

GLOBAL
IMPACT STUDY
 OF PUBLIC ACCESS TO INFORMATION & COMMUNICATION TECHNOLOGY

In-Depth Study Proposal Coversheet

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| Date: 13 August 2010 |
| Title of Study: Public Access, Private Phone: the Interplay of Shared Access and the Mobile Internet for teenage PAV users in Cape Town. |
| Submitted by: Jonathan Donner, Researcher, Microsoft Research India Marion Walton, Senior Lecturer, University of Cape Town |
| Researcher Contact Information: Name, address, email and telephone numbers of the <u>primary contact person</u> for this proposal Marion Walton, Centre for Film & Media Studies, Arts Block, Upper Campus, UCT, Rondebosch 7701 South Africa +27 (0)21 650 3373 marion.walton@uct.ac.za |
| Hosting Institution: Theresa Tomlinson, Faculty Finance Office, University of Cape Town, ttomlins@humanities.uct.ac.za UCT Finance Department, Room 308, Bremner Building Middle Campus, UCT, Rondebosch 7701 South Africa |

Abstract (summarize the proposed study in no more than 150 words)

We propose a study to assess and describe the interplay between public PC-based internet access and private mobile-based access for urban teenaged PAV users in Cape Town. Our working model suggests that we can assess various functions and uses of mobile internet and the public PC internet as copresent, competitive, or complementary. We would speak only to current users of shared access facilities, focusing on how individuals take advantage of both channels in strategic ways, as part of an ever-more-powerful communications repertoire. We would mix a survey with some open-ended interviews of both users and PAV operators. The outcomes would include recommendations about how operators of shared access facilities could maximize opportunities for complementarities with private mobile internet access, in alignment with the pro-social and pro-development goals of the public access movement. If the Global Impact Study wants to generate a clearer picture of this new and very significant shift in the accessibility of the internet to traditional PAV users, this is a perfect chance to do it – and South Africa is a particularly fruitful ‘leading edge’ environment to do this work.

Proposal

Section I: Research Participants

[Please attach resumes for all research participants named in this section]

Principal Investigator (the main contact person for this study)

Name: Marion Walton, Senior Lecturer

Email: marion.walton@uct.ac.za

Co-Principal Investigator(s) (*other lead researchers*)

Name:

Jonathan Donner, Researcher, Technology for Emerging Markets Group, Microsoft Research India

jodnner@microsoft.com

Other key personnel

Role: Translator/Ethnographer/Interviewer TBD

Name:

Address:

Email:

Telephone:

Section II: Research Questions and Study Justification

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| <p>A. The Global Impact Study has six areas of research interest. Which of them does the proposed study address?</p> <p>(1) Reach of Public Access ICTs (2) Usage of Public Access ICTs (3) Physical Design and Location of Public Access ICTs (4) Public Access Venue Services and Operations (5) Information Ecologies (6) Policy and Regulatory Context</p> |
| <p>(2) Usage of Public Access ICTs (4) Public Access Venue Services and Operations (5) Information Ecologies</p> |

| B. What are the specific research questions for this study? | | | | |
|--|--------|---------|-------|------------|
| | User | | | Operator |
| | survey | Openend | Tasks | Interviews |
| 1. How do social networks, affinity groups, and communities of practice mediate mobile and PAV use to potential users? With what consequences? (for levels and patterns of PAV use, and for relative impact for users) | ✓ | ✓ | | ✓ |
| 2.1. What are the ways in which users combine and balance private mobile internet use and PAV internet use in a communications repertoire? With what consequences? (for levels and patterns of PAV use, and for relative impact for users) | ✓ | ✓ | | ✓ |
| 2.2. Can we contrast collocated use (using the phone while at the PAV) and <i>separate</i> use (using the phone outside of the PAV – which could still be complementary) | ✓ | ✓ | | ✓ |
| 2.3. Can we identify particular patterns of attrition (withdrawal/substitution from PAVs towards mobiles); of attraction (seeking PAV services after mobile use) and of complementarities? With what consequences? (for levels and patterns of PAV use, and for relative impact for users) | ✓ | ✓ | | ✓ |
| 3. Which complementarities (and substitutions) are associated with higher levels of satisfaction with PAVs, and/or with socioeconomic/developmental impact for young PAV users? | ✓ | ✓ | | ✓ |
| 4. How do non-profit PAV owners deal with the increasing availability of mobile internet? What practices do they describe, and what policies do they apply in their venues? Specifically with teenaged PAV users? | | ✓ | ✓ | |

