COMMUNITY RADIO, GENDER & ICTS IN WEST AFRICA

HOW WOMEN ARE ENGAGING WITH COMMUNITY RADIO THROUGH MOBILE PHONE TECHNOLOGIES

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EXECUTIVE SUMMARY

This research project, funded by the *Centre for Media and Transitional Societies* (CMTS) of the *Carleton University School of Journalism and Communication*, involves a comparative study across three West African countries (Sierra Leone, Liberia and Guinea) to explore the current intersection between radio, gender and information communication technologies (ICT). The research examines whether recent improvements in radio broadcast coverage and SMS technology are increasing women's access to information and providing them with a platform that adequately meets their needs. The research also tests whether implementing a SMS mobilization program, like FrontlineSMS, can increase women's engagement with local community radio programming.

The findings show that despite cultural and socio economic barriers, women desire to contribute to the national discourse and to their local public sphere. But radio is still male-dominated and too often consigns women's programming to a narrow interpretation of gender issues including marriage, childcare or domestic responsibilities. Women on the air are usually viewed through a traditional model - in the context of their relationship to their husbands or children – and not as individual beings with a broad range of interests and needs. As a result, radio does not currently meet the needs of women, and women do not participate as much as they would normally otherwise be willing to do.

For the latest generation of young women, it has become easier to overcome traditional cultural obstacles as well as to embrace the newest technologies that allow them access to a public platform. However it is still difficult to get ordinary women – of all ages – to come and talk on the radio about their experiences, opinions and interests. This will not change without an increase in women radio presenters and contributors – more women's voices need to be broadcast, and outside of the stereotypical contexts, to encourage greater female ownership in community radio.

This research helps determine the current barriers of women's participation in community radio programming and provides recommendations that can be implemented for a more inclusive and interactive public sphere.

BACKGROUND & JUSTIFICATION

Throughout West Africa, radio is the leading source of information – far outpacing television, newspapers and the internet. It is a sustainable, cost-effective medium able to reach large, illiterate populations in a way that is relevant to local cultures and oral traditions. It is a medium that can give the marginalized a voice, appeal to societal calm and order, and spread credible, useful information.

The power and reach of radio is central to the work of *Search for Common Ground* (SFCG), an international conflict resolution organization operating in West Africa.[1] The medium has helped to open channels of information and dialogue that can effectively mitigate rumours, prevent and resolve conflict, and promote a more inclusive exchange of opinions to help move societies toward security and development.

Community radio[2] can be defined as radio that serves the public interest of a particular geographic group or community. According to *Developing Radio Partners* President Bill Siemering,[3] community radio is unique from other models of radio through its emphasis on: a governing board that reflects the diversity of a community; structures and processes that identify community needs and interests in order to inform programming; the encouragement of broad participation during programming; and independence from outside influences, be they government, commercial, special interests, or religious.[4]

Information and Communications Technologies (ICTs)

Community radio stations in West Africa already play a valuable role in informing public opinion, but have even greater potential to reach their audience as they begin to converge with rapid innovations in information and communications technologies (ICTs), in particular via mobile phones and short message service (SMS).

Mobile phones now represent the most used form of two-way communication over distances and text-messaging via mobile devices has become the most widely-used form of data communication. Africa's poor fixed-line infrastructure, coupled with increasingly low mobile phone costs due to robust competition amongst service providers, has paved the way to the so-called 'mobile revolution.' The rate of mobile phone usage is growing by 50% to 60% a year, faster than anywhere else in the world.[5] Enormous further potential remains, with market penetration standing at little more than 20%.[6]

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[1] Search for Common Ground, http://www.sfcg.org.

[2] Whereas national radio stations focus on the vertical exchange of information – delivering information from a one-to-many position – community radio is based on the horizontal approach of interaction between the radio station and its community. This is best seen in the makeup of the board and staff itself, drawn by representatives of the community and responsive to the diversity of its needs. Additionally, and in contrast to national programming, community radio is more often than not broadcast in the local language of the community itself.

[3] Bill Siemering wrote the original mission for *National Public Radio* and with his staff, developed their first news and information program, *All Things Considered.* He is now president of *Developing Radio Partners*, dedicated to improving the flow of information to those who need it most, in rural areas of developing countries by working alongside the local station staff.

[4] Center for International Media Assistance, National Endowment for Democracy. *Community Radio: Its Impact and Challenges to its Development.* June 2007. Available at http://www.ned.org/cima/CIMA-Community_Radio-Working_Group_Report.pdf.

[5] "2009 African Economic Outlook," page 83. Organisation for Economic Co-operation and Development (OECD), 2009.

[6] Banda, Fackson. Citizen Journalism and Democracy in Africa - An Exploratory Study, page 27. Publication. Grahamstown, South Africa: Highway Africa, 2010. Print. http://www.highwayafrica.com/media/Citizen_Journalism_and_Democracy_Book.pdf

According to Mary Myers, an expert on international media development, "Mobile telephony represents probably the biggest revolution in radio broadcasting since the invention of the transistor. For community radio broadcasters, mobile phones now mean they can communicate with their audiences more easily, elicit a greater quantity and quality of listener participation, create more and better outside broadcasts, send reports from remote places and thus get even closer to their community... mobile telephones are community radio's remote broadcasting units ... [they] cost less than $100 and are so simple to use that community members can become empowered correspondents, commentators and critics."[7]

Indeed, radio stations have begun to harness the power of mobile phones and SMS technology. Listeners call and text-in during radio broadcasts to contribute news, views, stories and feedback. To accept calls, radio station staff simply place the mobile phone up to the microphone, allowing the caller to speak freely on-the-air; for text-messages, presenters read the messages off their phone. By soliciting such feedback, radio station staffs are able to gain insight into the local issues their audience cares about and their listeners are given a voice. SMS is already being used by 83.8% of stations surveyed in a seven-country study across West Africa (Benin, Ghana, Sierra Leone, Burkina Faso, Niger, Senegal, Mali).[8] This new communication channel is redefining the concepts of universal service and, on a limited scale, is serving to democratize the media landscape by empowering individuals otherwise left out of the debate.

Nonetheless, despite these changes in the media landscape in developing countries in recent years – including increased networking, democratization and liberalization, expansion of ICTs and media outlets, increasing interactivity of community-based programming, and the emergence of strong civil society organisations[9] – communication and access to information is still limited to traditional centres of power. The radio landscape in transitioning[10] African societies – Sierra Leone, Guinea and Liberia included – remains largely dominated by men and focused to political urban discourse. Even community radio, with the potential to interact with marginalized groups and rural areas, may be reaching more men than women.

LITERATURE REVIEW

Significant research has been conducted in the field of participatory information and communication technology (ICT), women's access and use of information via mobile phones and community radio in West Africa, including by the *World Bank*, OECD[11], UNDP, CIA, *Plan International*, *Kiwanja*, *Center for International Media Assistance*, and numerous NGOs.[12]

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[7] Myers, Mary. "Voices from Villages: Community Radio in the Developing World," page 33. Center for International Media Assistance, National Endowment for Democracy. April 2011. http://cima.ned.org/publications/voices-villages-community-radio-developing-world.

[8] "Radio and ICT connectivity in West Africa: Connectivity and Use", Panos Institute West Africa, October 2008, available at http://www.cipaco.org/sources/Radio%20and%20ICT%20in%20West%20Africa_light_couv.pdf

[9] "Communication for Empowerment: developing media strategies in support of vulnerable groups. Practical Guidance Note", *UNDP*, March 2006. http://www.undp.org/oslocentre/docs06/Communicationforempowermentfinal.pdf

[10]Transitioning societies are those that are shifting from traditional ways of being organized, or governed, to more modern ways based on notions of representative democracy whereby leaders are considered servants of the people and people are citizens and not subjects.

[11] Organisation for Economic Cooperation and Development (OECD). *2009 African Economic Outlook*. Paris: OECD, 2009.

[12] This review of past research ensures that the current project does not replicate the efforts of previous projects, that it is informed and supported by the data currently available, and that it contributes original research to the ongoing literature.

Projects carried out by the *Gender Research in Africa into ICTs for Empowerment* (GRACE) have concluded that ICTs provide a platform for women's voices to have a greater impact in the shaping of public opinion.[13] Researchers Nancy Hafkin and Nancy Taggart note that ICTs allow isolated women to gain access to information that was not previously made available, thus helping them to become better informed members of society and consequently empowering them to speak up.[14] As the most common usage of mobile phones in developing countries is networking, women are increasingly networking with other women, accelerating the spread of information by word-of-mouth and providing a means to mobilization around issues that can have a direct impact on public opinion and action. In particular, ICTs are allowing traditionally marginalized women's voices to become greater forces in the realm of politics: the improved ability for women to disseminate information about social, economic, and environmental conditions and needs in their communities can take women out of a passive role and transform it into an active one. Armed with greater information, and in conjunction with open local governments, they can influence and shape the action of local political actors. ICTs thus have the potential to inform marginalized groups, like women, and equip them to participate more fully in political processes.

> *"Information is power. It can generate positive social change, in particular building the confidence and status of marginalized groups such as women, children and the young. The combination of this inherent value of information with the adaptability which young people show with new technology gives ICTs real power to improve their lives."*
>
> *- David Souter, "The Case for Communications" (PLAN International)*

Despite this potential, however, research has also shown that women are more likely to be passive receivers of technology than producers of it.[15] This creates the risk of women's needs, interests, and priorities being disregarded by the male-dominated media production structures. Thus, prioritizing women's direct role in media production is crucial, as media produced by women is more likely to empower women. The increased presence of women's voices would represent an important ideological shift away from a biased male-centric focus to a more balanced society, in which the voices of both genders are given a platform to be heard.

Women's Media Habits in Sierra Leone, Liberia and Guinea

According to a joint *BBC World Service* and SFCG study on media consumption habits in Sierra Leone, men are more likely than women to own or have access to radio and to listen more frequently.[16] The extensive "2010 Media Use Survey" by the *Hirondelle Foundation* also provides important baseline data on radio listenership, finding that radio is by far the most important source of information in Sierra Leone in terms of access, consumption and reputation for reliability.[17] Furthermore, while radio reach and listenership is increasing, men are still more likely to listen. In terms of ICTs and audience participation, 78% of all radio listeners said they listen to programs involving call-ins and/or text-

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[13] Macueve, Gertrudes et al. "Women's Use of Information and Communication Technologies in Mozambique " 2009.

[14] See Hafkin, Nancy and Taggart, Nancy. *Gender, Information Technology and Developing Countries: An Analytic Study.* Washington D.C.: USAID, June 2001.

[15] Hafkin and Taggart, p. 19.

[16] BBC World Service Trust and Search for Common Ground. Media Use and Attitudes Towards Media in Sierra Leone. June 2007. Available at http://downloads.bbc.co.uk/worldservice/trust/pdf/media_report_2007.pdf. Last accessed 7 February 2011.

[17] Hirondelle Foundation. 2010 Media Use Survey - Sierra Leone. July 2010. Available at http://www.cottontreenews.com/images/stories/documents/media-use-survey.pdf. Last accessed 7 February 2011.

messaging and 19% of radio listeners said they had taken part or attempted to take part. The most common reasons given for non-participation were the cost of calls and texts and lack of access to a mobile phone. However, as mobile ownership is increasing rapidly, this is less likely to be a future barrier.

In 2009, SFCG evaluated the community radio landscape in Sierra Leone and Liberia, finding that while community radio continued to play a strong role in local peacebuilding and development initiatives, there was significant unmet potential for increased quantity and quality of programming tailored to marginalized populations, particularly with women and youth.[18] In Liberia, the findings showed that listeners, especially female listeners, preferred to hear women's voices on the radio. In addition, 30% of survey participants regularly called interactive programmes, with another 50% doing so occasionally, while 20% regularly used text messaging during interactive broadcasts, and only 38% occasionally.

Statistics on Guinea's radio landscape are harder to determine as media freedom and liberalization in Guinea lags behind its neighbours. According to *Freedom House*'s annual reports on press freedom, Guinea has been ranked in the lowest "Not free" category for the last decade, compared to "Partly Free" for Sierra Leone.[19] Until the death of Lansana Conte in 2008, there were extremely restrictive laws to allow media censorship. In the final years of his regime he allowed the emergence of private stations, in addition to the state-controlled station. However, under Dadis Camara's rule from 2008 to 2009, private radio and print outlets were harassed and threatened by the government and several radio journalists were intimidated, attacked and arrested. While radio is still the most important news medium – with one state-owned radio station, 21 private stations operating mostly in urban areas, and 12 rural and community stations – there is not as much known about listenership habits in Guinea, as compared to Sierra Leone and Liberia.

