experiment using knowledge acquired during my fieldwork in Uganda. With financial assistance from some leading international development organizations and valuable input from experienced African specialists, I have developed an online software platform that allows radio presenters to enrich their talk show with a real-time SMS stream of crowd-sourced information on pressing political issues. This project, named TRAC FM, is described in the appendix.

Appendix
ICT4Accountability – TRAC FM

Interactive radio talk-shows are the most popular platforms for political debate in Uganda. TRAC FM builds on the success of these platforms and combines several new media practices to involve citizens in high frequency monitoring of public service delivery such as teacher absenteeism, availability of text books, drug stock outs, waiting time at clinics, teacher payments, election proceedings, functionality of water points, potholes etc. Relying on a suitable combination of available ICTs, TRAC FM combines Radio, Mobile, Print and Online media to create a new and popular approach to public monitoring of service delivery.

How it works
Together with local media partners we identify pressing and popular problems related to the delivery of public services. The easy to use TRAC FM software is used by radio presenters to hold surveys during their talk show to which listeners can react via SMS (free of charge). During these popular radio debates, listeners are presented with a specific question which allows them to report on a failing public service, give their opinion on pressing public matters or elect the worst or best service deliverer within a certain sector of service delivery. Incoming text messages are collected by TRAC and processed into a 'data visualization', which is a real-time overview of all the received answers depicted in a range of clear graphs. The visualization is relayed to the FM stations (KFM) where the radio talk show host interprets and presents the graphs and feeds the data back into the public debate. Questions are posed in a way that allows our software to recognize answers coming into the system, allowing instant feedback of results to the radio station.

Data received at the TRAC central database is analyzed by TRAC and combined with pre-existing information on household characteristics and other valuable data. Data quality is enhanced by cross-verifying the correctness of information through SMS feedback between the central TRAC database and selected respondents and our in-house call center. Through this process, TRAC is able to set up an extensive body of data and create several quality enhancing feedback loops. Within legal limits and with respect to individual privacy concerns, TRAC uses this database to do further research and to contact respondents for additional inquiries. In this way TRAC can outline trends and profiles of respondents on the ground.

The data gathered during the radio-polls are processed into comprehensible and attractive info-graphics (Graphs, Maps, etc.) and used in background stories in Print Media (The Daily Monitor newspaper). In this way, the public debate is strengthened by substantive data, which helps people to engage in informed dialogue with their government officials. Furthermore, by publishing information pertaining to the quality of service delivery, existing information gaps are closed and government's ability to respond to problems strengthened.

Background

Democratic public life only thrives where institutions enable citizens to debate matters of public importance. The reach of radio networks and the uptake of mobile technology by Ugandan citizens allows for unprecedented involvement, openness and vibrancy in the public debate. TRAC FM builds on the success of interactive radio platforms and aims to stimulate an informed political debate outside of the domain of the political elite.

Research shows that interactive radio talk shows have a positive effect in opening up dialogue between the general public and their administrators. However, without objective claims based on substantive data, arguments often turn into subjective accusations that can overheat the debate and cause more friction that fusion. TRAC FM is building a platform for a crowd-sourced approach to permanent monitoring and permanent campaigning. Our goal is to structure arguments in the public debate and to involve citizens in a well-informed assessment of the performance of their leaders.

For more information on TRAC FM
Website: www.trac.pro
Email: wdijkstra@trac.pro
Twitter: http://twitter.com/tracafrica
TRAC FM Foundations:

BIBLIOGRAPHY

Adorno, Theodor, 'On Popular Music', *Studies in Philosophy and Social Science*, New York: Institute of Social Research, IX, 1941: 17-48.

Alesina, Alberto, 'Credibility and Policy Convergence in a Two-Party System with Rational Voters', *American Economic Review,* 78, 1988: 796-805.

Angstrom, Jan, 'Transformative Learning through Globalization of World Politics', *Cooperation and Conflict: Journal of the Nordic International Studies Association* Vol. 44, 2, 2009: 231–240

Bandura, Albert, 'Personal and Collective Efficacy in Human Adaptation and Change', *Advances in Psychological Science: Vol. 1. Personal, Social and Cultural Aspects*, John G. Adair, David Belanger, and Kenneth L. Dion (Eds.), Hove, UK: Psychology Press, 1998: 51-71.

Baryamureeba, Venansius and Florence Tushabe, `Cyber Crime in Uganda: Myth or Reality', *The World Academy of Science, Engineering and Technology,* Volume 8, 2005: 66-70.

Baudrillard, Jean, 'Requiem for the Media', in Noah Wardrip-Fruin, and Nick Montfort *The New Media Reader,* Cambridge: MIT Press, 2003 [1972].

Berger, Guy, 'Putting Media at the Centre of Accountability', New Media Lab Blog, 22 May 2009, http://nml.ru.ac.za/blog/guy-berger/2009/05/22/putting-media-centre-accountability.html.