| C. What are the hypotheses? | | | | |
|---|--------|---------|-------|------------|
| | User | | | Operator |
| | survey | Openend | Tasks | Interviews |
| 1.1. User choices to configure PAV+mobile use will be influenced by their prior participation in formal educational contexts, and by the informal communities of practice and peer networks where they are learning to use devices and digital media. | ✓ | ✓ | ✓ | |
| 1.2. Teen social networks will primarily mediate mobile-centric practices, while their involvement in communities of practice and interest-based affinity groups will mediate and motivate their PAV use. | ✓ | ✓ | ✓ | |

| | | | | |
|--|---|---|---|---|
| 2. Among users with higher-functionality handsets and social involvement with computer-using communities, both threats of substitution and opportunities for complementarities increase. In baseline condition of low-capability mobiles, most of the behaviors will be copresent rather than substitutive or complementary | ✓ | ✓ | | |
| 3.1 Users are designing new and mobile-centric strategies and scripts to solve problems, but they will still struggle with certain kinds of tasks, particularly the informational/educational tasks which require a shift in their usual mode of participation (and which are associated with social inclusion and upward mobility). | ✓ | ✓ | ✓ | |
| 3.2 Many kinds of entertainment and social networking activities would be taking place on mobile phones, because mobile internet allows convenience and frequency of use and is associated with participation in peer networks | | ✓ | ✓ | |
| 4. Non-profit PAV owners are slow to identify and nurture potential complementarities. Understanding the kinds of tasks where teens currently struggle, will allow us to make recommendations about how PAVs should be adapting so that they continue to provide free access for resource-intensive tasks, and to enroll mobile-centric teens in socially inclusive forms of participation | | | | ✓ |

D. What is the theoretical justification/rationale for this study?

We focus on the mobile internet, rather than on the mobile phone more broadly, for three reasons: 1) mobile internet is a sharper, more powerful potential substitute for the PAV than a voice call or even an SMS. This is not to say that an exploration of SMS use would not reveal interesting and important complementarities and substitutions. Rather, it is a way to (2) narrow the theoretical focus of the inquiry to a distinct and increasingly widespread set of sub features of the ‘mobile phone’. (3) South Africa is a unique and fruitful place to pursue this research.

In a population of 49 million people, ITU estimates suggest there are 4 million internet users (not subscribers), but over 45 million mobile subscriptions. A comparably reliable estimate of how many of those 45 million phones are data-ready and data-using is not available. However, MXit, a Java-based GPRS “internet-lite” chat application boasts over 10 million users in South Africa, and market research in urban areas suggests that there may be 9 million unique users of the GPRS data channel. An earlier study by Kreutzer (2009) found that a majority of grade-11 teenagers in low-income township schools in Cape Town were using their mobiles to access the internet (for web browsing or for chat and instant messaging) on an average day.

In the same way that the browser is not the exclusive means of accessing “the internet” in a PAV, the boundaries of what constitutes an “internet experience” on a feature phone are not clear. Access modes range from accessing WAP sites in mini-browsers, to running enclosed applications such as MXit or a twitter client, to downloading premium content or games from operator websites.

Thus “mobile centric” internet use (Gitau, Marsden, & Donner, 2010) is a reality in South Africa, even if the details of that use remain difficult to sketch without future data—like the kind this study would generate.

We acknowledge that South Africa is a special case. However, the patterns and trends we identify in 2010 in South Africa may manifest themselves in 2012 in India, in 2014 in Nigeria, etc. We can build generalizable theory from this-leading edge case. That said, China might already be seeing the emergence of mobile centric internet use.