The literature review underscores that radio is indeed a powerful tool but has yet to realize its full potential in terms of furthering the participation of women in transitional societies across Africa. The findings suggest that if research were to be conducted focusing on women – surveys, focus groups, and training with ICT technology to increase interaction – with the resulting recommendations implemented, the potential for improvements in women's radio programming, and thus empowerment, would be significant.

SCOPE & OBJECTIVES

Community radio can play a key role in empowering local communities and, in particular, vulnerable or marginalized groups by presenting these groups with a two-way communication channel to receive information and to voice their specific concerns. However, despite the attention focused on community radio, it does not yet appear to be sufficiently oriented so as to reflect and respond to the genuine communication needs of women.

Notwithstanding, the participation and engagement of women in community radio is key on several fronts. Achieving human development means empowering individuals with the capacity to live fulfilling and wilful lives. Community radio has the potential to provide this opportunity by granting women a

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[18] "An Assessment of the Role of Community Radio in Peacebuilding and Development: Case Studies in Liberia and Sierra Leone," Search for Common Ground. July 2009.
http://www.sfcg.org/programmes/sierra/pdf/New%20Community%20Radio%20Assessment%20FINAL.pdf
[19] Freedom House. Freedom of the Press 2010. Last accessed 7 July 2011.
http://www.freedomhouse.org/template.cfm?page=16.

channel through which to access information on the issues that concern them, a *voice* to air their perspectives in the public domain, and *space* for dialogue and debate.[20] Women are not yet fully included in this process, and community radio provides an unprecedented opportunity to empower and ensure that they can genuinely participate in the processes that affect their lives and their communities.

Encouraging the adoption of recent advances in ICTs can likely play a role in promoting these social outcomes. FrontlineSMS, a free open-source software, facilitates the ability of radio stations to engage their audiences by managing calls and text messages sent during radio programming.[21] Despite valid concerns of literacy – a proven obstacle for women's access and use with ICTs – there is room for such tools to increase women's interactivity with community radio programming, and in the process, better influence programming to meet their needs. This research aims to determine and provide recommendations concerning any ongoing barriers preventing such development.

Key Research Questions

1) **Listenership**: Is community radio station programming taking into account women's preferences and improving their access to information?
2) **Participation**: Are the increasingly popular methods of interactive radio broadcasting—including text-messaging and call-ins— sufficiently engaging women and providing a platform for information and dialogue that meets their interests?
3) **FrontlineSMS**: Could implementing an SMS mobilization program like Frontline SMS increase women's interaction with radio programming?

Hypotheses

1) Women's particular listening habits and preferences are not being taken into account during community radio programming, including during programs that are meant to specifically-target women listeners;
2) Methods of audience participation – text-messaging and call-ins – are not currently being adopted by women and thus not meeting their needs;
3) Adopting a more interactive form of broadcasting through the use of Frontline SMS could encourage greater participation of women in community radio.

Expected Outcomes

The research findings were expected to:

- Complement existing data on women's listenership habits and preferences;
- Provide data on whether the growing methods of interactive broadcasting—including SMS texts and call-in programs—are adequately engaging women;
- Identify the challenges of women's access to and interaction with radio programming;
- Provide concrete evidence on the value-added of new ICT developments, like Frontline SMS, and help to inform the strategies and approaches used to further women's access to information;

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[20] "Communication for Empowerment: Developing Media Strategies in Support of Vulnerable Groups -- Practical Guidance Note", *UNDP*, March 2006. http://www.undp.org/oslocentre/docs06/Communicationforempowermentfinal.pdf
[21] FrontlineSMS. http://www.frontlinesms.com.

- Provide valuable feedback to the FrontlineSMS development team[22] which is currently improving the current FrontlineSMS user-interface design and building missing functionality ahead of their next product release, FrontlineSMS: Radio, aimed explicitly for radio station use;
- Determine whether SFCG's independent radio programming featuring women and youth voices has had an impact on opening up the airwaves to women, both as listeners and as active participants.

METHODOLOGY

This research project, funded by the *Centre for Media and Transitional Societies* (CMTS) of the *Carleton University School of Journalism and Communication*, involves a comparative study across three West African countries (Sierra Leone, Liberia and Guinea) to explore the current intersection between radio, gender and information communication technologies (ICT). The research examines whether recent improvements in radio broadcast coverage and SMS technology are increasing women's access to information and providing them with a platform that adequately meets their needs. The research also tests whether implementing a SMS mobilization program, like FrontlineSMS, can increase women's engagement with local community radio programming. In sum, tools and methodology were developed to examine women's **listenership**, their **participation** in community radio programming and the effects of **FrontlineSMS** implementation.

Research was carried out in a total of six communities (two each from Sierra Leone, Liberia and Guinea), for a period of six weeks each, according to the following selection criteria:

- Geographically outside the main urban hub of the country (i.e. Freetown in Sierra Leone, Monrovia in Liberia and Conakry in Guinea);
- Proximity to a well-established community radio station with wide coverage in the region (so that both urban and rural populations are able to tune in), regular interactive programming and computer-based in their technology.

Table 1: Selected Communities

Country	Town	Community Radio Station
Liberia	Gbarnga	Radio Gbarnga
	Buchanan	Radio Gbehzohn
Guinea	Mamou	Mamou Rural RadioFM 100.1
	Kindia	Kindia Rural Radio FM 82.8
Sierra Leone	Mile 91	Radio Gbafth FM 91
	Kenema	Eastern Radio

To conduct this study, the following four tools were developed:

1. Women's Surveys
2. Community Radio Staff Questionnaires and Station Observation
3. Focus Groups
4. FrontlineSMS Implementation and Data Collection

Women's Surveys

The target demographic for the surveys was adult women, of any education level, civil status or occupational background. Following previous research convention,[23] women were considered 'adult'

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[22] FrontlineSMS:Radio project. http://frontlinesms.ning.com/forum/topics/frontlinesmsradio-1?groupUrl=media

after the age of 15 years, rather than the legal age of majority (18). This definition allowed the survey to capture the demographic of young students, an important element since young women are more likely to embrace new technologies. To best capture generational disparities, the surveying was weighted to the general population distribution, approximately the same in the three countries: of 'adult' women, 60% are between the ages of 15-35 years old; 40% are 35 years and older. The former group was considered 'younger' women for research purposes, while the latter was considered 'older'.

Each enumerator was tasked with collecting 250 surveys on women's listening habits in her assigned community over the course of fifteen days, using the purposive method. This meant deliberately seeking out the required women (60% younger, 40% older) in places where they were likely to be found: markets, health centres, salons, schools, etc. In some cases, enumerators even visited private homes. An element of randomisation was introduced by selecting for interview every second woman who fulfilled the criteria. Efforts were made to obtain a reasonably representative sample, by surveying both rural and urban areas. Though it was not always possible to question women on their own (especially in markets), as far as was possible, each interviewee was isolated, both so that other women would not interfere and so that they would not listen in and thus be influenced when it came to their turn to answer.

Table 2: Total Female Population Surveyed

Country	Total sample size	Younger women		Older women	
		Number	%	Number	%
Sierra Leone	535	323	60.5	212	39.6
Liberia	600	359	59.8	241	40.2
Guinea	518	312	60.2	206	39.8
TOTAL	**1653**	**994**	**60.13**	**659**	**39.87**

Community Radio Staff Questionnaires and Station Observation

Researchers conducted two separate interviews at the community radio station in each community, one with the radio station manager and one with the presenter of women's preferred programming, to explore their qualitative level of "buy in" and commitment to addressing women's needs.

The questionnaires provided basic identifying information of the radio station, a baseline of their in-house procedures before implementing the FrontlineSMS trials, and a look into their assumptions concerning women listenership/interaction that could later be compared against the research (women's surveys, focus groups, FrontlineSMS implementation and data collection). As a complement, the researchers observed the radio station's interactive programming to gain an overall understanding of the general quality of broadcasts.

Focus Groups

Consolidating the results from the women's surveys, researchers probed for a deeper, qualitative understanding of the way in which women are using community radio, their degree of use and ease with mobile phones, and the barriers to participation they face during interactive programming.

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[23] See, for example The Hirondelle Foundation 2010 Media Use Survey.

Researchers sought to include a broad range of socio-economic levels among the focus group participants using purposive sampling to ask for participation and, whenever possible, were assisted by the radio station manager and staff to identify women leaders. In particular, a variety of focus group sessions were conducted in each community, including among: younger women (15-35 year olds); older women (36+ year olds); illiterate women; women leaders in the community; and radio station staff.

FrontlineSMS Implementation and Data Collection

For each participating community radio station, the researcher provided a GSM modem and a laptop computer containing the FrontlineSMS software. The equipment remained with the station afterwards, to encourage sustainable development in research practices. Staff were then briefed on how to use the FrontlineSMS software, its benefits and how to troubleshoot the system. FrontlineSMS was then initialized to begin collecting two sets of data, using the software's ability to archive all text-messages received during programming.

For the first three weeks, FrontlineSMS ran quietly in the background to count how many people were texting-in during the most popular program (generally during peak listening hours) and during the most-listened to program identified by women in the surveys. The data was disaggregated for women based on the name of the sender (frequently included in each text-message), with the data being used to determine a baseline figure of women currently using SMS technology.

During the last three weeks of monitoring, some of the advanced features of FrontlineSMS were implemented. Text-messages were sent to all saved contacts in the FrontlineSMS database, to remind listeners to tune into each upcoming women's-preferred program. In addition, a "thank you" reply was automatically sent via SMS to all listeners who texted-in during broadcast so as to demonstrate appreciation and encourage future interactivity. Phone credit was provided out of project expenses to cover the costs of messaging.

After the six-week period, the number text-messages received from women during the first three week period was then compared against the last three week period findings in order to determine whether implementing an SMS mobilization program like Frontline SMS led to an increase in women's interaction with radio programming.

Table 3: Total research conducted

Quantity and Type -->	Frequency -->	Total Research
Minimum of 250 surveys	6 communities	**1500 surveys**
3 weeks of baseline data	6 community radio stations	**18 weeks of data**
3 weeks of follow-up data	6 community radio stations	**18 weeks of data**
1 questionnaire	6 radio station managers	**6 questionnaires**
1 questionnaire	6 radio station presenters	**6 questionnaires**
5 focus group findings	6 communities	**30 findings**

Detailed information on each of these tools, including the actual surveys and questionnaires used, as well as detailed information on FrontlineSMS, can be found under Annex I.

KEY FINDINGS

Though certain urban biases emerged in our survey samples,[24] and while each community radio station demonstrated distinct characteristics,[25] some broad trends from survey results, focus groups and interviews nonetheless emerged.

Listenership

Overall, Sierra Leone had the highest radio listenership rate at 85.8% of those surveyed, followed by Liberia at 81% and Guinea at 73.6%. There were quite significant differences however, both within and between countries. For example, in Sierra Leone, 72% of women surveyed in Mile 91 listened to the radio, compared to 99% in Kenema.

Disaggregating by age yielded no significant differences in listenership between older and younger women in any sample, however. Overall, 80.1% of younger women listened to radio, compared to 80.4% of older women.

Figure 1: Listenership rates among women, by radio station (2011)

Of those women who listen to the radio, virtually 100% listen to community radio. As it is rooted in a local environment, it has far more relevance and interest to listeners than state, urban or international radio stations. The community radio programmes are an important source of information, education and ideas for women listeners in all three countries: 54% of listeners said their favourite programme provided them with these.

The frequency of listening varies between the age groups in different countries. In Liberia, younger women are slightly more likely to listen every day (41%) than older women (38%); in Sierra Leone and Guinea, older women are far more likely to listen every day (57% and 65%, respectively) than younger women (44% and 33%, respectively). This is likely linked to the kind of programming offered: in Liberia, there is a heavier youth orientation, with more entertainment and music-based programming. In Guinea, by contrast, programmes tend to focus on

Figure 2: Listening hours of women, by age (2011)

news, community issues (agriculture, rural life, etc.), development and peacebuilding, all which attract an older audience.

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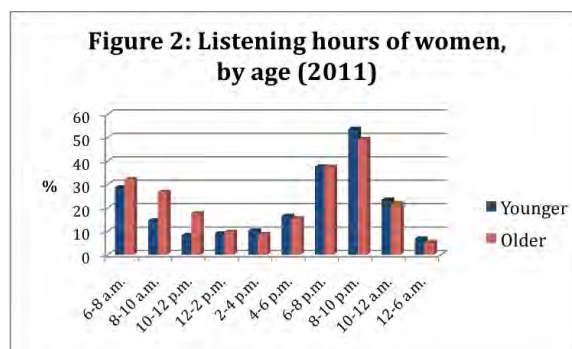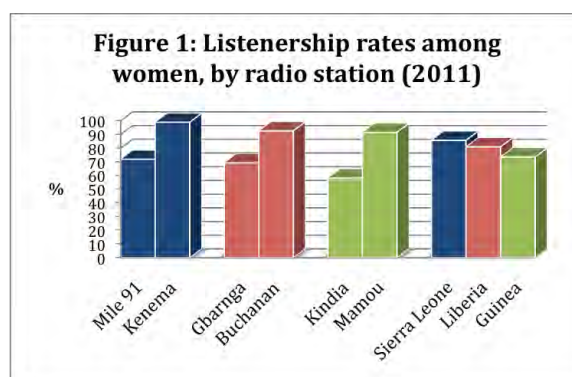
[24] Though efforts were made to conduct surveying in rural areas, as well as the main urban centres, the survey samples revealed an urban bias, as shown, for example, by the higher than average levels of literacy and education compared to national averages.

