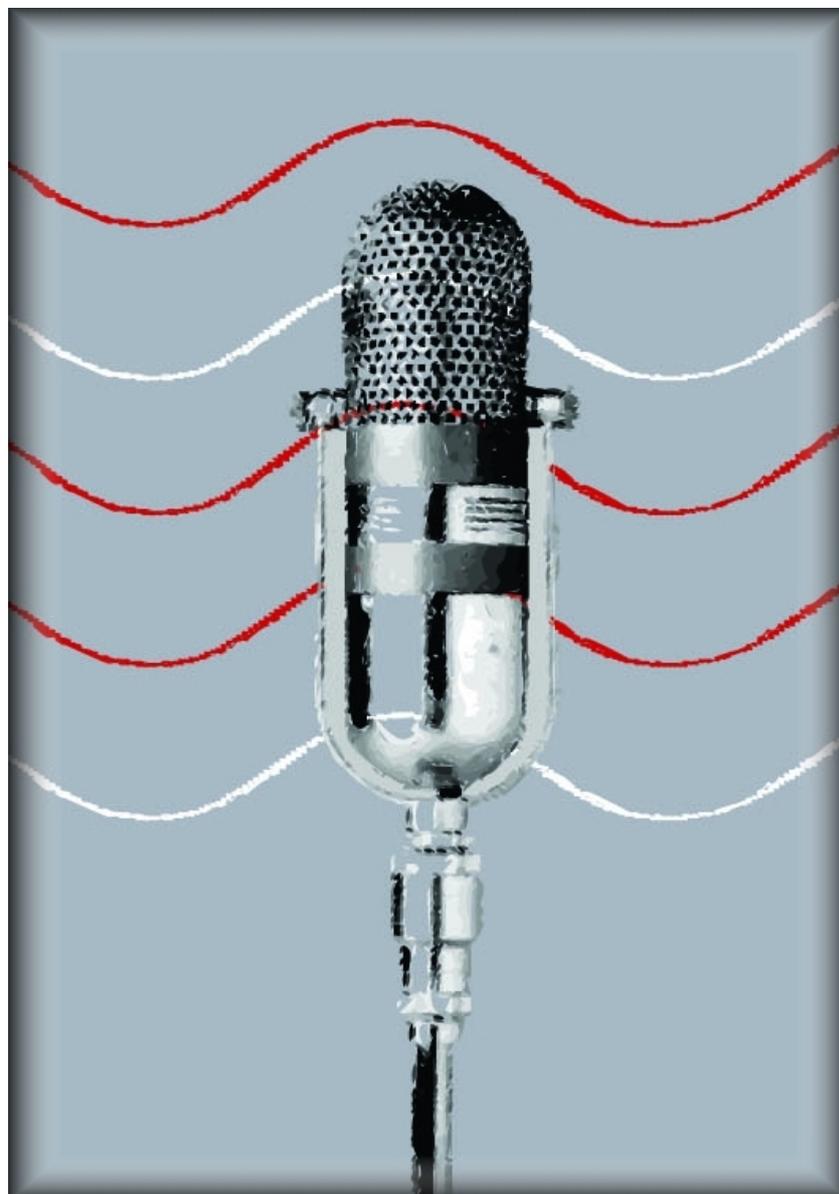


The One to Watch

Radio, New ICTs and Interactivity



Edited by Bruce Girard
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Foreword

Ester Zulberti

We live in an era characterised by rapid technological advances in the telecommunication sector which affect all spheres of human activity. New communication tools, services and practices have emerged and information has become the most distinguishing trait of contemporary societies.

Knowledge and information can greatly impact on agricultural production and food security. Improved communication systems can help rural communities access relevant and timely information on agricultural and rural development issues. With the dramatic expansion of various forms of electronic interchange, including electronic mail and the Internet, unprecedented opportunities exist for knowledge and information sharing and dissemination among development agents, policy makers and the beneficiaries themselves. Information and Communication Technologies (ICTs) can be effective means of providing development workers with huge amounts of relevant information on markets, technology, prices, successful experiences, credit facilities, government services and policies, weather, crop, livestock and natural resource protection.

However, in order to have a significant impact on development programmes, ICT services must be readily accessible and meaningful to broad segments of rural populations and the information they carry must be adapted and disseminated in formats and languages that they can comprehend. They must also serve people's needs for entertainment, cultural enlightenment, and human contact – needs which, despite being strongly felt by us all, are too often overlooked by development professionals.

