

An Oral Wiki to Support Informal Justice Systems

Cindy JEFFERS, Stefan AGAMANOLIS

Distance Lab, Horizon Scotland, Forres, IV36 2AB, United Kingdom

Tel: +44 1309 678123, Fax: + 44 1309 678101, Email: [cindy, stefan@distancelab.org](mailto:cindy_stefan@distancelab.org)

Abstract: We present the Oral Wiki, a system with wiki-like functionality that is accessed and interacted with by phone. This technology could serve as a networking tool that would strengthen informal justice systems by facilitating discussion around best practice and establishing an archive of decisions. These objectives are important as many informal justice systems, such as the Abunzi system in Rwanda, lack an archive of decisions and a forum for informal justice actors to discuss their profession. This technology would facilitate information sharing between informal and formal justice systems. This system aims to increase transparency and accountability in informal justice systems. This technology strives to enable informal justice actors to more quickly resolve cases, which would in turn ease tensions in communities and support reconciliation in developing areas of the world.

Keywords: Africa, Rwanda, informal justice system, arbitration, mediation, dispute resolution, Abunzi, Web 2.0, wiki, e-development, social networking, ICT, infrastructure.

“If you never leave your village you think your ideas are the best ones.”

– Anonymous Abunzi, West Province, Rwanda

1. Introduction

1.1 Background

In September and October of 2008 we met with informal justice actors called Abunzi, in Rubavu District, East Province and Kirehe District, West Province in Rwanda. When meeting with them we found that they repeatedly expressed a need for a network on which to discuss best practice. It was from these meetings that we set out to create a technology to connect the Abunzi. Researching and developing a technology for the Abunzi inspired us to think more globally about informal justice systems and how they could be assisted through technology. The Oral Wiki is our first attempt at addressing a need in the informal justice sector. In this paper we describe the Oral Wiki, a proposed technological system not yet implemented, that would be a professional network on which the Abunzi in Rwanda could discuss best practices. It is our hope that this technology would prove useful in other informal justice systems.

1.2 Informal Justice in Sub-Saharan Africa

“When most sub-Saharan African countries became independent in the 1960s, the majority of African citizens were resolving their disputes using traditional and informal justice forums. Despite their popularity, these forums were regarded as obstacles to development. It was thought that as Africa modernized they would

eventually die out. This did not occur. Informal and traditional modes of settling disputes have remained as widespread as ever." [1]

Informal justice systems play an important role in sub-Saharan Africa where they are often the only access people have to justice. They have remained strong partly due to people's preference for them and partly because the formal justice systems have not had the capacity for the volume of cases. Penal Reform International suggests that in rural areas people are more likely to prefer informal justice systems, "They are accessible to rural people in that their proceedings are carried out in the local language, within walking distance, with simple procedures which do not require the services of a lawyer, and without the delays associated with the formal system." [1] Cost and nature of penalties associated with formal courts were mentioned as reasons people find this form of justice preferable.

Sub-Saharan Africans' preference for informal justice is also due to its involvement of the participation of the entire community,

"They are highly participatory giving the victim, the offender, and the community as a whole, a real voice in finding a hopefully lasting solution to the conflict. Furthermore, they assist in educating all members of the community as to the rules to be followed, the circumstances which may lead to them being broken, and how ensuing conflict may be peacefully resolved." [1]

It is also suggested that consensus and reconciliation, as opposed to "retribution," associated with "Western-style justice," are preferred results, "In most cases, the type of justice they offer – based on reconciliation, compensation, restoration and rehabilitation – is more appropriate to people living in close-knit (multiplex) communities who must rely on continued social and economic cooperation with their neighbours." [1]

Informal justice works because of "social pressure," it's being "voluntary," it's ability to "restore social harmony," and it's being "participatory." [1] Taking these characteristics into account we have developed a technological approach in keeping with informal justice systems.

1.3 The Abunzi System, Rwanda

Abunzi in Kinyarwanda means to bring two people together. The Abunzi system in Rwanda is an informal justice system at the village-level based on a traditional form of justice. There are about 32,400 Abunzi divided amongst the 2,150 cells, or villages, nationwide. Every two years each village elects fifteen new Abunzi who comprise a committee. They process 70% of the civil cases in the country. Their objective is to unite two parties who have a disagreement. Depending on the case they will either play the role of mediator or arbitrator.