[25] Radio stations had different broadcast hours (for example, in Guinea, the stations were off throughout the afternoon), different emphasis on local languages (most programming in Liberia was in English; in Sierra Leone, mainly English or Krio; in Guinea, almost entirely in local languages, rather than French), different numbers of interactive programmes, different formats for women's programmes, etc.

Women overwhelming listen to the radio at home (88%), and with company, usually their families, suggesting that radio listening is a shared social experience.

All women, older and younger, generally tune in from 6 p.m., with the most popular timeslot being 8-10 p.m. There is also a significant proportion of older women tuning in between 6-10 a.m. Afternoon hours, when most women are busy, at school, in fields, markets, and other workplaces, are the most unpopular timeslots. The heavy responsibility women bear for ensuring their livelihoods and those of their families is evident in that 63% of women say they listen at certain times because it is the only time they have free (older women are slightly more likely to cite this reason).

When asked what type of programming they would like to hear more of, women's programming was the most popular answer in all three countries. In terms of what is actually listened to, women's programming is also the overall favourite type of programming for both older and younger women. There are variations within this pattern however: in Liberia, women's programming is much more entertainment-based and therefore younger women prefer it to older women. In Sierra Leone, on the other hand, older women prefer women's programming, which is more focused on domestic issues, husband-wife relations, child rearing and education, etc.

Figure 3: Favourite type of radio progamming, by age (2011)
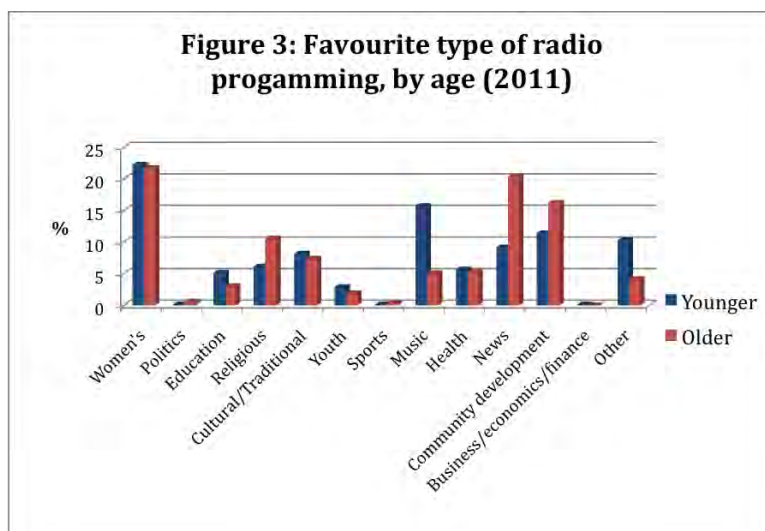
In Guinea, women's programming among both age groups is far less popular than in the other two countries (8.7% compared to the overall average of 22%). In Kindia, the broadcast hour of 10 a.m. on Sunday morning played a key role in the lack of popularity, as even the station staff acknowledged many women listeners had complained that they could not follow the programme during this timeslot. Indeed, when taking only the sample from Mamou (where the women's programme is broadcast in the evenings), the popularity of women's programming rose to 13%, being the second-most favoured, after news.

Women like listening to programmes that inform, educate and deal with the interests and issues that affect their daily livelihoods; women's programming appears the most effective platform to meet these needs. It provides a space for women to express themselves, to participate in public life, educates them on their rights, sensitises them and gives them protection against harmful traditional mindsets.[26] In addition, since listening to radio is a social activity, women and men listen to radio together and thus messages on women's issues reach men, too. Indeed, during focus groups across all three countries, older women testified that listening to the radio with their husbands had led to some degree of

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[26] In Mamou, the radio station offered specific programming on the need to stop the practice of female genital mutilation, despite receiving much criticism and harassment from community, traditional and religious leaders. Indeed, the radio was one of the few institutions openly discussing this deeply-rooted custom and calling for its abolition.

abandonment of traditional mindsets, including domestic violence. "The radio," said one participant "is helping women to become responsible and that is an element of emancipation".

Overall, as figure 3 indicates, while there is a fairly even preference for cultural/traditional and health programming among age groups, younger women are more likely to prefer music, education, youth, and entertainment-based programming. Older women are more likely to favour news, religious and community development programmes.[27]

Almost no women surveyed cited politics or business/economics/finance programmes as their favourite. Yet these are issues that greatly affect women's livelihoods, especially as women are usually a source – if not *the* main source – of income for their households. Paradoxically, having greater access to informed and tailored-programming on economics was cited important for agriculturalists, petty traders and businesswomen, who formed 41% of the sample. For example, in focus groups, market traders raised the point of wanting to hear more on the issue of inflation and the rising cost of goods. Likewise, in Liberia, community leaders had ideas for elections-based programmes, while in Guinea they highlighted the need for radio to push for women's registration in elections, as well as programmes that would advocate for greater women participation in decision-making bodies. Thus it is not necessarily that women have no interest in politics or economic issues, but rather that radio stations are failing to engage their female audiences when they deal with such topics. Indeed, in Mile 91, over 15% of older women said they would like to listen to more economics programming, but none cited such programming as their favourite. This may be due to these subjects being traditionally male-dominated, leading to a lack of female voices speaking on the matter.

Figure 4: Type of voices women like to hear on radio, by age (2011)
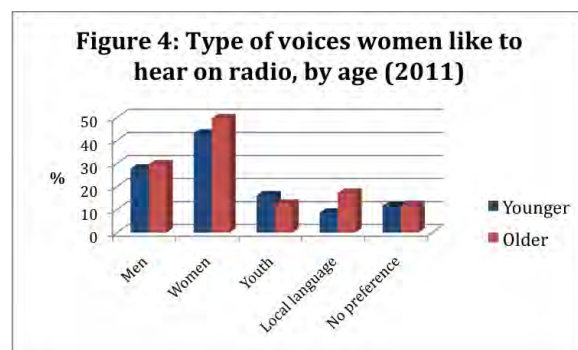
Relatedly, women prefer to listen to the voices of other women on the radio and are able to relate more to issues when hearing them from a woman's perspective. As explained in focus groups, women feel that "Every woman who speaks on the radio expresses the needs of all of us". For younger women, they explained that they felt greater inspiration and motivation to follow advice on the radio when it came from another women and that women broadcasters talked about issues that they did not feel comfortable raising with their parents or even friends. Guinea is the only country that showed the opposite trend in the surveying, whereby women preferred listening to men's voices. However, when probed in focus groups discussions, *all* women, across age and occupational groups, agreed that they would rather listen to women talking about the issues that concerned them.

Participation

In general, from observation and interviews with station staff, interaction between female listeners and the station is significant. Interactive programming in all three countries had no shortage of female callers. Clearly, female audiences want to participate in community radio programming, but who is calling and why?

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[27] 'Community development' programming is rooted in the locality, and informs the listeners about events that directly influence the life of the community. As such, it acts as a kind of 'community watchdog' to name and shame negative behaviour, holds authorities to account on justice, governance, development etc. issues, and encourages listeners to become stakeholders in the future of the community.

The answers to these questions depend on women's access to mobile phones themselves. There are no clear trends, in favour of either age group, concerning access to and ownership of mobile phones: in Liberia and Mile 91 in Sierra Leone, older women have higher access and ownership. However, in Guinea and Kenema, Sierra Leone, younger women have the advantage. Overall, 80% of young women had access to mobiles and 66% owned one; for older women, 76% had access and 61% their own phone. Sierra Leone had the lowest rates of mobile access (73%) and ownership (49%). Guinea had the highest rates, with 87% having access to mobiles and 80% owning. Liberia lay in the middle with 77% having access and 63% owning.

**Figure 5: Mobile phone access and ownership rates among women (2011)**
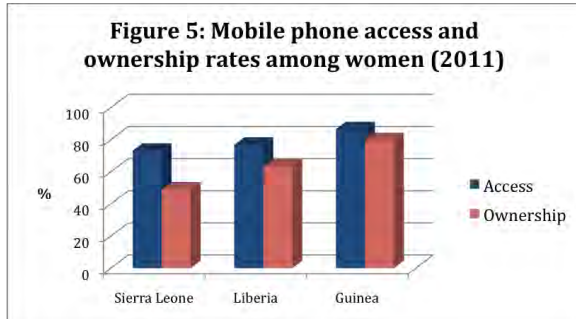
38% of the overall sample claimed to know how to use text-messaging functionality. Sierra Leone and Liberia had similar levels of technological ease at 36% and 37%, respectively. Guinea was above average, at 43%. In all cases, younger women were far more comfortable with this technology, with 48% claiming competence, compared to 24% of older women.

Of those women who listened to the radio, 27% reported to have called-in during a radio programme at least once in their life. Sierra Leone had the lowest rate of call-ins at 22%, followed by Guinea (27%), while Liberia had the highest (32%) despite only placing 2nd for access/ownership of phones. The relatively high level of participation in Liberia can be partially explained by the fact that the two stations under consideration had a better technical set-up for interaction. Both stations there had set up partnerships with private phone companies to ensure constant electricity and provide a choice of networks to allow people to participate more cheaply; one station even struck a deal with a major network so that people could call its line free of the charge. In contrast, at the two Sierra Leonean stations, individual presenters used their own phones during programming, making it confusing for listeners to keep track of which numbers to call/text and more expensive for those on a different network than the presenter. In Guinea, both stations relied solely on the state network, which had a far smaller subscriber base and coverage than available private networks. This meant that listeners, especially in more isolated areas, would find calling the station more expensive than a normal phone call.

Unsurprisingly then, the data shows that in places where it is easier and cheaper to access the radio station lines, there are more calls.

Figure 6: Rates of radio participation, by type of interaction (2011)

Overall, 13% of listeners had sent text messages to radio stations, about half the proportion that had called. Though Guinean women were more likely to know how to text, they had the lowest rate of text-ins (11%), followed by Sierra Leone (12%) and Liberia (15%). It must be noted, however, that text messaging was only introduced to the community radio stations in Guinea with this research project, which likely explains why Guinea ranks lowest in text-in messaging despite women have the greatest know-how. Liberia's high rate is likely linked to the high rate of literacy of the sample, as literacy is highly correlated with the ability to text (66% of literate women knew how to text, compared to 9% of illiterate women).
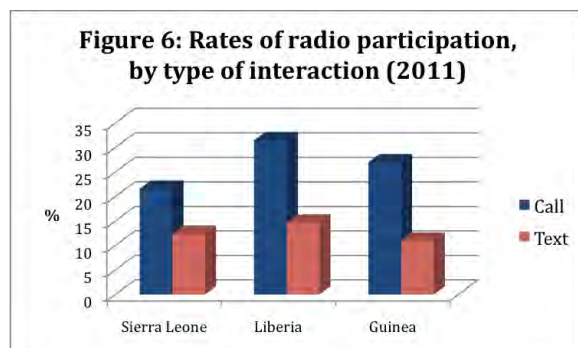
Overwhelmingly, women who call and text do so because they want to contribute their viewpoint. When asked why they called, 83% of women said it was to share their opinions; 66% of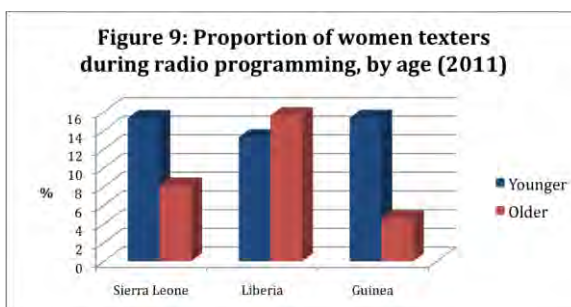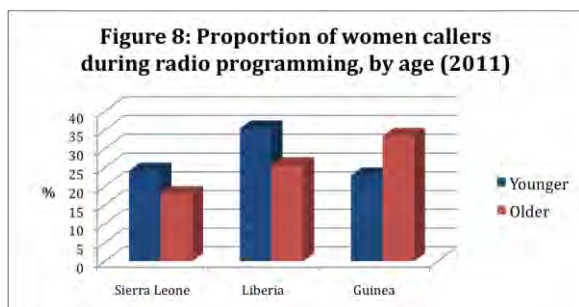 those who sent texts did so because they believed they had something important to share, with another 39% saying they thought their views would help the community. This discredits any notion that women are not interested in having a public platform to express their experiences or in having a stake in key debates.