The convergence of ICTs with rural radio can serve these purposes, providing a powerful support for harnessing and communicating knowledge for development, for ensuring wider access to information, and for permitting local cultural expression and development. This is especially true in rural areas, where radio is an important mechanism for the rapid diffusion of knowledge and information in a diversity of languages and formats and where its long history and time-tested participatory methodology make it the most widespread and popular communication medium. The combined use of the two media not only allows wider access to a wealth of information, but it also provides an effective mechanism for bottom up articulation of real development needs.

This publication provides an overview of the most significant experiences in combining radio and ICTs to sustainable development. It is a result of numerous attempts by FAO's Communication for Development Group to foster information exchange and collaborative partnerships in rural radio initiatives. We hope that the reader will find in these pages some useful insights for stimulating discussion and concrete action in the context of their own development work.

Ester Zulberti
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Preface

Bruce Girard

In February 2001, the FAO organised an International Workshop on rural radio entitled *Information and Communication Technologies Servicing Rural Radio: New Contents, New Partnerships*. The fifty workshop participants exchanged experiences and developed ideas for how radio and ICTs could be used together to support rural communities. We were enthused by the idea of combining radio with the Internet and with its potential for breathing new life into radio and for making the Internet's information truly accessible to rural populations. As Carleen Gardner, FAO's Assistant Director General for Information, said at the conclusion of the workshop:



Sometimes looked down upon as the “poor relation” of television, and certainly considered old-fashioned compared to the Internet, radio today has become the one to watch. That may sound like a bad pun, but as our discussions here this week have proved, radio's stock is rising like never before. Still the most portable communication medium, the most widespread and the most economical, radio is now proving itself versatile enough to go hand-in-hand with the Web.

This book grew out of that workshop. It focuses on the use of the Internet by radio stations in their efforts to support initiatives for democratic and sustainable development and it includes insights and experiences from all parts of the globe.

It was also inspired by two conferences organised by Comunica and sponsored by the Friedrich Ebert Foundation. The first, in Kuala Lumpur in 1999, was attended by broadcasters, Internet activists and policy makers from Asia and the second, held in Florida in 2000 focused on the convergence of independent and community radio and ICTs in Latin America and the Caribbean. Both of these conferences were attached to the annual gathering of the International Institute of Communications, an organisation founded thirty-four years ago with the then unique idea of bringing together people from broadcasting and telecommunications.

While Ms. Gardner's comment inspired the title of the book, reminding us of the versatility and potential of the radio ICT combination, the subtitle *Radio, New ICTs and Interactivity*, merits a few words here. This book is not concerned with how individuals or communities can interact with radio stations or the Internet via instant polling, “personalised” web interfaces, phone in radio programmes or remote broadcasts from the town market. Instead it focuses on interactivity as a social communication process – people and communities interacting with each other rather than with the media. It is about how radio, in combination with the Internet, can better inform people about themselves and the world, stimulating (interactive) communication within and between communities, and leading to a common understanding of problems and to common proposals for their resolution.

The chapters in this book are grouped into five sections. The five chapters in the first section introduce concepts and context important for understanding and analysing radio and Internet projects. The next three sections of the book each look at a number of cases of radio and ICT projects, organised into the broad categories described in chapter one – networking projects, community intermediary or gateway projects, and projects connecting migrants with their home communities. The final section includes three chapters with information that will be particularly useful to readers unfamiliar with rural radio and the essential role it plays in

people's lives. Jean-Pierre Ilboudo and Robert Hilliard situate rural radio in a historical perspective, considering the development of the medium in Africa over the past half century and over a span of almost 100 years in the USA. A chapter from Latin America illustrates how a "typical" rural radio station works to fulfil a community's day to day communication needs.

There are numerous people to thank for this book. Loy Van Crowder first conceived it when he was in the Research, Extension and Training Division of the FAO. The staff members of the Communication for Development Group provided support throughout the production process and Marianne Sinko designed the book. Claudia Rodríguez designed the cover. Scott Eavenson translated chapters four, thirteen and fourteen from their original French and Spanish. Amy Mahan provided insights, editing assistance and invaluable support. Reinhard Keune, who passed away a few months before the book was completed, deserves special recognition, both for his support of this project and for the vision and commitment that marked his career at the Friedrich Ebert Foundation and his two terms as president of the UNESCO's International Programme for the Development of Communication.

Section I

Concepts and Context

This first section includes five chapters that introduce important concepts and context for understanding and analysing radio and Internet projects.

The introductory chapter, *Mixing Media to Bridge the Divide*, provides an overview of the how radio and the Internet are being used together in various development and democratic communication projects. It also introduces the book's structure, classifying the work being done into the three types of projects that are separately examined in the following sections.