Wallis (Wallis, 2009), for example, notes that resourced constrained female urban migrants have begun to eschew gendered, noisy, smoky cybercafés for the control and calm of their handsets, in order to engage with QQ mobile, (China’s Facebook).

The implications of this rise of a private, accessible, but not-optimal “mobile internet” for the role and utility of PAVs are clearly significant (Kolko, Rose & Johnson 2007). However, to our knowledge, no studies have addressed the interplay between or amongst these forms of access in a sufficiently systematic way; no one had plumbed the strategic choices made by users who are now confronted with a potential repertoire (Haddon & Vincent, 2005; Licoppe, 2004; Nardi & O’Day, 1999)of access choices.

The three frames we propose to frame this repertoire of internet access are *copresent*, *competitive*, and *complementary*. The middle category in the trichotomy can all be expressed as the absence of both substitutive and complimentary properties. In other words, we can re-cast the trichotomy as two binary variables: Which features and functions of the mobile internet are substitutes for PAV use? And which (if any) are complements to PAV use? (Chaffee, 1982).We reserve “complementary” for active, positive amplifications of overall utility and development impact, not just coexistence in a repertoire.

The table below illustrates the overarching research questions (and potential implications for Public Access Facilities) emerging from various levels of substitution and/or complementarity. Note that this is a simplification, since, in practice, the same handset can offer substitutive value via some features, while offering complementary value in others. We will use this table as a heuristic to inform the identification of clusters and patterns of behaviors according to goals and purposes, rather than around the technical artifacts themselves.

| | Private mobile internet use as.... | | |
|--------------------------------------|--|--|--|
| | ...a substitute for Public Access Facility Use | ... copresent with Public Access Facility Use | ... complementary to Public Access Facility Use |
| Overall summary | Current Public Access users stop coming, rely on mobile; other potential PA users never elect to walk through the door | Reconfiguration of ICT repertoire, some tasks to mobile internet, some to PAV. Few linkages or synergies between the platforms | Good news! An augmentation of utility and use of Public ICT access |
| Macro implications for PAVs | Shrinking community/utility | Changing role for PAVs, requiring the reconfiguration of the array of services on offer | Positive impacts of private mobile use are not necessarily reflected in “more hours in more PAV seats”, but PAV users would report higher satisfaction with PAV experience and/or experience a beneficial development impact due to enhanced, interconnected ICT repertoire. New users drawn to PAV |
| Sub question: mobile-first community | Mobile-first users who elect not to begin visiting PAVs | Mobile first users arrive at PAV with different needs and expectations than non mobile-users | Mobile first users who are actively, identifiably drawn to PAVs due to mobile use; with different needs and expectations than non-mobile users |

We include a set of sub questions specific to the “mobile first’ sub community – those whose first contact with the internet was via the mobile, as opposed to via a PC. We expect that these “mobile first” users will bring different literacies and expectations (and frustrations) to the PAV venues, and hope to use both qualitative and quantitative means to explore this subset of users.

Media convergence is partly a cultural phenomenon (Jenkins, 2006) since it takes place as people engage in social contexts which assist and motivate them to use converged media platforms. For example, these social contexts may include: teen friendship networks which move to digital social networks such as MXit or Facebook, or which value the sharing of digital photos and hiphop music; school assignments which require research and printing for projects; or job application letters and CVs; as well as television or radio advertisements and competitions which encourage consumers to visit company websites). People do not all engage in these contexts and thus do not experience media convergence in the same way. For example, some women experience discomfort in certain kinds of gaming-focused cyber-cafes, monolinguals may be less comfortable with English PC interfaces, etc.)

We conceptualize the ‘impact’ of PAVs as a shift in participation genres (see Ito et al. 2010) and socio-technical networks (Latour, 2005) for teen PAV users, with a resultant potential change in agency. Rather than a neutral intermediary which acts predictably to bridge the digital divide, mobile internet is an alternative ‘mediator’ which introduces new dynamics and requires the enrolment of new networks of technologies, semiotic resources, and interpersonal learning relationships.

Consequently this study will look for narratives of learning and change among mobile-centric PAV users in relation to their participation practices and internet use.