Women who call are 1.6 times more likely to usually listen to the radio alone than women who listen in company; for texting, those who usually listen alone are twice as likely to text. It could be that being alone might give women more confidence to call in, as they would not feel judged or exposed by the lack of anonymity by those around them, especially on a sensitive issue. Indeed 88% of women who usually listen alone called to share their opinion, compared to 80% of those who

Figure 7: Reasons why women call-in during radio programming, by age (2011)

listened and called in the company of others. However, this particular finding is likely linked to radio ownership: women who listen to the radio alone are almost twice as likely to own their own radio than women who listen in company. This is unsurprising as those who do not own radios are naturally more likely to listen with someone who does.
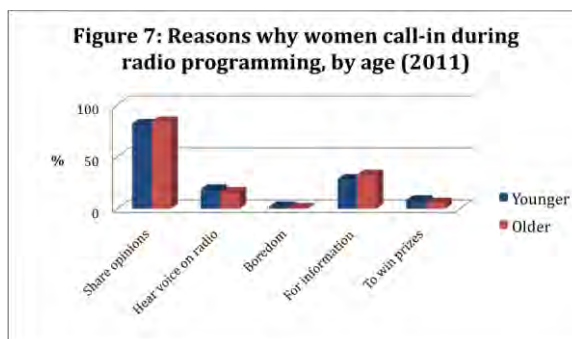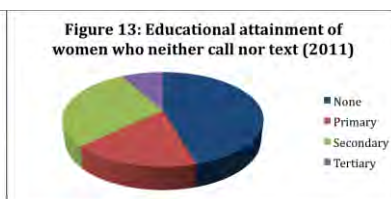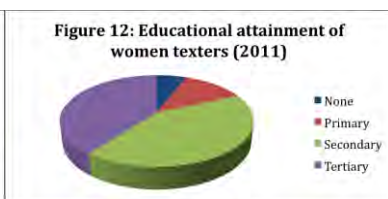
At first glance, age appears to be a determining factor in calling and texting: 28% of younger listeners have called-in at least once, compared to 25% of older women; and 15% of younger women had texted-in, compared to 10% of older women. However, results by country show conflicting trends: in Guinea, although older women have less access/ownership of mobile phones, they are more likely to call, though younger women are far more likely to text. In Liberia, it is the reverse, with younger women having less access to phones yet calling more, and older women who are more likely to text. In Sierra Leone, despite similar rates of phone ownership between age groups, younger women are more likely to call and far more likely to text.

Figure 8: Proportion of women callers during radio programming, by age (2011)

Figure 9: Proportion of women texters during radio programming, by age (2011)

In fact, the key demographic factor in participation does not appear to be age, but rather social class, as determined by literacy, education and occupational status. There is a strong correlation between educational attainment and likelihood of participation, particularly for texting. Literate and educated women are more likely to either be students or hold a higher occupational status. Literacy, education, and (relatively) high occupational status are likely to give women more confidence to share their views with their communities. They also better equip women to master the technologies needed to participate. Finally, they represent a higher earning potential for women, making them more likely to own their own radios and phones. Having access to such equipment is, unsurprisingly, a major factor in

likelihood of participation. Those who own their own radios are also more likely to decide what they listen to (93% of owners decide what to listen to, compared to only 28% of non-owners), meaning a higher likelihood of listening to that which motivates them to participate. Overall, those owning their own radios are twice as likely to call, and 1.9 times more likely to text than those not owning radios. Phone ownership is an even more significant variable, with owners 2.7 times more likely to call and 5 times more likely to text. Even controlling for occupation, literacy and education, ownership of radios and phones, is, in itself a factor in participation. Thus women who call, and in particular those who text, tend to have higher literacy rates, be more highly educated, and have higher occupational status. For example, 39% of students had called and 25% had texted; 37% of businesswomen, health workers, government and office workers had called, and 15% texted; and only 15% of women in agriculture, petty commerce, housewives or unemployed had called and 5% texted. It therefore seems that an increase in socio-economic class contributes to removing cultural and material barriers to participation in community radio.

Figure 10: Literacy rates among women, by type of participatation (2011)

Figure 11: Educational attainment of women callers (2011)

Figure 12: Educational attainment of women texters (2011)

Figure 13: Educational attainment of women who neither call nor text (2011)
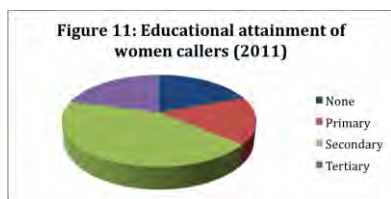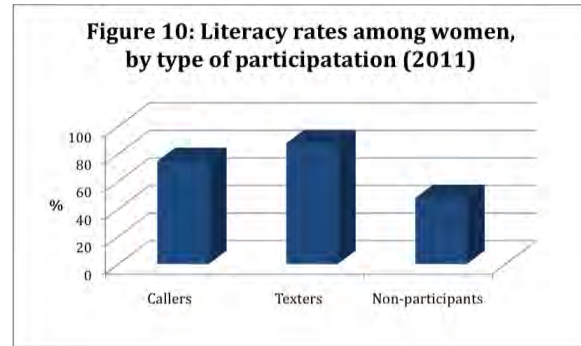
Those women who do not participate are therefore likely to be in a lower socio-economic class, for whom material obstacles are more significant: Indeed, when asked why they had never called, lack of access to a phone and the high cost of calls ranked high. As to why they had never texted, the lack of literacy and inability to text were also problems, in addition to lack of credit/phones.

Figure 14: Occupation of women participants, by type of interaction (2011)
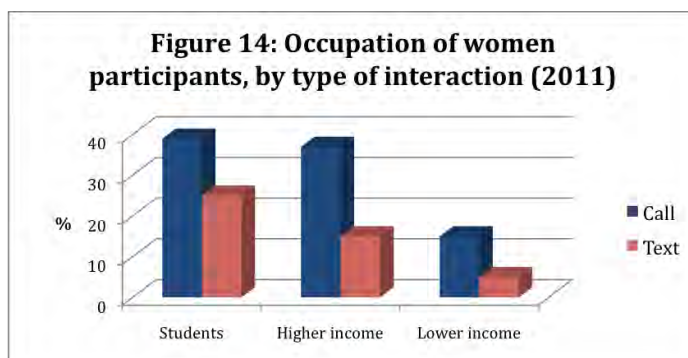
There are also cultural barriers: the belief that women should have the equal right to participate in public life –either by men or by women – is far from firmly held. For example, during surveying in Kenema, the enumerator was often harassed by men trying to interfere with her questioning of women. In interviews with station staff in all three countries, it was affirmed that there is still a tendency for women to defer to men's opinion. Still, only 5% of women who had never called cited being uncomfortable with sharing their opinion; only 4% cited fear of having their voice publicly heard; and only 2% said it was because someone had prevented them from doing so (surprisingly, perhaps, older and younger women cited these reasons in near equal proportions). This, again, indicates that a cultural shift is occurring, which allows for the possibility of women to share publicly their experiences and opinions.

Figure 15: Reasons given why women listeners do not call during radio programming (2011)
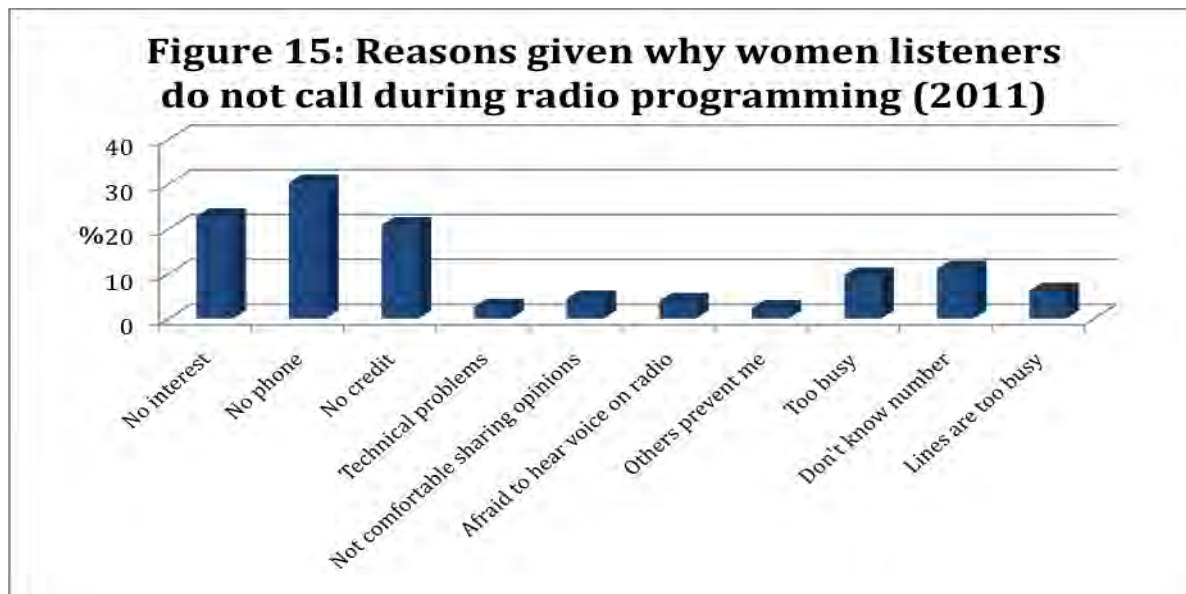
23% of listeners who had never called cited lack of interest in participating. Yet 90% of these women said they were open to changing their views. Thus many women are not only hampered by lack of access to the tools, but also radio programming that is not reflecting their interests, or presenting their issues in a way that motivates them to engage. This again shows that women *want* to participate in their community radio but that there are gaps that *must be overcome* in order to allow or encourage them to do so.

FrontlineSMS

There were several technical challenges during the implementation stage of FrontlineSMS, including electricity cut offs, computer breakdowns and station generator blowouts (thus off the air) – all of which affected the ability to collect data regularly and consistently, and as a result, extrapolate the results. For example, in Liberia, Radio Gbehzohn did not complete the second phase of FrontlineSMS collection due to the computer (newly purchased) being blown out by an electrical surge. Methodological issues also affected the quality of the data. In all countries, presenters would often change arbitrarily, making the competent running of the software nearly impossible. Thus the software was not used on a regular, consistent basis on the same programmes in either phase, making it difficult to compare the two phases. Finally, the interactive part was only half-implemented –automatic responses were sent to thank and encourage those who had texted, however, despite training and then assurances, station staff neglected to use the other feature of sending mass messages to listeners reminding them when to tune in again and encouraging them to continue texting.

Despite recognising the power of the new software and its features, a general lack of proficiency in ICTs in radio station staff also proved to be an obstacle, especially in Guinea. In Guinea, since the text messaging feature was only introduced with this research project, it is impossible to attribute with certainty any increase in number of text messages to the use of the interactive function of FrontlineSMS, since it could just be that listeners are getting more and more used to having the option of text messaging and therefore gradually texting more frequently.