Land disputes constitute 60% of the cases brought to the Abunzi. An Abunzi we interviewed in Gacuba District stated, "when people came back after the 1994 genocide land was a huge problem... Abunzi help with order and rehabilitating the country." The importance of the Abunzi system is evinced in how it assists in moving the country away from the ethnic tensions that resulted in the 1994 genocide.

We found that Abunzi typically have a hand-written archive of the arbitrated decisions. Furthermore, the Abunzi do not have access to how other Abunzi around the country make decisions when faced with similar disputes. The Abunzi we spoke with felt that a network on which to discuss best practices would supply them with the knowledge to more quickly make decisions. One Abunzi stated that such a network would facilitate a better level of service, "they're always looking for ways to ameliorate the way they work." They suggested that increased accountability in the system would lead to greater transparency and less corruption. Increasing access to the general Abunzi knowledge-pool would facilitate quicker resolution of disputes, which would help Rwandans move on more quickly with their lives and towards reconciliation.

Rwanda's Vision 2020, in which it lays out its future goals, explains that the government's biggest goal for the country is to move it from an agricultural to a knowledge-based economy. The eGovernment project aims to assist with this goal by providing internet access to all levels of government except the Abunzi and Gacaca judicial systems. Considering how important the Abunzi are to the judicial process in Rwanda we propose a technology that will further assist in moving the country towards this goal.

1.4 Abunzi User Profile

Abunzi represent average Rwandans, 88% of whom live on USD \$2 or less a day [2]. 90% of Rwandans work in the agricultural sector [3]. Rwandans are limited by 6% access to electricity [3], a 45% malnutrition rate in children age five and younger [4], and a 64.9% literacy rate [5]. The Rwandan Information Technology Authority (RITA), a government think tank charged with moving Rwanda from an agriculturally-based economy to a knowledge-based economy, expect mobile phone use to increase from 9% currently to 25% by the end of 2009. While village phone is still the most widely used phone type at 30%, mobile phones are growing at a faster rate than village phones. In Rwanda only 1% of the population uses the internet [6]. Rwandans' experience of technologies is unpredictable due to limited access to electricity, phones (mobile phone, village phones) and the internet.

1.5 Abunzi Professional Needs

The Abunzi we met with expressed a desire to do a better job more quickly and efficiently. They stated that they do not always have access to enough information regarding laws or knowledge of the myriad ways similar cases have been solved in other parts of the country, partly because of their limited training. They expressed a desire to learn about what other Abunzi in other parts of Rwanda were working on and how they solved cases as a way to more quickly come to a decision. Currently the only way Abunzi learn about how other towns solve problems is to travel to nearby towns and speak with Abunzi. They expressed a desire for a nationwide dialogue with their peers about the challenges and types of cases they face. They lamented their inability to travel to meet with other Abunzi. They said they would enjoy participating in such a dialogue and that they would learn a great deal from their peers. They also mentioned a desire to have increased communications with the government so that they better understand the laws that govern them.

The Abunzi we spoke with expressed a need for a professional network so as to access the wealth of knowledge and expertise of all 25,400 Abunzi. Professional networks are an invaluable and commonly utilized professional tool that people all over the world benefit from. Without access to the internet the Abunzi cannot take advantage of Web 2.0 applications, wikis, blogs and networking tools like LinkedIn. To address these concerns we are developing a technology that would equip Abunzi around Rwanda with a database of best practices that would allow them to begin a dialogue around their profession.

1.6 Technological Background

Many people in professional settings around the world now take advantage of Web 2.0 applications, wikis and blogs. However, the internet does not go everywhere, including most parts of Rwanda, and results in large groups of impoverished people who are not served by such advances. Due to limited availability and prohibitive cost, only 1% of Rwandans use the internet [6]. To compound this problem illiteracy further limits those with access to the internet. Users living in countries where oral traditions are strong are not usually included in a target audience because online content is typically textual. The Oral

Wiki aspires to address the professional needs of Abunzi with a technological solution in step with their limited access to resources, and compatible with future Web migration.

