Internship Final Report

Submitted to IDRC Awards Office
By Sarah Parkinson
Tuesday, January 20, 2004

This report summarizes the research process and initial findings from my work completed in 2003: "Universal Access in South Africa and Uganda" as presented on January 7, 2004. A more in-depth analysis of the same research will be completed in the first quarter of 2004. This research absorbed about 60% of my time during my internship, and the other activities I completed were largely complementary to it. (Please see Activity Reports for more detail)

1. Objectives and Rationale

The main purpose of the research presented in this report is to describe the current state of universal access in South Africa and Uganda and identify strategies that policy-makers, donor agencies and supportive intermediaries (such as national NGOs, networks and associations) can use to support existing universal access initiatives such as telecentres and to increase their developmental impact. The method employed is a comparative analysis of a range of modalities for achieving universal access across five different localities in South Africa and Uganda. The analysis takes a broad systems approach, with a focus on identifying linkages between national and local levels. These linkages are the potential leverage points for support strategies.

The four primary research objectives that this study endeavours to address are:

1. Describing what universal access means and is intended to achieve as stated by policy and leaders in this area.
2. Describing what forms universal access has taken.
3. Describing the implications of these forms for development and associated impacts.
4. Identifying ways policies, alliances, and networks might best support these access initiatives and enable them to achieve optimum impacts.

A review of literature indicates that there is still a lack of empirical evidence regarding the links between ICT access and development in Africa (Nyaki Adaya, 2002). This may be partially because in many cases, ICT-related development projects have experienced problems unrelated to the ICTs, and the area is still relatively young. There is still a sense that the potential of ICTs for development in Africa is still largely untested. Further, there is a noted tendency in the literature to downplay failure and focus only on success. This research attempts to seek out neither failure nor success, but rather to reflect the current status quo. Finally, in this new area, there is a pressing need to better understand the links between policy, projects, access and development. Such understanding is important especially for donors, policy-makers and project managers to make effective decisions.

2. Conceptual Framework & Methodology

The research took a broad and experimental approach. Thus, the conceptual framework was developed throughout the literature review and further refined through the course of the research and analysis. The conceptual framework is itself intended to be a useful outcome of the research. It focuses on mapping the links between local, national and international actors and factors. At the community level, it attempts to focus, at least superficially, on dynamics within the community rather than looking exclusively at a particular access centre. The trade off here in terms of methodology was time: my conceptual framework implied, naturally enough, that more detail at all levels would add to the strength of analysis. Practically, this isn't feasible. Using the framework in other situations, the particulars of the context and the motivation behind the research would indicate where effort should be expended in achieving greater depth.