Figure 16: Trends in text messaging, before and after implementing FrontlineSMS, by gender (2011)
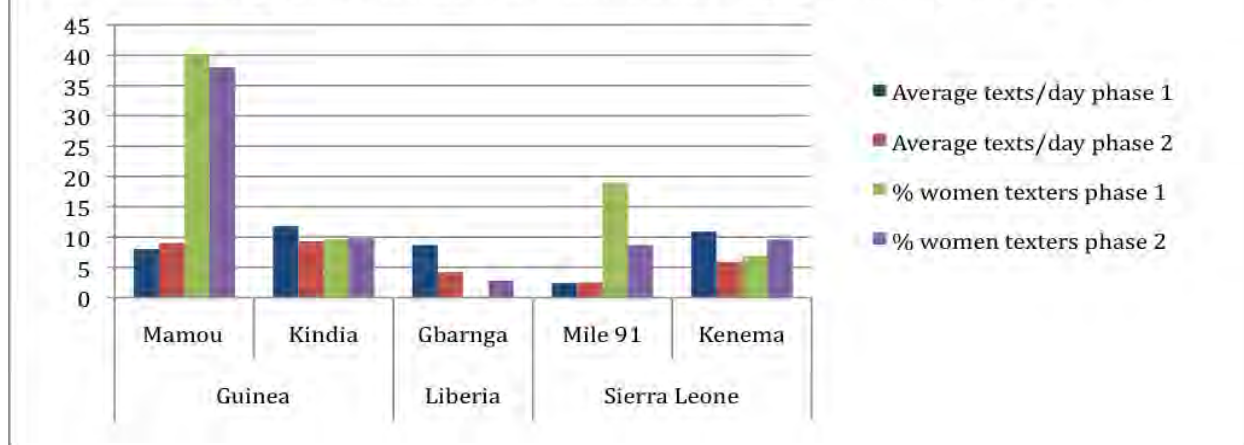
As the results show, there were no consistent trends towards greater participation in second phase, either overall or of women specifically. There was a low female participation overall, especially in the Gbarnga sample. However, there was a significant proportion of unsigned text messages which are likely to be from women, who prefer the anonymity. This remains speculative, however, and, as mentioned above, it is difficult to draw conclusions or compare across samples, due to the arbitrariness and inconsistency of the use of Frontline in the different stations. However, a significant finding is that Guinea had high rates of female participation, especially in Mamou, though listeners were not used to having the text message option. Additionally, although the overall numbers of callers in Guinea was lower than in other countries, women embraced the use of text messaging through the Frontline system far more eagerly. This suggests that, in Guinea at least, there is a female audience to be tapped into that is either unwilling or unable to call. Text messaging technology can provide an alternative for these women to nevertheless participate in their community radios.

While the software was not used as consistently as planned, FrontlineSMS remains an important tool for stations. In Sierra Leone, station staff no longer had to use their own phones for receiving texts from listeners and the radio station was able to devote a standard line for texting. In Guinea, stations no longer had to rely solely on the unstable state network for all interaction with listeners but were instead provided with greater network choice. In all countries, the simple interface and usability of FrontlineSMS allowed them to introduce the text message option on programmes that had previously been call-in only.

The software also allowed radio station staff to select more carefully the texts which they read on air rather than having to review each message one at a time. Instead of reviewing messages on their phone screen, multiple messages were read on a larger computer screen. Additionally the software allowed the radio stations to permanently archive their messages instead of deleting them from their phones, enabling an overall greater and systematic feedback channel. Finally, the telephone numbers of the callers and texters were tracked, providing stations with an indication of who is calling/texting during each programme. For example, at Radio Democracy 98.1 FM in Freetown, the station was able to see that a large percentage of participants during to their morning show were actually returning listeners. It also means they now have a record of their listeners which can later be used to send out targeted information to listeners, including breaking news, polling station information during elections or

emergencies to avoid. These benefits will accrue, after the research period, as each radio station was provided with the necessary equipment and expressed an enthusiastic intention to continue using the new setup.

Figure 17: Suggestions given by women to increase interaction during radio programming (2011)
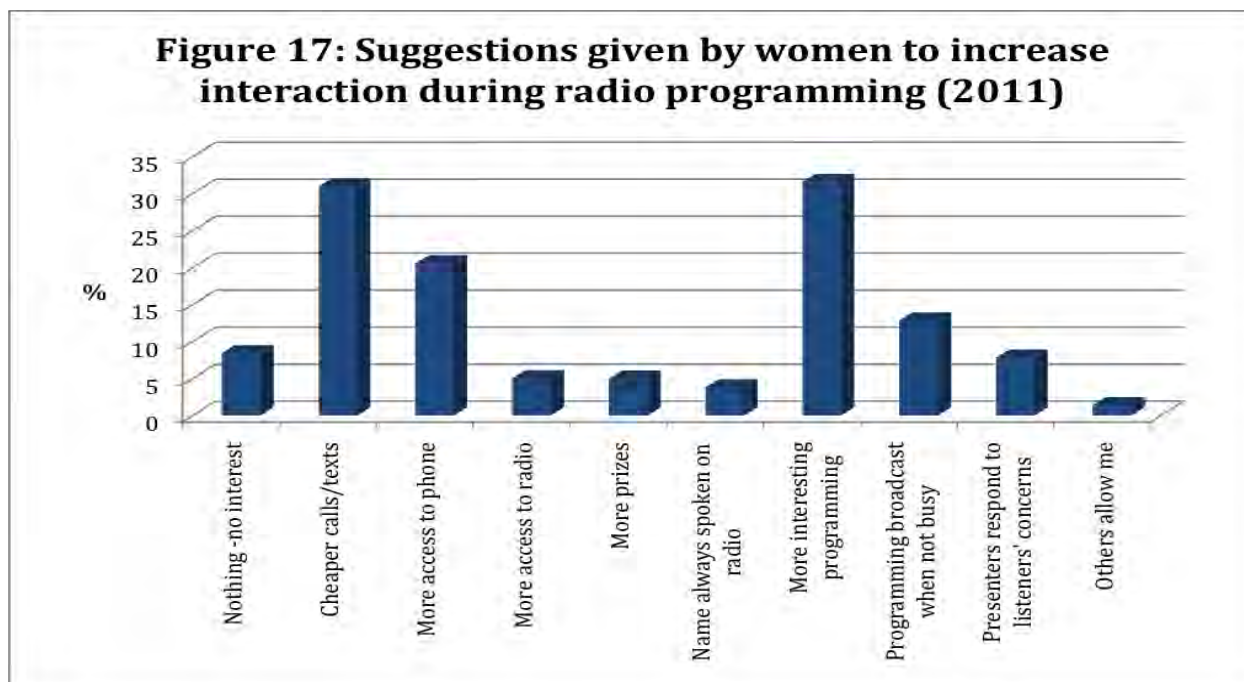
IMPLICATIONS OF FINDINGS

Listenership

Women are listening to radio, but radio stations are not listening to women. Radio is failing to meet the needs of women in their communities despite the belief from radio station staff that they are. Since the overwhelming majority of radio staff is male (no station had more than two female presenters, most having only one, some with none) women's concerns and interests are insufficiently being taken into account in radio station programming. And yet the demand is great; when asked what kind of radio programming women prefer, they overwhelmingly cited women's programming tailored to their needs.

The time slot during which women are able to listen is also clear. Women of all ages prefer to listen to the radio after 6pm. Radio stations should thus take these listenership habits into account when defining their programme schedules if they truly intend to engage with women listeners.

Participation

To meet women's interests in the most effective way, not only are broadcast hours important, but also getting more women's voices on the radio. Women feel more "courage" to participate when they hear other women on a public platform. At the moment, there are too few women in radio (in some stations even the women's programme was presented by a man). Women stated that even the best-trained men could not transmit in a way that women were able to receive well. While women have a vested interest

in areas such as economics and politics, they often don't chose to listen or participate in related radio programmes as they are dominated by male experts and male opinions.

It is not only a question of more female presenters, but soliciting the voices and opinions of ordinary women during programmes. Radio stations need to reach out to their community and enable even the most marginalised women to have a say. As the station manager in Mile 91 station manager admitted, presenters who could not relate to the experiences of the most disadvantaged populations frequently gave advice that was not necessarily useful or relevant to their lives. One of the reasons the Tata Su programme[28] was so popular in rural areas was that it gave a public voice to the most disadvantaged and vulnerable of women, allowing them to feel a sense of worth and belonging in their community. Thus women find radio programming more encouraging and easier to relate to when they listen to other women - not just professional women journalists, but their peers who share their experiences and concerns. In Mamou, one female radio presenter has worked over several years to get more women's voices on air, going to markets and rural areas to interview ordinary women on their perspectives. As a result, most of the women interviewed in focus groups there (young, old, community leaders, market traders, fish vendors, tailors, etc.) had been to the rural radio station at some point to talk about their various experiences. This contrasted starkly with focus groups in other communities where, though the participants had listened to the community radio for years, the vast majority outside of the community leader group had never visited the station.

While the majority of women *do not* call or text during community radio programming, those who do feel that they have something of value to contribute. Furthermore, those who do not participate do not cite cultural barriers that dictate they should remain quiet. This discredits the notion that women are not interested in having a public platform to express their experiences and ideas or in having a stake in key debates.

Women *want* to participate in their community radio but that there are gaps that *must be overcome* in order to allow or encourage them to do so. The main inhibitors to interaction are that the radio stations are not engaging women in the most effective ways during programming, a lack of encouraging female voices on air and material factors (lack of credit, phones, radios, etc.). Increased socio-economic development will contribute towards a greater trend for participation, by giving women both the confidence and tools necessary. However, radio stations will still need to play a role in opening up access to women.

FrontlineSMS

Text messaging technology is a useful alternative for listeners to participate, and with women in particular. It is a cheaper option than calling, which is important, as a lack of resources is a key factor in non-participation. It also gives a degree of anonymity to those who want to talk about the sensitive issues that often concern women (rape, FGM, domestic violence, etc.), and which are still controversial to speak publicly about. In sum, it allows those who are unwilling or unable to have their voices on air to nevertheless have a way to make their opinions heard.

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[28] Tata Su – produced by Radio Gbafth in Mile 91, Sierra Leone, is an original local language programme, in which the presenter travels to rural settings to listen to people's requests and concerns and broadcasts messages and information to family members in other locations.

Efforts to consistently use the advanced features of FrontlineSMS to encourage interaction and collect data were a failure due to a lack of technical proficiency and structural issues outside of human control. Six weeks per community proved too short for the full training, adoption and data collection in this part of the research. Nonetheless, the adoption of this software (and the upcoming FrontlineSMS:Radio product which is being currently developed for community radio use) is likely to produce benefits in the long-term. In the short-term, radio station staff noticed a marked improvement in the ability to read text messages on the air, and appreciated the ability to store records of audience participation.

CONCLUSIONS & RECOMMENDATIONS

- The vast majority of women listen to radio, during specific times when they are most available;
- More women will listen to community radio programming once it is in line with their interests and preferred listening times;
- Women want to have a greater say in their community radio;
- Improvements in ICTs must be met with improvements in women's radio programming to produce a substantial increase in women's participation.

Despite cultural and socio economic barriers, women are increasingly showing they have something important to contribute to the national discourse and to their local public sphere. Community radio is an important tool for this empowerment and has contributed to the education and development of women. But radio, community or otherwise, is still male-dominated and carries traditional social stereotypes. In addition, there appears to be a prevalent, self-serving assumption that if a radio station provides a women's programme then it has somehow met women listeners' needs. However, radio too often consigns women's programming to a narrow interpretation of gender issues including marriage, childcare or domestic responsibilities. Women are usually viewed through a traditional model - in the context of their relationship to their husbands or children – and not as individual beings with a broad range of interests and needs.

It is still difficult to get ordinary women to come and talk on the radio about their experiences, opinions and interests. But this will not change without an increase in women radio presenters and contributors – something all women cited as a main factor in their listening preferences. Radio stations cannot preach gender equity if they fail to practice it. More women's voices need to be broadcast, and outside of the stereotypical contexts, to encourage greater female ownership in community radio.

For the latest generation of young women, it has become easier to overcome traditional cultural obstacles as well as to embrace the newest technologies that allow them access to a public platform. However, increasing participation hinges on opening up access to the radio for all age and social demographic groups. This can be done in a variety of ways, some of which have been tried and shown to be successful: in Liberia, the station's technical set-up shows that providing listeners with more and cheaper means of calling has a positive impact. In Mamou, the influence of a dedicated radio officer in actively recruiting more marginalised groups to participate is significant. The introduction of text messaging technology provides yet another alternative to communicate with radio station.

Software programmes such as FrontlineSMS provides radio stations with new tools to improve audience participation. As a system of mass communication, FrontlineSMS gives radio stations direct access to a large database of repeat callers and texters, from which it can learn more about an audience's concerns,

preferences and motivations. Over time, this will allow radio stations to develop more targeted programming, better attuned to the needs and interests of the community it aims to serve.

Better knowledge of the audience is also crucial for radio stations, as it allows them to develop more intelligent business models. By capturing the interests of its listeners, they will be more able to tap into a larger source of revenue, for example through deals with private companies, such as advertisers and phone networks. By promoting the use of texting technology, stations are simultaneously raising the profit of these phone networks, and therefore have leverage to negotiate for service deals (like a free call-in line, for example) that can further encourage user interaction. Economically-speaking, the use of text messaging through technology such as Frontline SMS is thus beneficial to listeners, radio stations and private companies.

Regardless of the innovation that information communication technologies bring, women have said they will interact more with their radio stations only once programming is more interesting. While certain obstacles of cost and access to mobile phones can certainly be lessened due to ICT solutions like FrontlineSMS, the clear message is that technology is not a panacea in of itself, nor can it achieve significant improvements in audience participation absent substantive changes to radio programming itself.

Women's Surveys

Main Research Question: Is community radio station programming taking into account women's preferences and improving their access to information?