Because most Rwandans live on so little per day, the numbers mentioned above might not suggest a return on investment that merits attention, however, according to The Next 4 Billion, a report by the World Resources Institute, “Though smallest, the African ICT market is the most rapidly growing one—and it has already generated very profitable companies and significant wealth” [7]. Additionally, a Vodafone study referenced in The Next 4 Billion suggests that mobile phones are purchased when people at the bottom of the economic pyramid see it as a business investment, “A recent study among low-income families in Tanzania showed that access to livelihoods was a primary reason for owning a mobile phone” [7]. Phones, be they mobile or village phone, are much more readily available in rural areas of Rwanda than internet. This fact meant that for the purposes of this project phone accessibility was of utmost importance to nationwide accessibility. It is important to invest in professional networking tools in areas where distance presents difficult barriers to professional dialogue because that distance is typically coupled with limited telecommunications resources.

2. Objectives

The primary objectives of the Oral Wiki are the following:

1. Build technologies that connect disadvantaged communities to emerging telecommunications infrastructures
2. Increase access to justice
3. Strengthen informal justice systems
4. Facilitate information sharing among informal justice actors
5. Facilitate information sharing between the informal and formal justice systems
6. Facilitate more efficient and transparent informal justice systems
7. Create archives of decisions made in informal justice systems
8. Generate awareness around oral societies' technological needs

3. Technology Description

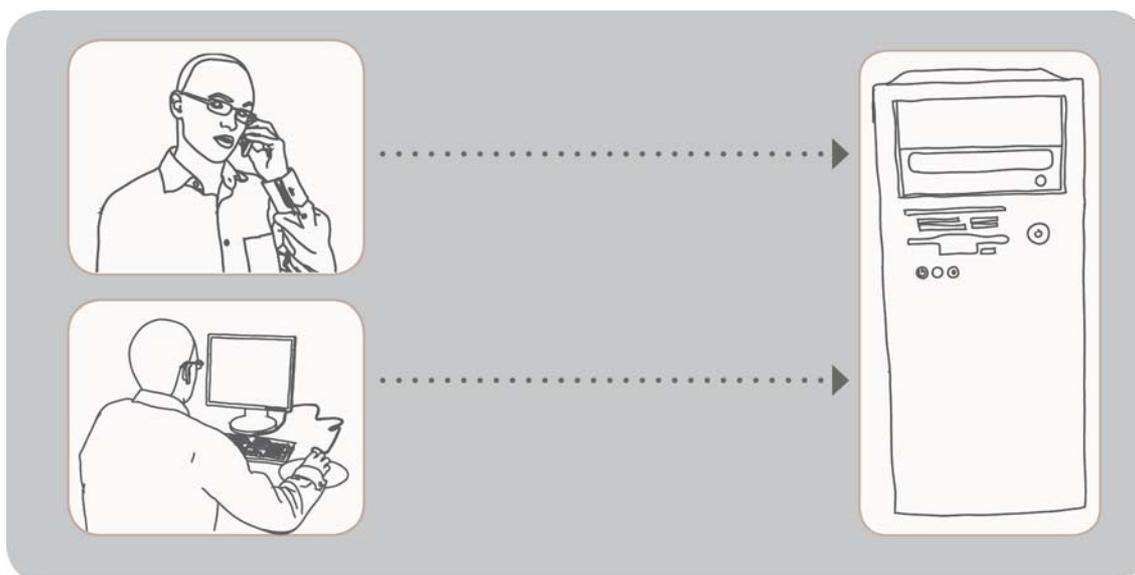


Figure 1: Users Interact with the Oral Wiki by Phone or Internet.

The Oral Wiki is a proposed database technology that would store audio recordings of Abunzi decisions. It would provide record, playback, tagging and commenting functionalities akin to those found on wikis. It would be accessible by phone and internet

and would enable the ranking of decisions made by Abunzi. (Figure 1) Abunzi and the formal justice system would each need to play a vital role in the database.

After two disputing parties arrive at a decision a recording could be made. The recording would need to encompass a dispute description and a description of the decision.

3.1 Database Interfaces: Phone & Internet

The Oral Wiki would be accessible by phone because our primary user, the Abunzi, have greater access to phone than internet. In the near-term the phone-based interface will be the primary project emphasis. The technology will be available online for participants with access to internet such as those in government. The internet interface would provide for a smooth transition to an online setting once an internet infrastructure is in place in Rwanda.