Brecht, Bertolt, 'The Radio as an Apparatus of Communication', *Video Culture,* ed. John Hanhardt, Layton, UT: Peregrine Smith Books, 1986.

Burrell, Jenna, 'Could Connectivity Replace Mobility? An Analysis of Internet Café Use Patterns in Accra', *Ghana Mobile phones: The New Talking Drums of Everyday Africa*, 2009, pp. 151-170.

Bush, Vannevar, 'As We May Think', *New Media Reader*, Cambridge: The MIT Press 2003, p. 35-48.

Chun, Wendy, *Control and Freedom: Power and Paranoia in the Age of Fiber Optics*, Cambridge: MIT, 2006.

Collier, Paul, *The Bottom Billion, Why the Poorest Countries are Failing and What Can Be Done About It,* New York: Oxford University Press, 2006.

Colm, Allan*, A Critical Reflection on Current Civil Society Anti-Corruption Strategy and the Principle of Accountability, Introductory input at roundtable entitled: A Review of Anti-Corruption Strategies* – The Role of Civil Society Organized by The Open Society Foundation, 2004.

Corbett, Sarah, 'Can the Cellphone Help End Global Poverty?' *New York Times*, 13 April 2008, http://www.nytimes.com/2008/04/13/magazine/13anthropology-t.html.

Crisell, Andrew, *Understanding Radio*, London and New York: Routledge, 1994.

Eglash, Ron, *African Fractals: Modern Computing and Indigenous Design*, New Brunswick, NJ: Rutgers University Press, 1999.

Fialkowski, K., 'Software Industry in the Developing Countries: The Possibilities', *Information Technology for Development, 5(2),* 1990: 187-194.

Fuller, Mathew, 'Introduction', *Software Culture, a Lexicon,* Cambridge: The MIT Press 2008, p. 1-14.

Giovannini, Enrico, 'Statistics and Politics in a "Knowledge Society', *Social Indicators Research,* v86 n2 April 2008: 177-200.

Gaio, F.J., *The Development of Computer Software Technological Capabilities in Developing Countries*

Global Poverty and Research Group, 'Institutions and Development in Uganda', August 2009, http://www.gprg.org/themes/t5-govrn-norms-outcms/inst-dev-ugan.htm.

Gomez, Ricardo and Katherine Reilly, 'Comparing approaches: Telecentre evaluation experiences in Asia and Latin America', *International Information & Library Review,* 2002.

Habermas, Jurgen, *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society*, Cambridge: MIT Press, 1989 [1962].

Heeks, Richard, 'The ICT4D 2.0 Manifesto: Where Next for ICTs and International Development?' Development Informatics Working Paper. Manchester: Centre for Development Informatics; Working Paper no. 42, 2009.

_____, 'ICT4D 2.0: The Next Phase of Applying ICT for International Development', *Computer*, vol. 41, no. 6, June 2008: 26 - 33.

_____, 'Promoting Software Production and Export in Developing Countries'. Information Technology, Development and Policy, E. Roche & M. Blaine (eds), Avebury, Aldermaston, UK, 1996.

Hines, Christine*, Virtual Ethnography*, London: Sage Publications Ltd, 2000.

International Telecommunications Union, 'ICTs in Africa: Digital Divide to Digital Opportunity', http://www.itu.int/newsroom/features/ict_africa.html.

Jellema, Jako and Rudi Westerveld, 'Learning lessons from failure: the Ugandan telecentre expe-

rience in prospective', *ITU Telecom Africa*, November 2001.

Kivikuru, Ullamaija, 'Top-Down or Bottom-Up?: Radio in the Service of Democracy: Experiences from South Africa and Namibia', *International Communication Gazette*, 68 February 2006: 5-31.

Kleine, Dorothea and Tim Unwin, 'Technological Revolutions, Evolutions, and New Dependencies: What's New about ICT4D?', *Third World Quarterly* 30.5, 2009: 1045-1067.

Mafirakurewa, Mernat, 'Africa's Broadband to Grow Four-fold', Africanews.com, 10 February 2009, http://www.africanews.com/site/Africas_broadband_to_grow_fourfold/list_messages/23101.

Maia, Rousiley, and Celi Moreira, 'Media Visibility and the Scope of Accountability', *Critical Studies in Media Communication,* Volume 26, Issue 4, October 2009: 372–392.

Mernissi, Fatima, 'Sheherazades Weblog: De Internet Revolutie in het Traditionele Marokko', 2004.

Mwesige, Peter, 'Cyber Elites: A Survey on Internet Café Use in Uganda', *Telematics and Informatics*, Volume 21, Issue 1, February 2004: 83-101.

Nafula, Jane, 'Uganda: Special Report: Heavy Alcohol Consumption Causes Mental Illness', December 2007, http://allafrica.com/stories/200711301128.html.

Negroponte, Nicholas, *Soft Architecture Machines*, Boston: MIT Press, 1975.