Are the increasingly popular methods of interactive radio broadcasting—including text-messaging and call-ins—engaging women and providing a platform for information and dialogue that meets their interests?

Sub-Question: What type of programming most appeals to women? What specific program, from their local community radio station, do they most listen to?

Interviewer Name: _____ **Date:** _____
Community Name: _____ **Survey #** _____
Unless noted otherwise: Do NOT read response options aloud; just circle the response provided

GENERAL

A1) How old are you?

1	18-25	3	36-45	5	Don't know/no answer
2	26-35	4	46+		

A2) Can you read and/or write?   1) **Yes**   2) **No**

A3) What is your highest level of education?

1	No schooling	5	Some secondary school	9	Currently in university
2	Some primary school	6	Currently in secondary school	10	Completed university
3	Completed primary school	7	Completed secondary school	11	No answer
4	Currently in primary school	8	Some university		

A4) What is your occupation?

1	Agriculture	5	Businesswoman	9	Beautician/hairdresser	13	Other
2	Petty trade	6	Health worker	10	Saleswoman	14	No answer
3	Student	7	Government worker	11	Retired		
4	Housewife	8	Office worker	12	None		

A5) What is your civil status?

1	Married/Long term relationship	4	Separated
2	Single	5	Widowed
3	Divorced	6	No answer

RADIO
B1) Do you listen to the radio?   1) **Yes**   2)**No[IF NO, JUMP TO QUESTION C1]**

B2) Where do you listen most often? *(Circle one answer)*

1	At home	3	At workplace	5	Other
2	At someone else's home	4	In public (church, square, etc)	6	Don't know/no answer

B3) Do you mostly listen alone?   1) **Yes**   2) **No**

B4) If NO, who do you usually listen with? *(Circle all answers given)*

1	Family	3	Others at workplace

2	Friends	4	Other (specify)

B5) Who owns the radio you most listen to?

1	I do (Personal)	3	Neighbour / Friend	5	Other
2	Family member	4	Business / Community centre	6	Don't know/no answer

B6) Who decides what to listen to most of the time?   1)**I do**   2)**Others do**

B7) What time do you usually listen? *(Circle as many answers as given)*

1	2	3	4	5	6	7	8	9	10
6-8am	8-10am	10-12pm	12-2pm	2-4pm	4-6pm	6-8pm	8-10pm	10pm-12am	12–6 am

B8) Why do you listen to the radio at this time? *(Circle as many answers as given)*

1	Only time I can listen (am not busy working, sleeping, etc)	4	I am alone and want the company
2	To follow a certain programme	5	Other (specify)
3	Only time I have access to a radio	6	Do not know / No answer

B9) How often do you listen to the radio? *(Circle one answer)*

1	Every day	5	Less than once a week
2	Almost every day (5-6 times a week)	6	Less than once every two weeks
3	2-4 times a week	7	Less than once a month
4	Once a week	8	Do not know / No answer

B10) What would you most *like* to hear on the radio? *(Circle as many answers as given)*

1	Women's Programming	6	Children's Programming	11	Community Development
2	Politics	7	Sports	12	Business / Finance / Economics
3	Education	8	Music	13	Other (specify)
4	Religious Programming	9	Health Programming	14	Do not know / No answer
5	Cultural/Traditional	10	News / Current Affairs		

B11) What kind of voices do you like to hear on the radio? *(Circle as many answers as given)*

1	Men	5	Other (specify)
2	Women	6	No preference
3	Youth	7	Do not know/No answer
4	Local language		

B12) Do you ever listen to your community radio? If yes, specify the name of the station
1) **Yes** _____ 2)**No**

B13) What programme do you listen to most? *(The interviewee must identify the programme by name, by the signature tune, the presenter etc. The interviewer will later associate the answer with the categories provided, using the radio programme schedule)*

_____

1	Women's Programming	6	Youth Programming	11	Community Development
2	Politics	7	Sports	12	Business / Finance / Economics
3	Education	8	Music	13	Do not know / No answer

4	Religious Programming	9	Health Programming		
5	Cultural/Traditional	10	News / Current Affairs		

B14) Why do you listen to this particular programme? *(Circle as many answers as given)*

1	Only time I am free to listen (not working, sleeping, etc.)	4	For information/education/ideas
2	I enjoy listening to this program, so I make time for it	5	Other (specify)
3	Only time I have access to a radio	6	Do not know / No answer

MOBILE PHONES

C1) Do you have access to a mobile phone?   1) **Yes**   2) **No**
C2) Do you own your own mobile phone?   1) **Yes**   2) **No**
C3) Do you know how to use the text function on your phone?   1) **Yes**   2) **No**
C4) Have you ever used a mobile to call-in to a radio programme? 1) **Yes**   2) **No**

C5) If YES, why? *(Circle as many answers as given)*

1	I want to contribute to the programme/share my views	5	To win prizes or money
2	I like to hear my voice on the air	6	Other (specify)
3	I am bored, it helps pass time	7	Do not know / Refuse to answer
4	To find out information/ask a question		

C6) If NO, why not? *(Circle as many answers as given)*

1	No interest	5	Don't feel comfortable sharing views	9	I don't know the call-in number
2	No access to a phone	6	Afraid to hear my voice on the air	10	The lines are too busy/ I cannot get through
3	No phone credit / cost of credit too high	7	Others will not let me	11	Other (specify)
4	Technical problems (poor reception)	8	I am too busy working	12	Do not know / No answer

C7) Do you ever use a mobile phone to text in during a radio programme? 1) **Yes**   2) **No**

C8) If YES, why? *(Circle as many answers as given)*

1	I have something important to say	5	To win prizes or money
2	I like to hear my name read on the air	6	Other (specify)
3	I am bored, it helps pass time	7	Do not know / No answer
4	My views can help the community		

C9) If YES, who sends the text message?

1	Me	4	Husband / boyfriend
2	Friend	5	Other family member
3	Child	6	Other (specify)

C10) If NO, why not? *(Circle as many answers as given)*

1	No interest in contributing	5	Don't feel comfortable sharing views	9	I am too busy working
2	No access to a phone	6	Cannot read / write message	10	I do not know the text number

3	No phone credit / cost of credit too high	7	Do not know how to use the text function	11	Other (specify)
4	Technical problems (poor reception)	8	Others will not let me	12	Do not know / No answer

C11) What would make you call more or send more text messages during radio programmes? (*Circle as many answers as given*)

1	Nothing -- no interest in participating	5	My name is always read on the air	9	Others let me
2	Costs of calls or text messages should be free or cheaper	6	The programming is more interesting	10	Other
3	More access to a phone	7	Programming broadcast at a time when I am free/less busy		Do not know/ No answer
4	Prizes offered	8	The presenters respond to concern of listeners		

Community Radio Staff Questionnaires and Station Observation

Main Research Question: Is community radio station programming taking into account women's preferences and improving their access to information?

Radio Station Questionnaire for Station Manager
Data Collector:
Date:

Main Research Question: Is community radio station programming taking into account women's preferences and improving their access to information?

The researcher will conduct this interview with the radio station manager, to determine his/her qualitative level of "buy in" and commitment to addressing women's needs.

In addition, the researcher will observe the overall programming over the six weeks of the study to gain an understanding of the general broadcast quality.

GENERAL INFORMATION

Name of Radio Station	
Station FM Number	
Address	
Station Manager Name and Contact Information	

TECHNICAL SETUP

Before the FrontlineSMS setup, did the station have a mobile phone reserved for call-ins? A mobile phone reserved for text-ins? Were they separate or the same phone?	
Does the station have a dedicated call-in phone number? Is the same number used for both calls and text-ins? What is /are the number(s)? What telephone service company/ies does the station use?	

GENERAL PROGRAMMING

How would the station manager describe its primary station audience? Ie, who tends to listen to their programming?	
How does he/she know/measure this?	
How many call-ins does he/she think they typically receive per day?	
How many SMS does he/she think they typically receive per day?	
How is this monitored / measured?	
In general, how does he/she measure the quality of listenership interaction?	
What are the station policies for reading texts and accepting calls? Ie. What is off-limits?	
What are the station's thoughts for increasing interaction?	
After explaining FrontlineSMS' ability to send texts to listener groups, how would he/she like to most use this functionality?	

MEASURING IMPACT ON WOMEN

What is the title and time slot of [the program that women have identified as their most-listened to program]?	
How long have you offered this programming? What has been the general history of its development?	
What are the benefits of featuring programming for women?	
What are the challenges of broadcasting for women?	
How many women typically interact during these programs using call-ins and SMS?	
What are the barriers to greater participation using call-ins and SMS?	
Do you receive funding from donors to implement women's programming?	

SIT IN OBSERVATION (specify which program you are observing)

What is the level and type of interaction?	
How are texts and calls being handled? Are they all being read?	
General observations:	

Radio Station Questionnaire for Women's Most-Listened to Program Presenter
Data Collector:
Date:

Main Research Question: Is community radio station programming taking into account women's preferences and improving their access to information?

The researcher will conduct this interview with the presenter of women's preferred programming, to determine his/her qualitative level of "buy in" and commitment to addressing women's needs.

In addition, the researcher will observe the programming over the six weeks of the study to gain an overall understanding of the general quality of said broadcast.

GENERAL INFORMATION

Name of Radio Station	
Presenter's Name and Contact Information	
What is the name of the program you present? When does it air? Are the programs original or rebroadcasts?	

TECHNICAL SETUP

Before the FrontlineSMS setup, did the station have a mobile phone reserved for call-ins? A mobile phone reserved for text-ins? Were they separate or the same phone?	
Does the station have a dedicated call-in phone number? Is the same number used for both calls and text-ins? What is /are the number(s)? What telephone service company/ies does the station use?	

PROGRAMMING FOR WOMEN

How would the presenter describe its primary audience? Ie, who tends to listen to their programming? % of men/women? older/young?	
How does he/she know/measure this?	
How many call-ins does he/she think they typically receive per day?	
How many SMS does he/she think they typically receive per day?	
How is this monitored / measured?	
In general, how does he/she measure the quality of listenership interaction?	
What are the station policies for reading texts and accepting calls? Ie. What is off-limits?	
What are the station's thoughts for increasing interaction?	
If station used FrontlineSMS to send texts to listener groups, how would they like to use this functionality?	

EDITORIAL DECISIONS

How do you decide on the themes that you are broadcasting on?	
Where do the ideas come from?	

Who makes the final decision?	
Do you get feedback from your listeners? If so, how? *Interviewers: Please ask for specific examples to validate the response.* What do you do with feedback? Have you changed your programs or schedules in response to feedback? How?	

MEASURING IMPACT ON WOMEN

|	
What has been the general history of your program's development?	
What are the benefits of featuring programming for women?	
What are the challenges of broadcasting for women?	
How many women typically interact during your program using call-ins and SMS?	
What are the barriers to greater participation using call-ins and SMS?	
(Is the presenter a woman?) Have you worked on gender issues before this program? Or attended gender-based journalism training?	
How many call-ins does he/she think they typically receive per day?	

SIT IN OBSERVATION

What is the level and type of interaction?	
How are texts and calls being handled? Are they all being read?	
General observations:	

FrontlineSMS Implementation and Data Collection

FrontlineSMS Info-Sheet for Station Managers
Prepared by Andrew Kessinger
Last revised, 7 December 2010

What is FrontlineSMS?
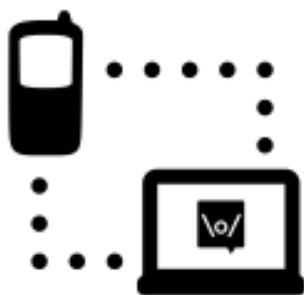
FrontlineSMS is a free program that manages calls and text messages sent during radio programming and enables instant two-way communication with radio stations and their listeners. The system uses tools already available to most radio stations — a computer and a mobile phone – and does not need the internet to work.

How does it work?

By connecting a mobile phone to your radio station's computer, FrontlineSMS makes reading and storing text-messages easy.

The software also saves the contact information of your listeners, allowing you to send text-messages to provide an additional level of interaction. This feature allows radio stations to communicate directly with their listeners: either to selected individuals, or to groups via mass SMS. Messages could be sent, even off-the-air, to transmit important emergency information, to send reminders about upcoming programs, to run political campaigns, to poll listeners, etc.

Receiving text messages from your listeners will always be free (callers pay the fee) but you would need to pay the fees to send messages to your listeners (usually 3 cents per message). However, if your radio station can work out an arrangement with a phone service provider – maybe by providing free advertising in exchange – you can likely lower the costs of any sent messages, or even make them free.

What are the benefits?

Even for radio stations that already use a mobile phone to allow listeners to call or text-in during programming (one-way communication), FrontlineSMS has its benefits (two-way communication).