3.2 Core Phone Functionality

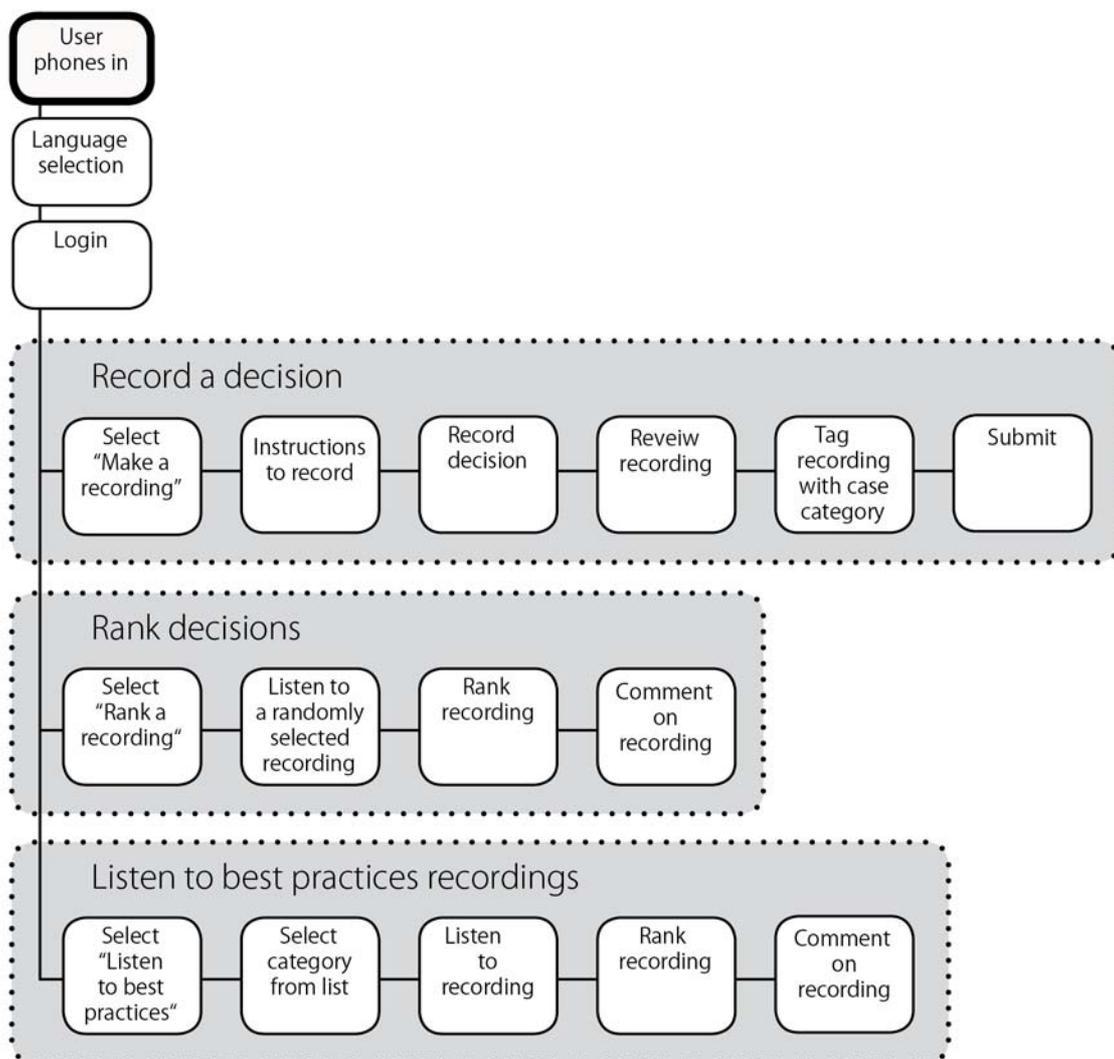


Figure 2: User's Phone Experience Flow

To interact with the technology users would listen to verbal prompts on the phone and respond orally or by touching the numbered keypad. (Figure 2)

Record a decision

Users could call into the database to record her/himself recounting a decision made for a dispute. After making the recording it could be tagged with suggested categories.