Teens’ effectiveness and efficiency will be measured (i) in achieving the information-related goals they set for themselves visiting the PAV and (ii) in completing a set of web-based tasks (Hargittai, 2002) under different conditions of device use and sharing. We will explore differences in effectiveness and efficiency in “PAV only” and “PAV plus mobile internet” conditions.

We will identify to what extent configurations of mobile internet and PAV use feature in narratives of change in teens’ genres and trajectories of learning, and how these might entail new discourses and identities for them. While we will focus on the forms of participation that are of interest to the Global Impact study (e.g. finding information about a university via MXit, using computers to produce school assignments), we will also include non-instrumental participation (e.g. hip hop music as a form of political and civic expression, sex talk in peer networks as a way of learning about HIV/Aids).

Finally we will ask teen PAV users to use stories and before and after diagrams to depict changes in their networks and enrolments as a result of mobile internet and PAV use. These would encompass changes in user participation in peer, kinship, organizational, consumer, activist and citizen networks (which may include communities of practice and affinity spaces), but would also need to address how they enroll social, physical and symbolic resources in their own networks. Discussions will not only focus on how users are making new connections, but will also identify to what extent users are ‘routing around’ obstacles or unwanted enrolments and discarding less valued connections.

E. Which public access stakeholders (e.g., governments, donor agencies, users) could benefit from the findings and other outputs of the study (e.g. research reports, survey instruments, software)?

Please note research outputs that would be particularly relevant to the library community.

One goal is to not just to assess but also to reframe or reduce the notion of mobiles and the mobile internet as “threat” to PAVs or to libraries. Our work will emphasize and raise ideas around *complementarities* which are important for actors who tend to focus first on PAV policy and design. There is no such singular concept as a “a

mobile phone” – rather a set of overlapping features, functions, and practices, some of which can support the evolving mission of libraries and PAVs. If we help disaggregate the thinking around these ubiquitous new arrivals in the landscape, that will be helpful.

Additionally, this can result in recommendations on how PAV operators can leverage the mobile internet to better serve their user communities.

F. Does this study overlap with or complement other in-depth studies in the Global Impact Study? How?

Our study has strong links to three of the other in-depth studies:

The role of infomediaries is both complicated and enhanced by private mobile internet use. It is possible that as individuals become more able to access some internet resources on their own, the value and differentiator of the PAVs may increasingly include the kinds of participation which they scaffold or those who can assist those who find private mobile access too difficult. Thus interviews and surveys will investigate the value of empathy and skills of PAV operators and other infomediaries.

The mobiles study will explore complications of sharing in multi venue, multi device settings. As in the case of the the collaborative knowledge sharing study, PAV users’ effectiveness and efficiency on a series of four tasks will be measured, and we will track (although not specifically vary) sharing activities during the tasks.

And, most importantly, there are bound to be linkages to the non-instrumental use study. The primary drivers of private mobile internet use in South Africa are self-expression, social networking, chat, and entertainment. There are ways to leverage the private mobile for instrumental means (job search, health information, etc.) but in practical and symbolic terms, the arrival of a private, personal, non-instrumental internet via the mobile will have to be factored in to how we understand instrumental I and non-instrumental use in PAVs.

Section III: Methodology

A. In which countries will this study take place?

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| Country: | Local research partner (if applicable): |
| South Africa (see rationale above in section II - D) | |

B. Methods

What methods will be employed? What types of primary data will be collected? What types of secondary data (if any) will be incorporated into the study?

1. **In depth, exploratory qualitative interviews** with current PAV Youth Users at three urban sites, focusing on (a) the ICT repertoire, mixing public PC and private mobile internet use and (b) the role of pre-exposure to the mobile internet in the current utilization of PAV.
2. **Task analysis** will be conducted with a sub-group of the users sampled for (1), and will include following them with a video camera as they perform (i) their planned information-related activities in the PAV, and then (ii) various instrumentally-focused tasks we request, using a methodology adapted from Hargittai (2002). These observations will be used to elicit learning narratives, which will include timelines indicating the point where PAV and mobile internet were introduced into their repertoires and allow users to explain how they learnt the practices we observed and to explain their importance to them. Finally, ‘before and after’ diagrams will be used to document how their participation in specific social and

learning networks depends on PAV or mobile use. These annotated diagrams will depict how users have enrolled pedagogies of peer culture, formal training, or other significant literacy events and practices.