ONE-WAY COMMUNICATION (listeners → radio station)

- Provides a communication channel for listeners to contribute news, views, stories and feedback;
- Encourages listeners to interact during programming which provides greater access and insight into the local issues an audience cares about;
- Displays text messages during a program more clearly and easier to read than on a small phone screen, freeing up air-time and avoiding awkward silences;
- Saves all text messages and calls automatically and permanently so you don't have to worry about deleting each SMS from the phone to save space;
- Connects listeners with radio stations regardless if they live far away or in a rural location;
- Can be used to poll an audience and have their results automatically sorted for easy calculation.

TWO-WAY COMMUNICATION (listeners ← radio station)

- All caller contact information is automatically saved in a listener database;
- Listener database can be segmented into groups;
- Using a listener database, messages can be instantly sent to any group at any time to:
  - Send a simple poll for immediate feedback on an issue
  - Transmit important up-to-date information during natural or political emergencies, for search and rescue, family reunification, alerts and early warnings etc.
  - Remind listeners to tune-in to a special radio program or attend an event
  - Run a lottery where one lucky caller receives a gift, perhaps to build up your contact database, bring in a bigger audience or increase interaction for a specific campaign
- By creating and using groups you can send out targeted information to:
  - Women (engaging them using information tailored to their needs)
  - Voters (providing polling station information or emergencies to avoid)
  - Staff (contacting staff for an emergency, a cancelled meeting, etc.)

Requirements for FrontlineSMS

1		**FrontlineSMS Software**	Free software that needs to be installed on the computer. Installation discs will be provided.
2		**Computer**	Used to run the FrontlineSMS software. Can be either a PC desktop or laptop computer. Must have Microsoft Windows 98 or later and 85Mb of free disk space.
3		**GSM Modem Key with Mobile Phone SIM Card**	Used to send and receive SMS messages on the computer, and connected with the USB port. GSM modems are the USB internet keys provided by local telephone providers (Zain, etc). An internet SIM card is not necessary, instead a normal mobile phone SIM card is used; therefore, an internet data plan should not be purchased.

### Types of Interaction

Radio Stations --> Listeners
1) Station (equipped with FrontlineSMS) broadcasts a question or asks for input from listeners via radio
2) Listeners send in their responses or their own questions via SMS

Listeners --> Radio Stations
3) Listeners contribute news, views, stories and feedback via SMS
4) Station transmits information to all other listeners via radio

When listeners send a SMS to a station, FrontlineSMS saves both the message and their contact information into a database for future use. A station can then use this archived "phonebook" to:

5) Send a mass SMS to any or all listeners using groups (radio pays for the SMS fees)
6) Export listener data for use in reports to funders, donors or advertisers
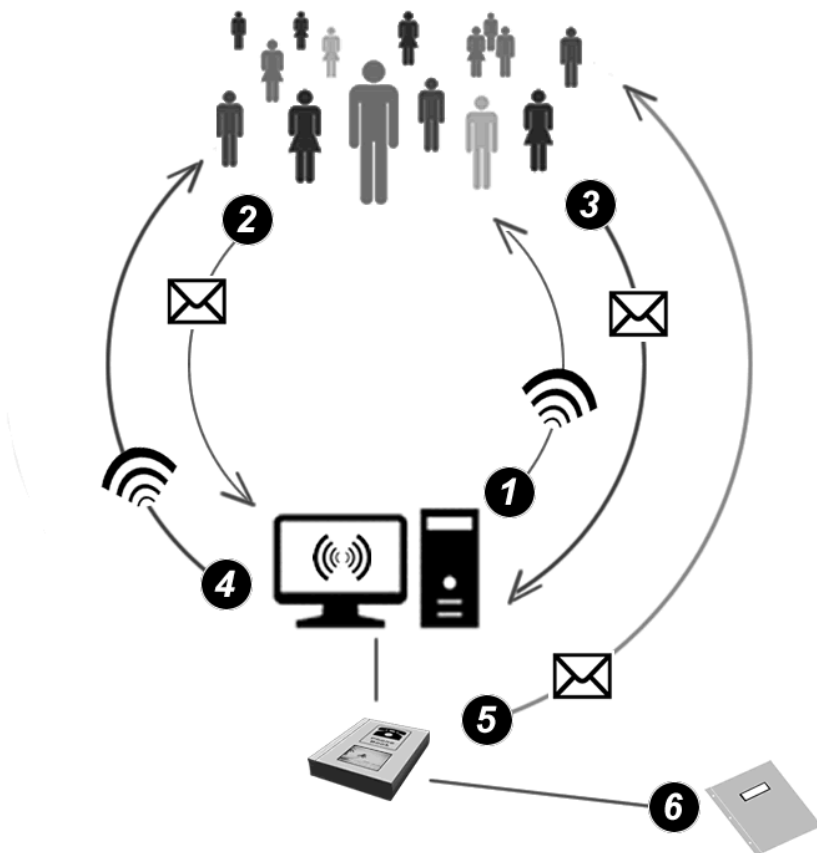
ANNEX II: ICT OVERVIEW IN SIERRA LEONE, LIBERIA AND GUINEA

Sierra Leone [29]

- **Population**: ~5,132,138
- **Age structure**: 0-14 years: 41.7% (male 1,060,463/female 1,081,333); 15-64 years: 54.7% (male 1,344,650/female 1,461,203); 65 years and over: 3.6% (male 83,595/female 100,894)
- **Median age**: 19 years
- **Urbanization**: 38% of total population is urban (2008 est.); 2.9% annual rate of change (2005-2010 est.)
- **Sex ratio**: 0.94 male(s)/female
- **Language**: English (official, regular use limited to literate minority), Mende (principally used in south), Temne (principally used in north), Krio (English-based Creole, a lingua franca and first language for 10% of population but understood by 95%)
- **Literacy**[30]: 35.1% of total population (46.9% of males, 24.4% of females) (2004 est.)
- **GDP, per capita (PPP)**: USD $900 (2009 est.)
- **Unemployment rate:** n/a
- **Population below poverty line**: 70.2% (2004 est.)
- **Telephone**: 31,500 fixed lines (2008 est.); 1.009 million mobile phones (2008 est.); general assessment: marginal telephone service with poor infrastructure; service area coverage remains limited; companies include: Celtel (SL) Limited (Zain Sierra Leone), Comium Sierra leone INC (COMIUM Sierra Leone), LINTEL (Sierra Leone) Limited (Africell)[31]
- **Radio**: 1 government-owned national radio broadcast station (SLBC); ~24 private radio stations primarily clustered in major cities; transmission of several international broadcasts (VoA, RFI, BBC)
- **Internet**: 13,900 users (2008 est.)

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[29] Sierra Leone. Central Intelligence Agency. *CIA World Factbook*. Washington, D.C.: Central Intelligence Agency, 2010. Web. https://www.cia.gov/library/publications/the-world-factbook/geos/sl.html

[30] Defined throughout as percentage of population aged 15 and over that can read and write at least one national language

[31] "Sierra Leone GSM Coverage Map." Web. 25 Oct. 2010. http://www.mobileworldlive.com/coverage.asp.

![World Bank icon] **World Bank • ICT At-a-Glance**

Sierra Leone

	Sierra Leone		Low-income group	Sub-Saharan Africa Region
	2000	2008	2008	2008
Economic and social context				
Population (total, million)	4	6	976	819
Urban population (% of total)	36	38	29	36
GNI per capita, World Bank Atlas method (current US$)	150	320	523	1,077
GDP growth, 1995–2000 and 2000–08 (avg. annual %)	-5.0	10.3	5.8	5.2
Adult literacy rate (% ages 15 and older)	—	40	69	66
Gross primary, secondary, tertiary school enrollment (%)	46	77	53	52
Sector structure				
Separate telecommunications regulator	—	Yes		
Status of main fixed-line telephone operator	Public	Mixed		
Level of competition[a]				
International long distance service	M	P		
Mobile telephone service	C	C		
Internet service	C	P		
Sector efficiency and capacity				
Telecommunications revenue (% of GDP)	—	—	3.1	4.7
Mobile and fixed-line subscribers per employee	31	—	275	492
Telecommunications investment (% of revenue)	—	—	—	—
Sector performance				
Access				
Telephone lines (per 100 people)	0.4	0.6	4.6	1.5
Mobile cellular subscriptions (per 100 people)	0.3	18.1	28.5	33.3
Fixed Internet subscribers (per 100 people)	0.0	—	1.0	—
Personal computers (per 100 people)	—	—	1.7	2.0
Households with a television set (%)	—	—	—	—
Usage				
International voice traffic (minutes/person/month)[b]	—	—	—	—
Mobile telephone usage (minutes/user/month)	—	—	—	—
Internet users (per 100 people)	0.1	0.3	4.6	6.5
Quality				
Population covered by mobile cellular network (%)	—	70	56	56
Fixed broadband subscribers (% of total Internet subscribers)	—	—	7.2	—
International Internet bandwidth (bits/second/person)	0	—	24	34
Affordability				
Residential fixed line tariff (US$/month)	—	—	9.0	11.6
Mobile cellular prepaid tariff (US$/month)	—	—	10.0	11.8
Fixed broadband Internet access tariff (US$/month)	—	—	102.4	100.1
Trade				
ICT goods exports (% of total goods exports)	—	—	2.5	0.9
ICT goods imports (% of total goods imports)	—	—	6.3	7.5
ICT service exports (% of total service exports)	—	0.2	—	—
Applications				
ICT expenditure (% of GDP)	—	—	—	—
E-government Web measure index[c]	—	0.06	0.11	0.16
Secure Internet servers (per 1 million people, December 2009)	0.2	0.4	0.5	3.1

GNI per Capita, Atlas Method, 2000–08
Current US$

ICT MDG[d] Indicators, 2000–08
Number per 100 people

ICT Service Exports, 2000–08
Percentage of total service exports

Secure Internet servers, 2003–09
Number per 1 million people

Sources: Economic and social context: UIS and World Bank; Sector structure: ITU; Sector efficiency and capacity: ITU and World Bank; Sector performance: Global Insight/WITSA, IMF, ITU, Netcraft, UN Comtrade, UNDESA, UNPAN, Wireless Intelligence and World Bank. Produced by the Global Information and Communication Technologies Department and the Development Economics Data Group. For complete information, see Definitions and Data Sources.

Notes: Use of italics in the column entries indicates years other than those specified. — Not available. GDP = gross domestic product; GNI = gross national income; ICT = information and communication technology; and MDG = Millennium Development Goal. a. C = competition; M = monopoly; and P = partial competition. b. Outgoing and incoming. c. Scale of 0-1, where 1 = highest presence. d. Millennium Development Goal indicators 8.14, 8.15, and 8.16.

Liberia [33]

[32] "ICT at a Glance - Sierra Leone." Chart. *ICT at a Glance - Sierra Leone*. World Bank. Web. http://devdata.worldbank.org/ict/sle_ict.pdf.