Rank decisions

To establish best practices we propose a system whereby the Abunzi would contribute to the database by ranking a certain number of recordings each month. Abunzi could make comments on others' decisions. This form of commenting on others' voice posts is comparable to the commenting capabilities on blogs and wikis where users may respond to a post. As the recordings are ranked, the highest ranked recordings would emerge as best practice examples.

Listen to best practice recordings

If Abunzi call into the database to listen to best practices they would listen to a selection of recordings that represent best practice for a particular type of case. Users could sort the recordings by type of dispute or by level of government, such as district or sector. Abunzi could rank a recording, leave voice comments about decisions and listen to others' comments. A key system feature would be the fact that it is oral, allowing everyone, including Abunzi who are not able to read and write, to submit decisions to the database.

Giving the Abunzi access to such a technology will promote the development of important content, "The growing accessibility of information technologies puts the tools required to collaborate, create value, and compete at everybody's fingertips. This liberates people to participate in innovation and wealth creation within every sector of the economy" [7]. Out of such a discussion could evolve regulation of the mediation process and better informed decision-making. It will provide the Abunzi with a much needed means of discussion around cases they face and a way for them to debate best practices.

4. Design Considerations

4.1 Technology

In this project we identified the need for a professional network in an area where limited access to many infrastructural assets, poverty and literacy rates guided the solution we decided upon. The hierarchy of technologies available to the largest number of people also directed our solution. Radio is the most widely accessible communication tool in Rwanda, but its one-way nature limits dialoguing capabilities. From radio we examined phone, which more people have access to than internet. Professional paper style newsletters could serve this need, but varying literacy levels would limit full access to the network. From these very real barriers to communication the phone emerged as the most viable option for widespread adoption.

An internet-only approach was considered, but deemed too costly as only 1% of Rwandans have Internet access. Another idea was to require Abunzi to type up the decisions on a computer and then mail the decisions on a burned compact disc to the district office, which could be circulated nationwide. Since most people do not have access to a computer where they could type up the decisions this did not prove feasible. A text-based mobile phone solution was also considered, but abandoned because fewer people use mobile phones than village phones and such a system would not include people with lower to no reading level. It was through this process of elimination that we arrived at a technological solution to the need for a Abunzi professional network based on phone access. The infrastructural barriers in Rwanda are found in many other sub-Saharan African countries where informal justice plays an important role in providing access to justice.

4.2 Participation

The Oral Wiki would give Abunzi a tool similar to what one might find in blogs and wikis, but on the phone, a platform with which they are already familiar. It would place the

responsibility of participation in their hands. According to Tapscott and Williams, “the participation revolution now underway opens up new possibilities for billions of people to play active roles in their workplaces, communities, national democracies, and the global economy at large. This has profound social benefits, including the opportunity to make governments more accountable and lift millions of people out of poverty” [8]. By bringing participation to the fore, the Abunzi will play a key role in the establishment of best practices for the informal justice system in Rwanda. The participatory nature of the Oral Wiki compliments the participatory nature of informal justice systems. This technology is a unique solution to the lack of a quick means to discuss professional challenges, a dilemma many working in the developing world face.

4.3 Cost-Efficiency

In some situations technological solutions can cost less and be implemented much more rapidly than waiting for nationwide access to internet and landline phones. The peer production aspect of this technology could indicate a more economical approach for a developing world setting [8]. This project provides a solution that could easily be expanded upon, could be owned and managed by Rwandans through skills transfer, and would not create dependency on foreign technical support once set up.

4.4 Beyond Rwanda, Bridge Technologies

We imagine the technology, if successfully implemented, could be used or built upon for dispute resolution and other informal justice settings in oral societies. We are geared towards building technologies that address specific professional needs and serve communities that are overlooked by investors. We seek to bridge these communities to emerging technological infrastructures with the intent of giving people in those communities the tools to improve their quality of life.

5. Related Works

There are many other wonderful initiatives in this realm. The Rwandan government is in the process of implementing the eGovernment and eSoko projects. The eGovernment project aims to connect the entire government online. The eSoko project sends text messages to Rwandan farmers with market rates for crops [9]. Outside Rwanda there are projects such as Ushahidi, a crowdsourcing platform for crisis information that lets people “submit crisis information through text messaging using a mobile phone, email or web form” [10]. Dialup Radio is “a tool that distributes human rights and independent media via telephone” [11]. In each case these projects provide textual solutions in places where literacy rates suggest that more widespread access might be accomplished by an oral solution.