3. **A detailed survey** of users at each site, with a focus on (a) validating and quantifying trends/issues/patterns found in qualitative exploratory interviews and (b) statistical clustering/association of various mobile and PAV behaviors and attitudes, as well as role of mobile as driver to PAV. Particular care will be taken to use an initial period of ethnographic observation to develop items for the questionnaire which are representative of mobile-centric repertoires of opportunities, and which do not normalize desktop-based opportunities.

In particular we expect to focus on (i) Frequency, number and nature of opportunities for internet use (PAV and mobile phone), including self-reported changes over time in usage patterns and repertoire choices. (ii) Frequency, number and nature of opportunities for other forms of media production and distribution (PAV and mobile phone). This survey will probably be used to assign each respondent into “substitute”, “copresent” or “complementary” meta-category

4. **Semi-structured qualitative phone interviews** with +/- 40 PAV operators in South Africa, focused on identifying patterns of complementarity and most novel/successful innovations in complementarity. Are they taking mobiles/mobile internet into account in any way in making choices about their offerings? Do users approach them with questions or requests related to mobiles? Is there any mobile use in PAVs or around PAVs that is intentionally encouraged by PAV operators?

C. Sampling strategy and sample size

What types of public access venues and user/non-user populations will be included? What sampling methods will be used?

Three sites will be selected in Cape Town, one library, one telecentre, one cybercafe. The interviews with PAV operators may be done via telephone to save money.

Within sites, we will recruit teenaged participants ages 16 - 19 randomly, screening for mobile internet use, and compensating with drawings for airtime or another prize.

If three sites do not yield sufficient survey N (300), we will augment with a 4th site as necessary

All sites will be urban. While we acknowledge that rural access is a major concern of the study, mobile internet behaviors in South Africa are currently found *primarily* in urban areas, making meaningful sampling in rural areas difficult in 2010. For the particular copresent/competitive/complementary framework we are using, we believe a rural:urban replication is unnecessary. However we will include recommendations in the report as to if/how to replicate the study in rural areas.

This study focuses on older teens to identify the roles of PAV and mobile use in educational, cultural and health-related web use and civic involvement. The consequences of PAV use for this particular demographic are particularly important because they confront a range of information-related challenges associated with this transitional point between school and tertiary studies or employment. For practical reasons, we also need to focus on this group because the distinctively youthful character of mobile internet use in South Africa (see Kreutzer, 2009, Bosch, 2008) will allow us to achieve the required sample size in a relatively short time.

D. Impact measurement

i) How will the study assess “impact”? What type(s) and/or level(s) of impact will be measured? What indicators will be used?

ii) The Global Impact Study highlights six areas of impact: employment and income; education; civic engagement; democracy and governmental transparency; culture and language preservation; health). Which of these will the study address and in what ways? If other areas of impact will be examined, please specify which areas.

Fundamentally, the module is about the renegotiation of PAV use in light of increasing private mobile internet use. However, we will scan for evidence of impact of “complementary” MOBILE+PAV use across all 6 highlighted areas of impact, using the user survey and PAV operator and user qualitative interviews. If possible, if we see drops (substitution) of PAV to mobile use we will try to estimate whether such patterns of substitution can be linked to corresponding drops in the impact of PAVs on the 6 areas. Given the age of the participants, we plan to focus the task analysis and internet literacy observations on the areas of education, civic engagement, youth culture and health.

A central issue with the study’s design (only a cross-sectional survey with no longitudinal data other than gleaned from user narratives) relates to the fact that we will not have information about former PAV users who have shifted to mobile-only use, or about mobile-only users who never use PAVs.

Impact claims

Our key strategy will be to identify how PAVs can leverage mobile internet for greater social inclusion of teens in South Africa, and to ask for self-reported impact and a skills test.