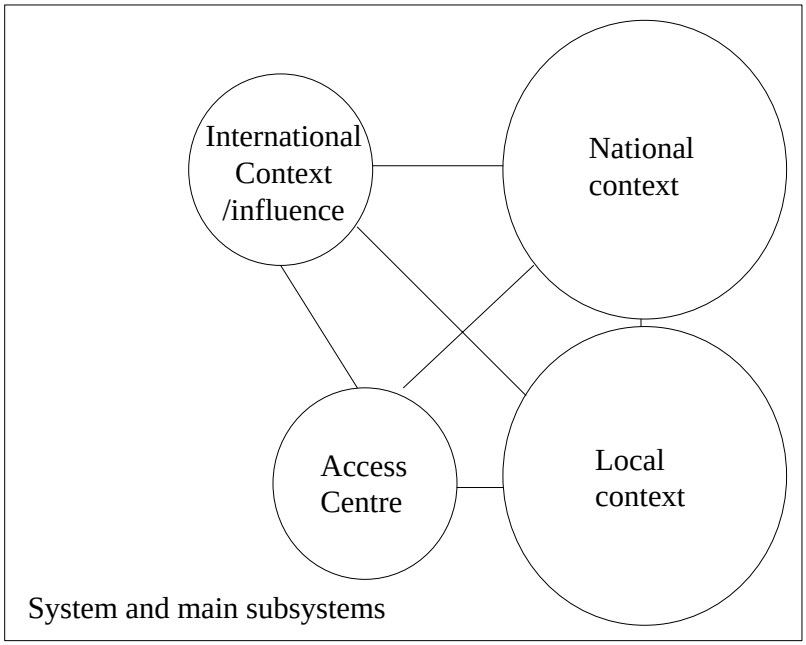

Figure 1: The research area as a system

Figure 1 shows the research area very simply as one system (the box) containing a number of interrelated subsystems. These subsystems could also be viewed as nested - i.e. the access centre as a system subsumed within local context. This figure is useful just to give an overall sense of the main components of the analysis, and the idea that they are all interrelated. This very basic map is expanded in Figure 2, which shows some of the key players and mechanisms through which they might act. This is a generic figure: that is, it is not showing a specific reality for any one country and/or access centre, but listing some of the commonly found elements and variables at play.

The system shown in Figure 2 can be thought of as the general "playing field" in which ICT access initiatives play out. Depending on how and by whom they are initiated, they may

have more activity focused just at the local level, but constrained by what is happening at national and international levels (which will effect pricing, etc.), or they may involve players and relationships from all levels. A donor-initiated and planned telecentre is a good example of the latter, whereas a small independent phone shop started by an entrepreneur is a good example of the former.

As already mentioned, this "playing field" is a generic one. It could be drawn according to a specific initiative. For example, a phone shop in Lira would have a simple interaction with the broad cross-section of people who make up its customer base, an owner, an employee, the company selling the phone, the electricity company, and the company - probably MTN, which is providing the phone service. It would have limited interaction with the government: it would be effected by some regulation, and it might be paying taxes, although probably not.

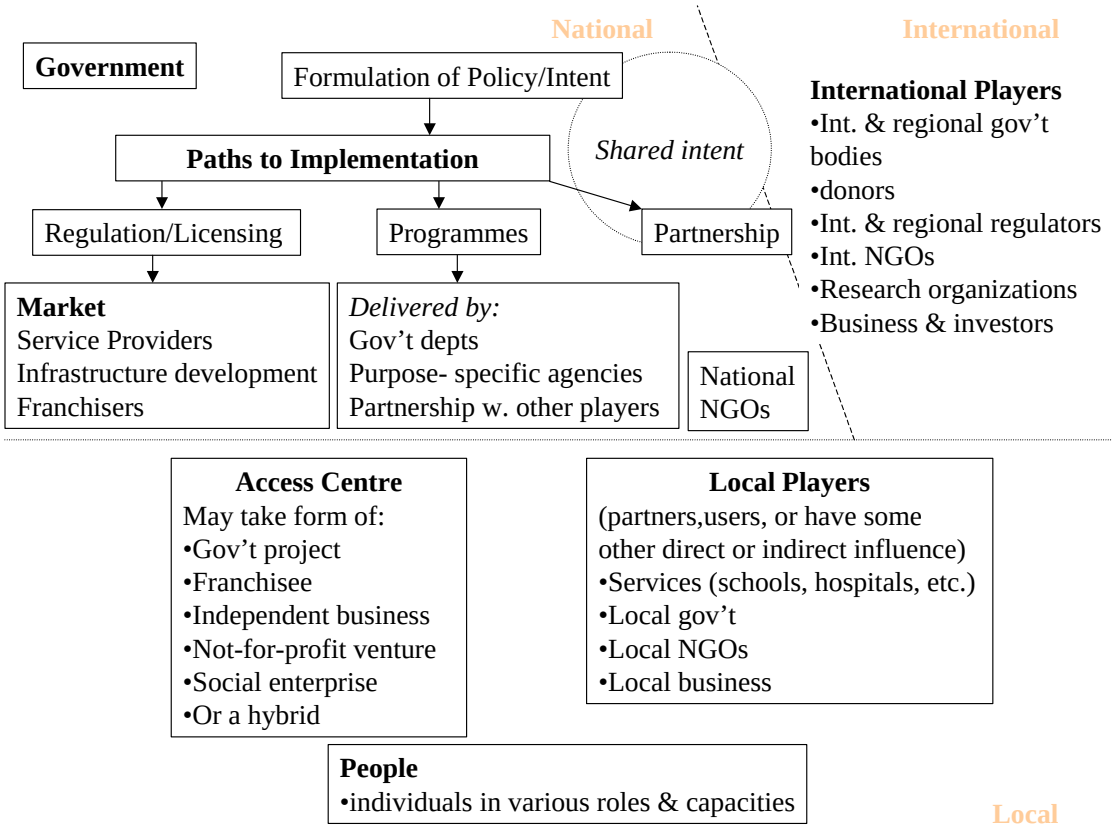

Figure 2: The system in more detail

Process for Analysis

The general conceptual framework as described above is by itself unwieldy if it is not focused. This implies that it is a tool that must be used in an analytic process that will provide more structure and focus in on specific aspects of the framework.