6. Developments

6.1 Pilot Program

Pending government negotiations, we plan to do an eight week pilot program with Abunzi in Rwanda. For the pilot program we suggest that one Abunzi per village be in charge of making recordings each week. Prior to the pilot, trainers would need to be sent to the participating villages to train participants on how to navigate the phone menu system, make recordings, listen to other Abunzi recordings and rank them. In cases where a participant does not have access to a phone s/he would be given a mobile phone and receive training on how to use it. Pilot program details are still being finalized as of early 2009.

6.2 *Deployment*

The next step after the pilot program would be nationwide deployment, which we would aim to push forward once the pilot program is complete. We recommend building out the technology in every village in Rwanda, which would involve scaling the project to 32,400 participants. Deployment will be predicated upon successful completion of the pilot.

7. **Expected Impact**

7.1 *Benefits to the Abunzi*

When asked about the usefulness of the Oral Wiki one Abunzi we met with felt that such a technology would promote:

1. “Responsibility”
2. “Transparency”
3. “Transmission of their decisions”
4. “Regulate the Abunzi system”
5. “Provide a better more efficient service”
6. “Abunzi can correct errors in the community with this tool”
7. “[Abunzi] can more quickly make a decision”

One Kirehe district level government official who works with the Abunzi stated that “the Abunzi have a hectic schedule and the technology will ease their way of work... Abunzi do a great job. The database... would provide for a great exchange of ideas.” An information sharing tool would provide ICT tools to an important professional sector in Rwandan society.

7.2 *Benefits to the Abunzi System*

With the Oral Wiki, the Abunzi could become more knowledgeable about ways to solve cases they face. The technology would allow the Abunzi to make quicker decisions and process more cases per week. People would more quickly move forward with their lives, which would lead to a reduction in poverty. The Abunzi would provide a better level of service to their communities. The oral nature of the database addresses potential barriers to entry caused by a lack of literacy.

Several Abunzi we spoke with felt that this technology would increase accountability in the Abunzi system because Abunzi would be more inclined to follow rules if they knew their decisions would be available to other Abunzi and the government. There would be increased transparency as the recordings would be heard throughout the country by Abunzi and by the government.

7.3 *Benefits to Rwandan Communities*

The Oral Wiki would benefit Abunzi communities because it would allow people to more quickly transition to normal life. Getting back to normal life would move people more quickly out of poverty. This project would empower communities' capacity because it is a tool that will enable people at a local level to help themselves.

7.4 *Benefits to the Rwandan Government*

The Oral Wiki could serve as the first nationwide archive of Abunzi decisions. It would increase the sharing of and access to information between local and central government. A written archive could be transcribed and developed from the database. The formal justice

system could make laws with the full knowledge of the cases the Abunzi face. It would contribute to a long-term establishment of an information society.

7.5 *Benefits to Rwanda*

The Oral Wiki would move the country towards its Vision 2020 goals of building human and institutional capacity through ICT and a more skilled labor force. In Rwanda's Vision 2020, one goal is described,

“Rwanda should also aim to find a niche market in the region, for example, becoming a telecommunications hub. It is envisaged that with these reforms, Rwanda will transform from a subsistence agricultural economy to a knowledge-based society, with a vibrant class of entrepreneurs” [3].

The Oral Wiki will help Rwanda move towards its intended telecommunications and socio-economic goals. Another Vision 2020 goal is to boost professional training,

“Rwanda lags behind in professional training, with the most acute deficiency being apparent in the fields of applied and natural sciences and ICT. Although the country will continue to rely on imported technology from advanced countries, well-trained, specialized nationals will be essential to run as well as maintain technological systems ranging from medicine and agriculture to industry and telecommunications” [3].

The Oral Wiki would provide the 32,400 Abunzi with training in a new technology that would build capacity in their profession, as well as in their communities.

The Oral Wiki would contribute to Rwanda's National Decentralization Policy by facilitating communication between local and central government and by moving some of the responsibility of determining best practice out to the Abunzi. This theme of decentralization is also embedded in the Oral Wiki system of participation whereby Abunzi contribute to content and moderate it, “a new form of horizontal organization is emerging that rivals the hierarchical firm in its capacity to create information-based products and services, and in some cases, physical things” [8].