This study conceptualizes agency as social involvement and participation. When a school pupil accesses a website for information and pastes it into a document to be printed, he or she is involved in a primary communication project with a teacher (and possibly peers, group members and parents). We see internet users as active participants, engaged in recruiting and maintaining individual socio-technical networks rather than as audiences “accessing” information). So rather than taking an ‘informational’ approach, we will focus on the nature of the audiences developed and artifacts created through participation in mobile-centric internet and PAV use.

This small-scale study cannot address all possible impact-related questions. We do not plan to evaluate whether mobile internet ‘or’ PAV use makes a greater contribution to addressing these needs. We believe this is a false opposition, which sets up a comparison between a particular aspect of a technology and a complex social context. Experimental HCI-type designs which compare PC and mobile use would not get to grips with the social complexity of the PAV. The overall impact of PAV use is also beyond the scope of the study, as there is no control group of non-PAV users. An experimental design would need to manipulate the whole center at once by providing mobile-centric messaging and training and would be too expensive and only quasi-experimental in that it would involve a number of additional uncontrollable variables. Finally, ‘impact’ is related to how individuals as connected to organizations (schools, NGOs, etc) leverage the facilities, rather than only how individuals use them.

The chosen approach will nonetheless allow us to identify the trade-offs that teen PAV users are making between sociality, urgency, resourcing (cost, bandwidth and hardware requirements), task complexity, privacy and convenience. These are the claims that we expect to be able to make:

1. Complementary use of PAVs and mobile phone use will support users’ participation in online affinity spaces, interest-based communities of practice, and in formal educational hierarchies while competitive or mobile-only use supports learning from peer groups. (Assumption – In low income communities, peer groups (strong ties) are less likely to be associated with broader social inclusion, mobility and the weak ties associated with other forms of participation)
2. Among low-income users, free use (such as that in a library) supports more resource-intensive goals (storage space, time, bandwidth) and stable media production while paid use (such as a phone) supports time-sensitive goals and transient media production.
3. Public access supports the development of elite digital literacies associated with hyperlinked media (which requires depth of use and entails significant expenditure), while mobile access supports everyday

social literacies (which require frequency) and ‘delinked’ media use.

4. Trained knowledge workers are needed to encourage online participation in ways that support goals associated with social inclusion and upward mobility for teens. For this reason they also act as gatekeepers to socially valued forms of participation.

E. Cost-benefit analysis

Specify how the study will incorporate cost-benefit analyses – for example, what level of cost information will be collected, from whom (e.g., public access venues, users), what perspectives on costs and benefits will you focus on (e.g., venue management, user, policymaker)?

Note: There will also be project-wide guidance on this topic with a view to have both global standards as well as project-specific flexibility. You may be required to incorporate some common elements in your research design.

At the user level, cost is a key variable in the calculation of utility and decisions to allocate expenditures between PAVs and mobile private internet access. We will explore these extensively in the qualitative interviews, and will include time (opportunity cost) as a form of cost. However a full-blown cost model for individual users is out of the scope of the proposed design.

At the PAV operator level, we can explore the cost dimensions associated with any innovative complementary strategies we uncover. Again this is likely to be qualitative in nature.

F. Gender analysis

Specify how the study will incorporate gender analysis

Some literature suggests that traditionally-observed differences in ICT utilization between men and women do not carry over to the mobile phone (Scott, McKemey, & Batchelor, 2004). There is little evidence either way concerning the use of advanced mobile features such as GPRS/data. We can explore for gender difference in the practices of PAV users, both in qualitative and quantitative analyses.

While South African telecommunications regulations stress gender equity, implementation has fallen far short of officially sanctioned ideals. Existing regulations have not had an envisaged impact on gender, primarily because until very recently policies did not tackle questions of affordability of communications for private use, while government telecentre projects have often been poorly managed and limited in their success. Women and children, particularly women who head households, and women in rural areas are disproportionately represented among the poor (Gillwald, 2001), which in turn loads them with additional burdens such as limited access to education, technical skills, literacy, and English, which makes them less likely to benefit from computers and computer-based internet, and to be subject to severe cost-constraints in their use of mobile telephony (Olatokun, 2008).