Such a process would include:

1. **Sketch the playing field** - as discussed above, so that the playing field is as specific as possible, but using the generic one for guidance.

2. **Map specific dynamics** - at a broad level and a community level - Depending upon the motivation behind the exercise, one level might hold precedence over another. For example, if one wants to understand how the government can encourage the spread of independent, locally owned phone booths, the broad level would be most important, especially the links between national and local. However, if one wanted to understand the impact of phone booths on the community, then more focus on the community level would be warranted and the broad level would be of relatively little interest.
3. **Assess health of system and components** (based on key indicators) - Especially if the approach is to be used in ongoing monitoring, selecting key indicators is crucial. In an evaluation, the indicators will be those elements that provide useful insight into the problem or question to be addressed. For our purposes, a healthy system is simply one that is producing the results intended (without any negative unintended results). This means that all systems we might examine under such criteria are artificial or designed to some degree, or that we have some idea of the intention behind them and are willing to state it in definable terms. Thus, before we can decide whether the system is healthy, we must be able to explain what results a healthy system will produce. Universal access targets are one simple starting point for this.
4. **Examine "problem components" in further depth**. This allows for further focusing of the data collection.
5. **Recommend strategies for increasing system health**. This is the final outcome of the analysis.

3. Methodology

I spent about eight weeks in South Africa and eight weeks in Uganda.

In South Africa, I conducted two community case studies, each lasting about a week. One was in Bhamshela, in rural KwaZuluNatal, about an hour northwest of Durban. The other was in Khayelitsha, South Africa's second largest township, located on the Cape Flats outside of Cape Town.

In Uganda, I conducted three community case studies. One was in Lira, Northern Uganda, the other was in Nabweru, a subcounty just north of Kampala, and the third was in Kabale, in the southwest of Uganda.

All of the community case studies in both countries consisted of household surveys, interviews with staff and management of various access centres, and user exit surveys at some of these same centres. In each community, I hired two or more research assistants whom I trained to carry out the household surveys and user exit surveys, and who often accompanied me and helped in other aspects of the research.

To examine the broader levels of the conceptual framework, I also interviewed policy makers, regulators, some ISPs, and a variety of NGOs at the national level in both countries. This was augmented by visits to additional projects (i.e. outside the case communities) and review of relevant secondary sources, especially on the topic of access policy in both countries.