Alfonso Gumucio's chapter, *Take Five: A handful of essentials for ICT in development*, takes a critical look at the Internet's development potential and proposes five "non-negotiable conditions for ICTs in development".

In the chapter by Jean-Pierre Ilboudo and Riccardo del Castello, *Linking Rural Radio to New ICTs in Africa: Bridging the rural digital divide*, the authors present the FAO's experience with rural radio in Africa and recent efforts to introduce ICTs into rural radio as a way of promoting new content and new partnerships.

Lynda Attias and Johan Deflander also aim to separate the hype from the reality. Their chapter, *The Information Highways are still Unpaved*, weaves together comments of West African radio journalists and the authors' own observations and proposes an approach for integrating radio and the Internet more suitable to the West African reality.

In his chapter on *Public Radio and the Internet in the United States*, Robert Ottenhoff, formerly the Chief Operating Officer of the Public Broadcasting System (PBS) in the USA, provides three examples of how the Internet and radio complement each other in the country that invented the Internet.



Chapter 1

Radio and the Internet: Mixing media to bridge the divide

Bruce Girard

At the beginning of the last century, on December 12, 1901, Guglielmo Marconi, demonstrated the communication potential of radio technology, transmitting three dots, Morse code for the letter “S”, from Cornwall, England to Newfoundland in what is now Canada. Marconi’s 1901 transmission is worth noting here for two reasons.



First, the innovations that accompanied this early radio transmission were the same ones that enabled modern broadcast radio. Technology advanced at the pace we grew accustomed to in the 20th century and only five years after Marconi’s historic transatlantic broadcast, radio operators on ships in the Atlantic were surprised to hear a human voice emitting from the Marconi-built equipment instead of the dots and dashes of Morse code. Three years after that, the first regularly broadcasting radio station was transmitting news and recorded music programs every Wednesday night to a handful of pre-Silicon Valley residents of San José, California who had bought radio receivers before there were stations to listen to.

Second, the wireless communication afforded by Marconi’s experiment was more than just a technological advance. It was also an important milestone for the rapid globalisation that was one of the most significant phenomena of the last century, and of the large-scale social and economic consequences that accompanied it. By today’s standards, sending the letter *S* from one side of the Atlantic to the other is a modest achievement, but Marconi’s transmission was the first real-time, speed-of-light, global communication. For those in the centres of global economic activity, it was a harbinger of the information society. For those on the periphery, it was the analogue precursor of the *digital divide*.

This chapter will first examine characteristics of the two information and communication technologies that feature in this book – radio and the Internet. We will look at the imbalanced global expansion of the Internet and some of the limitations that this imposes when applying North American or European models for its use in the less-industrialised regions, especially in rural areas. We will then turn to some of the characteristics that have enabled radio’s success in the same regions.

The primary argument of this chapter, and indeed of the collection of chapters in the book, is that the combination of the Internet and broadcast radio offers a new and potent range of possibilities for development communication projects. The second section of the chapter looks at some of these projects, grouping them into three broad and occasionally overlapping categories:

- Projects which create or support networks of broadcasters;
- Projects in which the radio station serves as a gateway or community intermediary, providing mediated but effective and meaningful access to the *knowledge and information potential* of the Internet;
- Projects which use the radio/Internet combination to facilitate communication with migrant communities, providing mediated but effective access to the *communication potential* of the Internet.

Finally, there are some preliminary conclusions and suggestions for the way forward.

Internet for Development

A century after Marconi's transmission, the so-called *digital divide* occupies an important place on the agenda of governments, international agencies, and civil society organisations around the world. Over the past few years there have been countless seminars, studies and statements about it and various related issues such as *digital opportunities* and *Internet for development*. Governments have adopted national IT policies and liberalised the telecommunications sector to try to attract investment. Hundreds of new NGOs have sprung up in the last decade, first to affordably extend the network to civil society sectors in both industrialised and less-industrialised countries, and later to promote effective use of it. On the intergovernmental level many UN agencies, the G7 (later the G8) group of industrialised countries, the World Bank and several regional bodies have put ICTs and development high on their agenda. The World Summit on the Information Society, hosted by the International Telecommunications Union on behalf of the United Nations, is the latest and biggest international effort to focus international attention on the issue. Not surprisingly, the Internet has provided the most active forum for discussion of it – typing “digital divide” in Google's search engine returns about 459,000 references.¹

The debates around the digital divide and Internet for development have focused uncovering new areas of global inequality and imagining new opportunities for development. However, with an enthusiasm for the new, these often overlook lessons learned in earlier efforts to understand and change other social, economic and quality of life divides that separate rich countries from poor ones. One of the most important of these is that *the reason people in poor countries do not have wide access to the Internet is because they are poor – the same reason they have inadequate water, education, healthcare, electricity, and transport*. And, while investment in the Internet could help them improve their lives, so could investment in water, education and healthcare.