The general symbolic meanings of computing and technology as a masculine domain influence use of PAVs (Olatokun, 2008), and these may be intensified in contexts where PAV ecosystems centre around certain kinds of masculine leisure and entertainment media, such as cybercafés for gaming. These and other factors leads to a global pattern of use by which users of PAVs are

young, male, relatively well-educated, of relatively higher socio-economic status, not physically disabled, and have usually had prior access to the Internet at some other location (Sey & Fellows, 2009, p. 10) (Sey, 2008:10)

In a Cape Town study, Chigona and Licker (2008) studied the Smart Cape community internet access project which provided free computers and Internet to disadvantaged residents of Cape Town, and found a significant gendering of the information spaces that were created by this project. In the first place, some centres had low adoption rates

among women and girls, and had to implement specific measures in order to attract women and girls as computer users at all. In the second place, public spaces can be highly gendered, and gendered cultures of use emerged around the computer access points in the libraries, which were often used by men and boys to play games, thus shifting the character of the library environment as a whole.

These gendered meanings do not extend to the use of cellphones, and so this study will have the opportunity to identify whether the cellphones extend women's access to PAVs by allowing them to overcome the spatial gendering of the facilities, or whether this factor alone is not sufficient. At the same time, the study will strive to document how gender inequities may be creeping into cellphone use as cellphones converge with the mobile Internet. For example, MXit company statistics suggest that early adopters of instant messaging are disproportionately male. Moral panics about MXit as an environment stress the dangers that it presents to young women, and the public moral opprobrium towards expressions of youth sexuality associated with MXit use is likely to have more negative ramifications for women, who are subject to local variants of global sexual double standards (A. Chigona & Chigona, 2009). These meanings will be carefully explored in the qualitative aspects of this study. In addition, the sampling for the study may need to control for the fact that women may be under-represented among PAV users because of their heavy load of responsibilities, limited leisure time, and (consequently) a lower inclination to spend time experimenting with new technologies (Rathgeber, 2000).

Just as gender has spatial dimensions, similarly the management of time in the PAVs may also have implications for gender. Time pressures on the use of facilities can increase the gaps between skilled and unskilled users (which often follows gender lines). For example, Chigona and Licker (2008) observed a division of labor between skilled and unskilled users, with schoolgirls often asking schoolboys to do things for them on the computers. The researchers pointed out that such practices are consistent with a general pattern - the homophilous character of diffusion practices can lead to inequitable development, unless counter-measures are adopted (Roman, 2003)

G. Capacity building

How will local research capacity-building be built into the study?

The day-to-day data gathering/interviews/analysis will be done primarily by 1-2 graduate students or grad-student equivalents (post-BA, pre-Ph.D.) These individuals will work with direct and frequent oversight and guidance with Jonathan Donner, an established researcher in the field of ICTD/M4D, and with Marion Walton, with a background in Media Studies.

Section IV: Research Outputs

A. What specific outputs will this study produce (e.g., research reports, publications, questionnaire instruments/tools, software)? *List with descriptions and anticipated delivery dates.*

Reports:

PAV interviews on 'innovative complementarities' (march 2011)

Qualitative user interviews (may 2011)

Task analyses (june 2011)

Quantitative user surveys (aug 2011)

Summary report integrating #1-4, plus recommendations on replications and follow-up studies (Nov 2011)

Handbook for PAV owners (dec 2011)

Practical guidelines with examples of how to integrate mobile and shared access for PAV patrons, with a focus on youth and social inclusion.

Instruments:

2 interview guides (users plus PAV interviews)
1 survey instrument (users)

Publications: (nov-dec 2011)

Journal-quality publication(s) on user level (evidence for substitutions, co-presence, complementarities)
Journal-quality publication(s) on PAV interviews (innovative models of complementarities, or barriers to this if we find none)
Journal-quality publication(s) on HCI implications of task analyses

Open Access Policy

We are happy to work within the parameters of the project's open access policies. We anticipate no problems with making any of the study's instruments and technologies open according to an appropriate creative commons license.

Section V: Work Plan and Timeline

A. What is the expected duration of the study (in months)

12 months

Section VI Bibliography

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