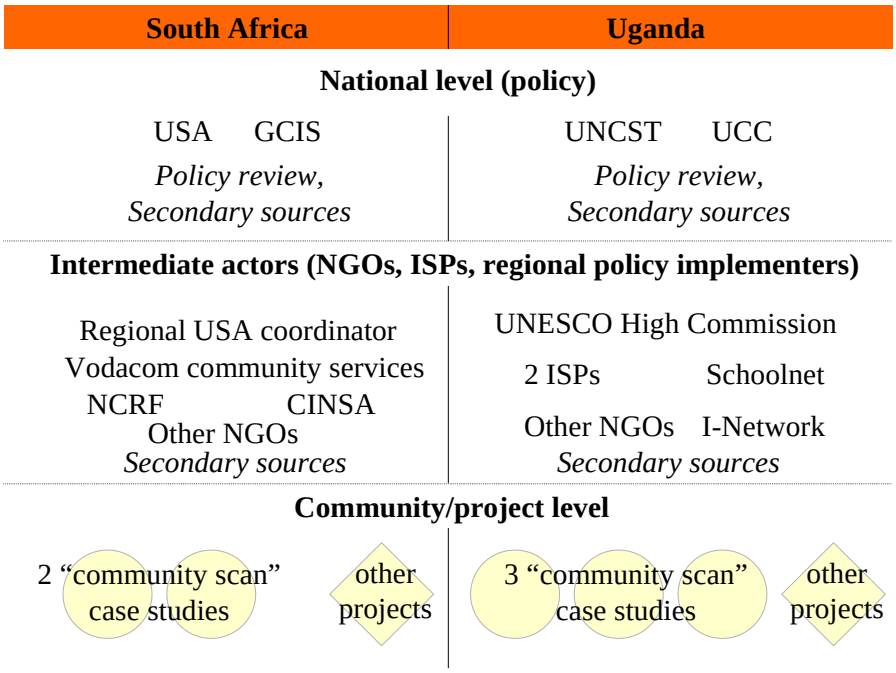

Figure 3: Data sources consulted during field research

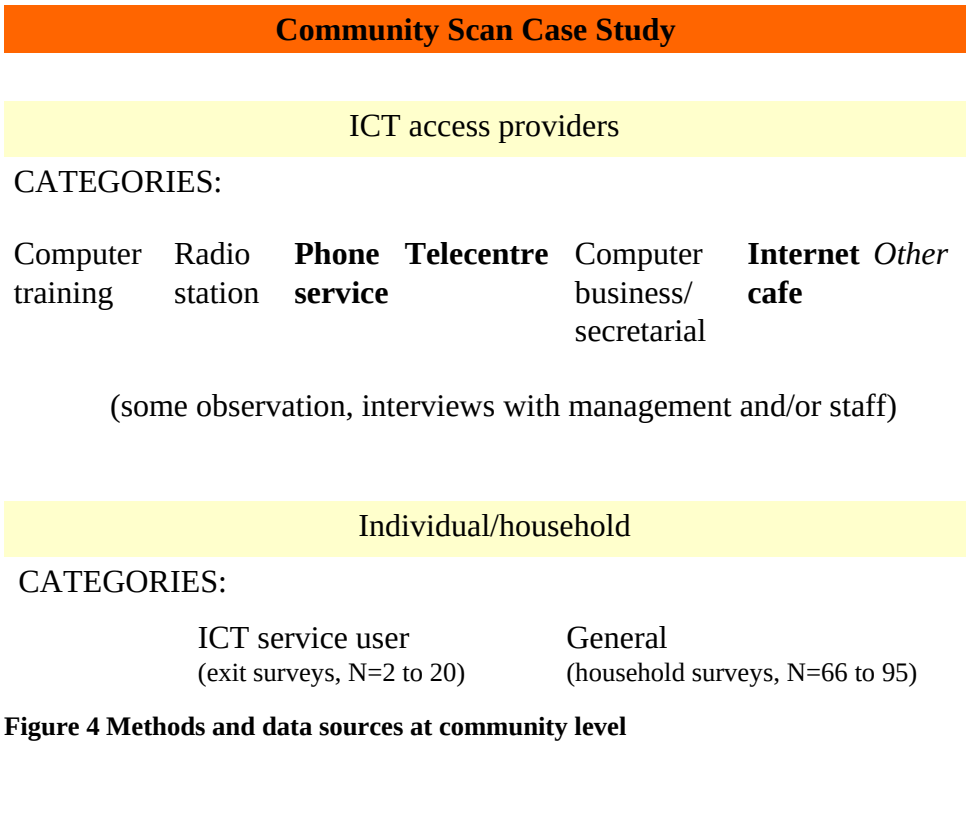

Figure 4 Methods and data sources at community level

4. Initial Findings

i) Universal Access: What it means and is intended to achieve as stated by policy and leaders in this area

Access, at minimum, refers to proximity to physical services. For example, South Africa defines the target for universal telephone access as everyone within a twenty-minute walk of a public telephone. Uganda defines it as a minimum number of public telephones in each district.

The relatively new presence of the Internet has raised the bar on access standards, so that access to "Plain Old Telephone Services" or POTS is no longer considered to be a sufficient goal by either the South African or the Ugandan government, although it may still be a reasonable interim goal. Both governments claim that they want their populaces to be able to fully participate in the new global information society, and each wants to use new ICTs to become more competitive as a nation.