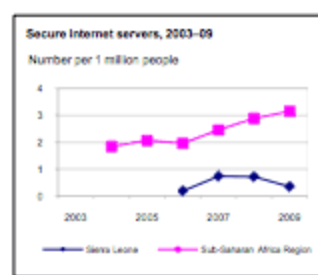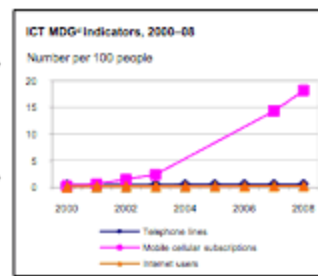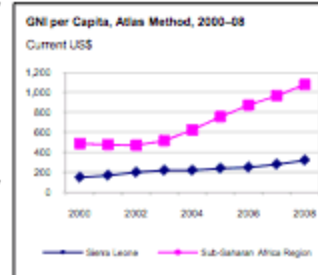[33] Liberia. Central Intelligence Agency. *CIA World Factbook*. Washington, D.C.: Central Intelligence Agency, 2010. Web. https://www.cia.gov/library/publications/the-world-factbook/geos/li.html

- **Population**: ~3,441,790
- **Age structure**: 0-14 years: 44.1% (male 760,989/female 758,554); 15-64 years: 53% (male 904,770/female 920,704); 65 years and over: 2.8% (male 47,013/female 49,760)
- **Median age**: 18.4 years
- **Urbanization**: 60% of total population is urban (2008 est.); 5.6% annual rate of change (2005-2010 est.)
- **Sex ratio**: 1 male(s)/female
- **Language**: English 20% (official), some 20 ethnic group languages few of which can be written or used in correspondence
- **Literacy**: 57.5% of total population (73.3% of males, 41.6% of females) (2003 est.)
- **GDP, per capita (PPP)**: USD $400 (2009 est.)
- **Unemployment rate:** 85% (2003 est.)
- **Population below poverty line**: 80% (2000 est.)
- **Telephone**: 2,000 fixed lines (2008 est.); 732,000 mobile phones (2008 est.); general assessment: the limited services available are found almost exclusively in the capital Monrovia; fixed-line service stagnant and extremely limited; telephone coverage extended to a number of other towns and rural areas by four mobile-cellular network operators; companies include: COMIUM LIBERIA Inc. (Comium Liberia), Cellcom Telecommunications, Inc (Cellcom Telecommunications), Lonestar Communications Corporation (Lonestar Cell)[34]
- **Radio**: 1 state-owned radio station; about 15 independent radio stations broadcasting in Monrovia, with another 25 local stations operating in other areas; transmissions of international broadcasters are available
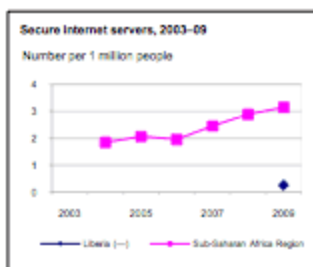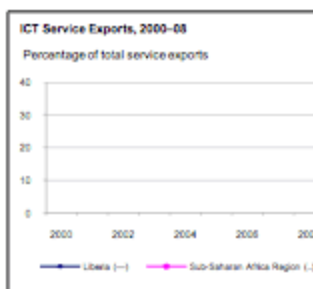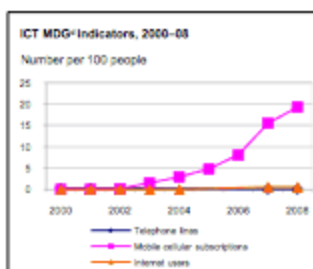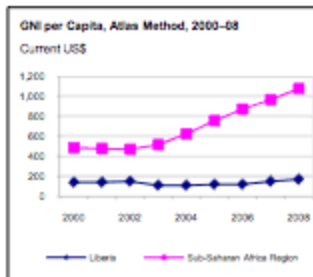- **Internet**: 20,000 users (2008 est.)

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[34] "Liberia GSM Coverage Map." Web. 25 Oct. 2010. http://www.mobileworldlive.com/coverage.asp.

Liberia

	Liberia		Low-income group	Sub-Saharan Africa Region
	2000	2008	2008	2008
Economic and social context				
Population (total, million)	3	4	976	819
Urban population (% of total)	54	60	29	36
GNI per capita, World Bank Atlas method (current US$)	140	170	523	1,077
GDP growth, 1995–2000 and 2000–08 (avg. annual %)	38.9	-1.1	5.8	5.2
Adult literacy rate (% ages 15 and older)	—	58	69	66
Gross primary, secondary, tertiary school enrollment (%)	65	—	53	52
Sector structure				
Separate telecommunications regulator	—	Yes		
Status of main fixed-line telephone operator	Public	Public		
Level of competition[a]				
International long distance service	M	—		
Mobile telephone service	—	P		
Internet service	—	C		
Sector efficiency and capacity				
Telecommunications revenue (% of GDP)	—	8.2	3.1	4.7
Mobile and fixed-line subscribers per employee	—	—	275	492
Telecommunications investment (% of revenue)	—	—	—	—
Sector performance				
Access				
Telephone lines (per 100 people)	0.2	0.1	4.6	1.5
Mobile cellular subscriptions (per 100 people)	0.1	19.3	28.5	33.3
Fixed Internet subscribers (per 100 people)	—	0.4	1.0	—
Personal computers (per 100 people)	—	—	1.7	2.0
Households with a television set (%)	—	7	—	—
Usage				
International voice traffic (minutes/person/month)[b]	—	—	—	—
Mobile telephone usage (minutes/user/month)	—	29	—	—
Internet users (per 100 people)	0.0	0.5	4.6	6.5
Quality				
Population covered by mobile cellular network (%)	—	16	56	56
Fixed broadband subscribers (% of total Internet subscribers)	—	—	7.2	—
International Internet bandwidth (bits/second/person)	0	—	24	34
Affordability				
Residential fixed line tariff (US$/month)	—	—	9.0	11.6
Mobile cellular prepaid tariff (US$/month)	—	—	10.0	11.8
Fixed broadband Internet access tariff (US$/month)	—	—	102.4	100.1
Trade				
ICT goods exports (% of total goods exports)	—	—	2.5	0.9
ICT goods imports (% of total goods imports)	—	—	6.3	7.5
ICT service exports (% of total service exports)	—	—	—	—
Applications				
ICT expenditure (% of GDP)	—	—	—	—
E-government Web measure index[c]	—	0.11	0.11	0.16
Secure Internet servers (per 1 million people, December 2009)	—	0.3	0.5	3.1

GNI per Capita, Atlas Method, 2000–08
Current US$

ICT MDG[d] Indicators, 2000–08
Number per 100 people

ICT Service Exports, 2000–08
Percentage of total service exports

Secure Internet servers, 2003–09
Number per 1 million people

Sources: Economic and social context: UIS and World Bank; Sector structure: ITU; Sector efficiency and capacity: ITU and World Bank; Sector performance: Global Insight/WITSA, IMF, ITU, Netcraft, UN Comtrade, UNDESA, UNPAN, Wireless Intelligence and World Bank. Produced by the Global Information and Communication Technologies Department and the Development Economics Data Group. For complete information, see Definitions and Data Sources.

Notes: Use of italics in the column entries indicates years other than those specified. — Not available. GDP = gross domestic product; GNI = gross national income; ICT = information and communication technology; and MDG = Millennium Development Goal. a. C = competition; M = monopoly; and P = partial competition. b. Outgoing and incoming. c. Scale of 0–1, where 1 = highest presence. d. Millennium Development Goal indicators 8.14, 8.15, and 8.16.

Guinea [36]

[35] "ICT at a Glance - Liberia." Chart. *ICT at a Glance - Liberia*. World Bank. Web.
http://devdata.worldbank.org/ict/lbr_ict.pdf.

- **Population**: ~ 10,057,975
- **Age structure**: 0-14 years: 42.8% (male 2,175,852/female 2,128,518); 15-64 years: 53.7% (male 2,701,184/female 2,704,161);65 years and over: 3.5% (male 153,053/female 195,207)
- **Median age**: 18.5 years
- **Urbanization**: 34% of total population is urban (2008 est.); 3.5% annual rate of change (2005-2010 est.)
- **Sex ratio**: 1 male(s)/female
- **Language**: French (official); though each ethnic group has its own language
- **Literacy**: 29.5% of total population (42.6% of males, 18.1% of females) (2003 est.)
- **GDP, per capita (PPP)**: USD $1000 (2009 est.)
- **Unemployment rate:** n/a
- **Population below poverty line**: 47% (2006 est.)
- **Telephone**: 22,000 fixed lines (2009 est.); 5.607 million mobile phones (2009 est.); general assessment: inadequate system of open-wire lines, small radiotelephone communication stations, and new microwave radio relay system; companies include: Areeba Guinea (MTN), Cellcom Guinee S.A. (Cellcom Guinee), INTERCEL Guinée (Telecel Guinee), Orange Guinee SA (Orange Guinee)[37]
- **Radio**: government maintains control over broadcast media; single state-run TV station; state-run radio broadcast station also operates several stations in rural areas; about 20 privately-owned radio stations, nearly all in Conakry, and about a dozen community radio stations
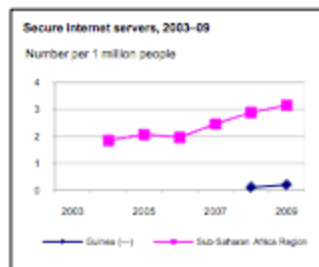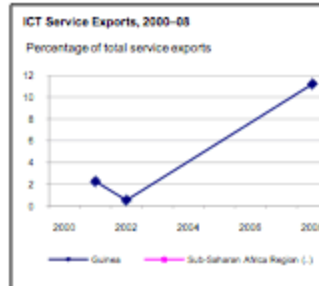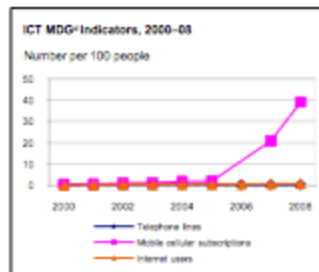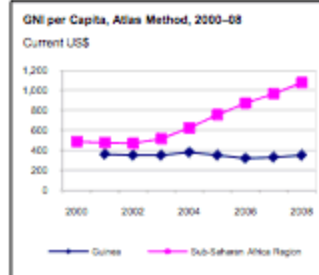- **Internet**: 90,000 users (2008 est.)

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[36] Guinea. Central Intelligence Agency. *CIA World Factbook*. Washington, D.C.: Central Intelligence Agency, 2010. Web. https://www.cia.gov/library/publications/the-world-factbook/geos/gv.html
[37] "Guinea GSM Coverage Map." Web. 25 Oct. 2010. http://www.mobileworldlive.com/coverage.asp.

Guinea

	Guinea		Low-income group	Sub-Saharan Africa Region
	2000	**2008**	**2008**	**2008**
Economic and social context				
Population (total, million)	8	10	976	819
Urban population (% of total)	31	34	29	36
GNI per capita, World Bank Atlas method (current US$)	360	350	523	1,077
GDP growth, 1995–2000 and 2000–08 (avg. annual %)	4.4	3.2	5.8	5.2
Adult literacy rate (% ages 15 and older)	—	29	69	66
Gross primary, secondary, tertiary school enrollment (%)	30	51	53	52
Sector structure				
Separate telecommunications regulator	Yes	Yes		
Status of main fixed-line telephone operator	Mixed	Mixed		
Level of competition[a]				
International long distance service	M	P		
Mobile telephone service	C	C		
Internet service	C	C		
Sector efficiency and capacity				
Telecommunications revenue (% of GDP)	0.9	—	3.1	4.7
Mobile and fixed-line subscribers per employee	82	—	275	492
Telecommunications investment (% of revenue)	17.8	—	—	—
Sector performance				
Access				
Telephone lines (per 100 people)	0.3	0.2	4.6	1.5
Mobile cellular subscriptions (per 100 people)	0.5	39.1	28.5	33.3
Fixed Internet subscribers (per 100 people)	0.0	0.1	1.0	—
Personal computers (per 100 people)	0.3	0.5	1.7	2.0
Households with a television set (%)	9	11	—	—
Usage				
International voice traffic (minutes/person/month)[b]	0.4	—	—	—
Mobile telephone usage (minutes/user/month)	—	—	—	—
Internet users (per 100 people)	0.1	0.9	4.6	6.5
Quality				
Population covered by mobile cellular network (%)	—	80	56	56
Fixed broadband subscribers (% of total Internet subscribers)	0.0	0.0	7.2	—
International Internet bandwidth (bits/second/person)	0	0	24	34
Affordability				
Residential fixed line tariff (US$/month)	—	3.4	9.0	11.6
Mobile cellular prepaid tariff (US$/month)	—	3.5	10.0	11.8
Fixed broadband Internet access tariff (US$/month)	—	800.0	102.4	100.1
Trade				
ICT goods exports (% of total goods exports)	0.1	0.0	2.5	0.9
ICT goods imports (% of total goods imports)	1.6	5.8	6.3	7.5
ICT service exports (% of total service exports)	2.2	11.2	—	—
Applications				
ICT expenditure (% of GDP)	—	—	—	—
E-government Web measure index[c]	—	0.07	0.11	0.16
Secure Internet servers (per 1 million people, December 2009)	—	0.2	0.5	3.1

GNI per Capita, Atlas Method, 2000–08
Current US$

ICT MDG[d] Indicators, 2000–08
Number per 100 people

ICT Service Exports, 2000–08
Percentage of total service exports

Secure Internet servers, 2003–09
Number per 1 million people

Sources: Economic and social context: UIS and World Bank; Sector structure: ITU; Sector efficiency and capacity: ITU and World Bank; Sector performance: Global Insight/WITSA, IMF, ITU, Netcraft, UN Comtrade, UNDESA, UNPAN, Wireless Intelligence and World Bank. Produced by the Global Information and Communication Technologies Department and the Development Economics Data Group. For complete information, see Definitions and Data Sources.

Notes: Use of italics in the column entries indicates years other than those specified. — Not available. GDP = gross domestic product; GNI = gross national income; ICT = information and communication technology; and MDG = Millennium Development Goal. a. C = competition; M = monopoly; and P = partial competition. b. Outgoing and incoming. c. Scale of 0-1, where 1 = highest presence. d. Millennium Development Goal indicators 8.14, 8.15, and 8.16.

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[38] "ICT at a Glance - Guinea." Chart. *ICT at a Glance - Guinea.* World Bank. Web. http://devdata.worldbank.org/ict/gin_ict.pdf.