7.6 *Implementation Research*

It has been suggested that informal justice systems should remain independent from the formal justice system because according to research bringing the informal justice systems under the formal justice system has had limited success. [1] As we move forward it will be important to research how to ensure that facilitating information sharing between the informal and formal justice systems does not undermine the strength of the informal judicial system. Considering how important and preferable the informal justice systems have been in sub-Saharan Africa it is our hope that better connected informal and formal judicial systems will serve to support rather than undermine the positive attributes of the informal system.

We hope that this tool will be used to ensure the rights of all people. As we move into implementation we will observe how it is used and ensure that it is not used to discriminate against anyone.

As we implement this tool it will be important to study the way the oral interface is used as the successes and failures we encounter could contribute to future research in this field. We hope to encourage other researchers and designers to develop technologies that consider oral societies who are also disadvantaged by the digital divide.

7.7 *Informal Justice System Uses Outside Rwanda*

We hope that this tool will prove useful in other areas where informal justice systems play a vital role in peoples lives. Uganda, Malawi, Mozambique, Zimbabwe, South Africa are a few examples of countries with thriving informal justices systems.

8. Conclusions

The Oral Wiki could offer the Abunzi a professional network, information sharing, a decision archive and greater accountability and transparency. Increased access to information through information communication technologies better position disadvantaged communities with the benefits of the information age and everything it has to offer. We hope that this technology will assist Abunzi in virtually traveling to other villages to listen and debate their profession with their colleagues.

Our proposed technological solution is based on the notion that working at the community level might help bring two people together, which could in turn bring reconciliation to communities where informal justice is key to the social fabric. Informal justice actors like the Abunzi have an expertise and understanding of the challenges their fellow citizens face. They have a wealth of knowledge to offer their fellow citizens, their governments, and the world. In post-conflict countries their work assists in moving people away from conflict by offering a forum for reconciliation. For these reasons informal justice actors should be given the means to share and archive their knowledge.

References

- [1] Penal Reform International, 2000. Access to justice in sub-Saharan Africa: the role of traditional and informal justice systems. London: Astron Printers. pp. 1, 126, 126, 9, 126, 33, 129.
- [2] UNESCO, Institute for Statistics, Data Centre, 2000. [Online] Available at: <http://stats.uis.unesco.org> Keywords: Poverty (% of pop. on less than \$2 a day). [Accessed 24 November 2008].
- [3] Republic of Rwanda, Ministry Of Finance And Economic Planning, 2000. Rwanda Vision 2020. July 2000. pp. 7, 17, 11, 13.
- [4] Demographic and Health Surveys, 2005. Rwanda Demographic and Health Survey 2005. [Online] July 2006. Available at: http://www.measuredhs.com/pubs/pub_details.cfm?ID=594#dfiles [Accessed 1 December 2008].
- [5] UNESCO, Institute for Statistics, Data Centre, 2000. [Online] Available at: <http://stats.uis.unesco.org> Keywords: national literacy. [Accessed 24 November 2008].
- [6] United States of America, Central Intelligence Agency. The World Factbook. [Online] 20 November 2008. Available at: <https://www.cia.gov/library/publications/the-world-factbook/geos/rw.html> [Accessed 24 November 2008].
- [7] Hammond, A. Kramer, W. J. Tran, J. Katz, R. Walker, C. The Next 4 Billion: Market Size and Business Strategy at the Base of the Pyramid. [Online] March 2007. Available at: <http://www.wri.org/publication/the-next-4-billion> [Accessed 24 May 2008]. pp.45, 43.
- [8] Tapscott, D. Williams, A., 2006. Wikinomics: How mass collaboration changes everything. Expanded ed. London: Atlantic Books. pp. 12, 17, 11, 23.
- [9] Republic of Rwanda, Rwanda Information Technology Authority. The eSoko Project. [Online] Available at: <http://www.rita.rw/spip.php?article133> [Accessed 24 November 2008].
- [10] Okolloh, O. Ushahidi. [Online] Available at: <http://ushahidi.com> [Accessed 19 November 2008].
- [11] Hirsh, T. Dialup Radio. [Online] Available at: <http://www.dialupradio.com> [Accessed 24 November 2008].