A number of academic and other observers have noted that effective access includes more than physical access. Even if a telephone is next door, for example, if using it is too expensive, or one does not know how to use it, or even that it is available, it is not really accessible. Official government access policies do not address these issues fully, although some acknowledgement of training needs is sometimes made.

The South African government was one of the first in Africa to have an ICT policy in place and has put a lot of emphasis on using ICTs to further development in the country. In particular, it has focused on addressing historical inequities in infrastructure, whereby white and urban populations have much higher access to telecommunications services than black and rural populations. It has also seen ICTs as a tool in addressing other inequities, especially in improving government service delivery, focusing in black townships and rural areas. ICTs are also seen as a tool in increasing government transparency and accountability, and in fostering a participatory democracy. Basic access goals that focus on telephony should be strategically extended to include the Internet, as reflected in the Universal Service Act. The government has also put a lot of emphasis on looking at the implications of convergence. The government also sees the ICT sector as a strategic area in which to invest for the growth of the economy, especially as South Africa already enjoys a large comparative advantage on the continent, being the most wired nation in Africa.

The Ugandan government has an ICT policy that was still in the process of being passed in cabinet at the time of my field research. The Ugandan Communications Commission (UCC) is responsible for regulating the sector and implementing policy goals. Besides providing basic telephone service in each district, government priority is on the ICT sector as a strategic sector for improving the national economy and making the nation more competitive within the region.

ii) Describing what forms universal access has taken

My research focused on publicly accessible ICT services. The household survey also captured information on personal ownership, which was generally high for radio (well over 50% and sometimes over 90%), variable for telephone depending on the location, variable for television, and extremely low in all cases for computer ownership.

One of the most salient distinctions between various types of access centres is that between market-based and funded telecentres. The first are those that are driven by market forces and are either franchises or independent ventures by locals. The second are those that are initiated and subsidized, at least in the beginning, by an outside source, either a development agency or government. There are some that fall in the middle. Most notably, South Africa's thousands of Vodacom containers appear to be mainly market-driven, since they are franchised by Vodacom and purchased by local entrepreneurs. However, Vodacom initiated these as part of its licensing requirements and runs them from its Community Services Department. Thus, it claims no profit motive in promoting the containers, although it appears to have minimized costs for itself and provided effective service.

Speaking in terms of the general distinction between market-driven and funded access centres, there are a few general differences that can be observed. These include:

- Telecentres etc. *appear* to have a higher failure rate
- Market-based initiatives spread quickly once demand is perceived
- Little innovation in most market-based initiatives and very mixed capacity on part of managers
- Both tend to mimic each other in service and prices
- Market-based generally have a higher degree of local control in management
- In most cases, local awareness and capacity is a limiting factor: amongst owners, staff and potential clients

Amongst those initiatives that were funded, they appeared to be more successful (in terms of obtaining basic functionality and meeting their own objectives) when they were embedded in existing structures. Two examples are the World Link School Based Telecentres and RANET sites hosted at World Vision Area Offices. Both of these are based in Uganda. While neither of these were without their problems and challenges, they appeared to have managed to achieve some level of success, and to have the capacity to face the problems they had.

iii) The implications of these forms for development and associated impacts

The implications for development differed with context and local priorities. Khayelitsha was an example where relatively little access to computers, and especially the Internet, existed within the township and where such sites did exist, they appeared underutilized. Thus it appears that the potential that ICTs might hold for development remains largely untapped. The final analysis will attempt to suggest why these ICTs haven't had a larger impact on Khayelitsha, although cell phone ownership at one third of the population, is quite impressive and public phones are also ubiquitous. It is a large urban area and of the communities under study, was the most wealthy.

At the other extreme was Lira. The villages surrounding the town were amongst the very poorest included in this study. Within the town itself, cybercafes, local FM radio stations, computer training and phone businesses were all present and active. While the presence of computers and the Internet has yet to have any immediate impact on the lives of most residents, who are still largely unaware of what these are, they have proven of immediate use to certain professions, and especially journalists. Presenters at the FM stations use the Internet cafes to surf for international news, while journalists from the south e-mail their stories down to

Kampala. The rapidity and recency with which these new services have entered Lira mean that it is too early to say what kind of effect they might have on this previously isolated region, but interesting to watch for. One of the reasons that public access centres play this role is because there are no other options: in areas where services have been available for longer, most major organizations and larger businesses are likely to acquire computers, even if personal ownership remains low.