Oestmann Sonja and Andrew C. Dymond, 'Telecentres - Experiences, Lessons and Trends, in The Commonwealth of Learning', in Colin Latchem and David Walker (eds) *Telecentres: Case Studies and Key Issues, The Commonwealth of Learning*, 2001.

Olstedt, E., 'Kritiskt tänkande i högre utbildning', *Lärprocesser i högre utbildning*. A. Bron and L. Wilhelmsson (eds), Stockholm: Liber, 2004.

Onwudiwe, Ebereand and Minabere Ibelema, *Afro-optimism: Perspectives on Africa's Advances, Westport:* Praeger Publishers, 2003.

Pieterse, Jan Nederveen, 'Digital Capitalism and Development: the Unbearable Lightness of ICT4D', *Incommunicado Reader,* ed. Geert Lovink, 2005.

Rawls, John, *Political Liberalism: The John Dewey Essays in Philosophy, 4*, New York: Columbia University Press, 1993.

Reuters, 'Broadband Set to Grow in Africa', 2 September 2009, http://www.nytimes.com/2009/02/09/technology/09iht-cables.4.20051593.html.

Rogers, Everett M. and Pratibha Shukla, 'The Role of Telecenters in Development Communication

and the Digital Divide', *Journal of Development Communication*, 2(12), 2001: 26-31.

Rogers, Richard, *Information Politics on the Web*, Boston: The MIT Press, 2005.

Ruiinga, M.T., 'Strategies for Managing Obstacles to Entrepreneurship Growth in Africa', Kampala: University of Limpopo, 2006: 74-92.

Scott, James C., *Domination and the Art of Resistance: Hidden Transcripts,* New Haven, CT: Yale University press, 1990.

Slater, Don and Daniel Miller, *The Internet: an Ethnographic Approach,* Oxford: Berg Publishers, 2000.

Sorj, Bernardo, 'brazil@digitaldivide.com: Confronting Inequality in the Information Society', UN-ESCO, 2003.

_____, *Information Societies and Digital Divides: An Introduction,* Milan: Polimetrica, 2008.

TED, 'Andrew Mwenda Takes a New Look at Africa', June 2007, http://www.ted.com/talks/andrew_mwenda_takes_a_new_look_at_africa.html.

Tedre, Matti and Ron Eglash, 'Ethnocomputing', *Software Culture*, a Lexicon, ed. Mathew Fuller, Cambridge: The MIT Press 2008, p. 92-100.

Thirumavalavan, Ramasamy and Chris Garforth, 'ICT4D and Farming Communities: Success and Failure of Telecentres in Rural Tamil Nadu', *Assessing the Contribution of ICT to Development, Dubai School of Government,* UAE, 2009: 26-28.

U.S. Department of State, 'Diversity Visa Lottery 2010 (DV-2010) Results', http://travel.state.gov/visa/immigrants/types/types_4574.html.

U.S. Department of State, Table III 'Immigrant Visas Issued (by Foreign State of Chargeability or Place of Birth) Fiscal Year 2009', http://www.travel.state.gov/pdf/FY09AnnualReport_TableIII.pdf.

Winner, Langdon, 'Mythinformation', The New Media Reader, eds. Noah Wardrip-Fruin and Nick Montfort. Cambridge, MA: MIT Press, 2003.

World Bank, Turkey: *Informatics and Economic Modernization*, World Bank Publications, Washington, D.C., 30 April 1993.

Zehle, Soenke, 'FLOSS Redux: Notes on African Software Politics', 23 November 2005, http://www.metamute.org/en/FLOSS-Redux-Notes-on-African-Software-Politics.

Beyond ICT4D: New Media Research in Uganda is a collection of ethnographic reports from diverse perspectives of those living at the other end of the African ICT pyramid. Crucially, these texts refocus on the so-called "ICT4D" debate away from the standard western lens, which depicts users in the developing world as passive receivers of Western technological development, towards Ugandans whose use and production of technologies entail innovations from the ground up. It is this 'other' everyday point of view that is too often missing in the ICT4D debate: valuable voices that put technologies, projects and organizations into their proper context.

Conducted in 2009 by a group of five Masters in New Media (humanities) students from the University of Amsterdam under the supervision of Geert Lovink the research examines both the role and implementation of ICTs in Uganda, covering a wide range of subcultures and projects, including internet cafe usage, print media, NGOs and communities, software subcultures and civic new media. The book argues that now is the time to look beyond the technology layer and instead focus on the social implications and local consequences of digital media's widespread use. By recognizing the impact that ICTs have on society and identifying what functions currently and what needs to be improved, we can more effectively understand and develop these technologies in the future.

Initiated and introduced by Dutch-Australian media theorist and internet critic Geert Lovink this Theory of Demand publication was produced at the Institute of Network Cultures (HvA). Authors: Ali Balunywa, Guido van Diepen, Wouter Dijkstra, Kai Henriquez and Ben White.

Printed on Demand
ISBN: 978-90-816021-9-8

institute of
network cultures