There are some observations that appear to cut across contexts. One is that ICTs in general offer local entrepreneurial and job creation possibilities, and these are generally considered to be of high interest by business-minded segments of the population. However, they also appear to be quite high risk, with a high turnover and many new enterprises reporting no profits and even losses. Acquiring capital for such endeavours is also a challenge, and most people take personal loans, use their savings, offset costs with profits from another business they already own, and often start small and try to build their business over time. Bank loans were not very popular, likely due to high interest rates.

Another cross-cutting observation is that telephone is used with greatest frequency for contacting family, and to a lesser degree, friends. Because of costs, most phone calls are quite short, most often less than ten minutes. While Internet has much lower prevalence, where it exists, e-mail is the most popular application by far. E-mail is used in most instances for social reasons - either keeping in touch with family and friends abroad or making new pen friends. In Khayelitsha, sending in job applications was a common use of e-mail.

Another observation is striking across all contexts, and common to both users and non-users of computers, where non-users have some level of awareness. While knowledge of how to use computers is low, it is seen as valuable specifically for entering the formal job market, and most frequently, seeking employment in office jobs. This implies movement towards urban hubs where such employment is more likely to be found, and a greater class divide, as only those with high school education or greater are eligible for these types of positions. Thus, insofar as this is perceived to be the greatest opportunity offered by computers, it is an opportunity only available to those who are already comparatively better off. Computer training courses are also very uniform across contexts, even across the two countries, and focus almost exclusively on learning different software packages, most popularly the MS Office suite.

In contrast to centres that provide access without being driven by a particular application or purpose are those initiatives that attempt to use ICTs as a means to an end, and often target a more specific segment of the population. While relatively fewer of these were included in this study, they appeared to be more effective in both reaching segments of the population otherwise unlikely to use ICTs, and to achieve results more directly related to development. The best example of this is RANET, which was focused on delivering seasonal weather forecasts to farmers to help them to plan their planting and harvesting. School-based initiatives also fit into this category to some degree, since they focus primarily on students and educational applications. However, from my observations they had a limited reach in practice. This is because they tended to be placed in the better equipped schools. This was partially a matter of necessity, since these schools had necessary infrastructure such as electricity, and also because of the relatively greater political pull such institutions have.

Finally, some generalizations can also be made about the implementation of funded centres. To flourish, these projects appeared to require a strong degree of local control coupled with strong ongoing external support and good communication between the two elements.

Especially in deciding implementation details, those who made decisions externally were likely to make assumptions that did not hold under local conditions.

iv) How to best support these access initiatives for optimal impacts?

Based on the observations above, it is possible to make some initial comments regarding how national and international actors can behave to support access initiatives in achieving optimal developmental impacts. These are:

- Universal access must be linked to universal education policy: because taking advantage of new formal job opportunities requires formal education plus computer training.
- Effective liberalization appears to make a big difference in terms of the spread of the technology, both in terms of the variety of options and affordability. This is based on the relatively greater liberalization of the market in Uganda compared to South Africa. Despite being a poorer country, the communities in Uganda had towns where many more computer and Internet services were available than in the huge township of Khayelitsha.
- For “scaled up” access: private sector local entrepreneurs appear to be effective in implementing basic and fairly reliable access services, although they do not venture into "value added" development related activities. The sector also widely perceived as desirable. This has the added benefit of "cheap" local job creation.
- Locals know how to implement locally. Outsiders making implementation decisions are more liable to make mistakes based on lack of contextual knowledge.
- Technical training and capital loans are barriers for entrepreneurial activities.
- For ongoing, effective, locally responsive access services, not-for-profits and government don’t do well.

Areas for direct public sector and/or donor intervention:

- Policy that helps to set a vision and focus disparate private initiatives,
- Experimentation for optimal social use (and dissemination of the results),
- Support networking amongst local initiatives nationally and regionally,
- Content development on priority areas and dissemination (via public-private partnerships),
- Training and support to small entrepreneurs: or encourage large service providers to do this. (This could be a part of their licensing requirements.)