A second similarity between the Internet and development issues such as education and healthcare is that local participation is essential if projects are going to address local problems or be attuned to local capacities. As Alfonso Gumucio points out in his contribution to this book (chapter 2), the history of development aid is strewn with the carcasses of “white elephants”, massive projects that failed because they did not adequately consult with local communities. Telecommunications projects are not immune to the white elephant syndrome. We have all heard stories of communities unable to tap into the telecom wires hanging over their heads because of some minor regulatory or technical oversight, and of hugely expensive telecentres that fall into disuse because of a lack of maintenance skills or that are inaccessible to women because they fail to adopt gender sensitive training or management policies.

In the past decade the international community has expended tremendous effort and expense in telecom development. Major initiatives have been taken to encourage the privatisation of State telephone monopolies, to invite foreign direct investment in the sector and to introduce competition. The results have been impressive in certain areas, notably prepaid mobile telephony, which has experienced rapid take-up wherever it has become available – primarily in urban centres. There has been virtually no progress in making the Internet available in the least developed countries, especially in the rural areas.

While the numbers vary according to who is counting, a quick look at data shows how little progress has been made in extending the Internet to less-industrialised world. According to NUA, an Irish company that has been tracking Internet use surveys since 1995, there are 606 million people online in the world – about 10 percent of the world's population.

¹ In contrast, “social divide” turns up 3,900 pages and “economic inequality” 33,000 (February 2003).

Of these, 62 percent are in North America or Western Europe, home to ten percent of the world's population. The Asia/Pacific region accounts for almost 31 percent,² almost two thirds of them mostly concentrated in a few countries. Barely five percent are in Latin America. Sub-Saharan Africa, with roughly the same population as North America and Europe combined, has about one percent of the world's Internet users.³ Sixty percent of US adults have Internet access, while in Africa, around one percent of the population is online – half of them in South Africa and *virtually none in rural areas*. And let us not forget that one third of the world's population has no access to electricity, billions have never made a telephone call, and there are nearly twice as many illiterate adults (98 percent of them in less-industrialised countries) than there are people online. Far from making progress in efforts to bridge the digital divide, the trends show growing inequality between the *info-rich* and the *info-poor*.

If the only way of harnessing the Internet's development potential is to bridge the *digital divide* by providing rural residents of less-industrialised countries with whatever level of service is enjoyed in the developed world, then we should not expect to succeed in our lifetimes. Moreover, even if we were to succeed, it would not solve the problem. Connectivity is the tip of the iceberg and below it lie many complex factors that impede the Internet's take-up by the majority of the world's population. Among them are:

- Illiteracy – UNESCO estimates that there are one billion illiterate adults in the world, approximately 25 percent of the total adult population. Most web content, especially development-oriented content, is written;
- Language – If you can read, can you read English? While there are more than 6,000 languages in the world, the Internet is dominated by English, with another dozen or so having significant presence. At least 20 percent of the world's population speaks languages which are almost entirely excluded from the web.⁴
- Content – You can read English, but can you find local, relevant or contextualised content?

While technology is important, escaping from poverty requires knowledge, and knowledge does not come from technology but from experience and **relevant and meaningful content**, digital or not. Content that explains useful agricultural techniques or the workings of local markets can be transformed into knowledge and contribute to increased production and better prices. Content about locally available traditional medicine or about nutrition can lead to longer and better lives. Content about rights, responsibilities and options can be both a prerequisite and a catalyst for democracy.

It is also becoming clear that the distribution systems for knowledge are most effective when building on the local information systems currently in use. These local systems are not made of wire or glass fibre, but they are human communication systems. This means that in addition to infrastructure, successful uses of the Internet will incorporate what Richard Heeks refers to as *community intermediaries*, institutions and individuals that use the Internet

² 70 percent of these are concentrated in three countries – Japan with 56 million users, China with 50 million and South Korea with 26 million.

³ NUA Internet Surveys, September 2002 <www.nua.ie/surveys/how_many_online/>. Estimates of the number of people with access to the Internet vary widely depending on methodology and definitions used. NUA's figures, based on a compilation of many individual surveys, attempt to measure the number of people who accessed the Internet at least once in the previous three months, regardless of whether they have their own computer or Internet account. NUA's methodology is described at <www.nua.ie/surveys/how_many_online/methodology.html>.

⁴ According to a study published by VilaWeb.com in 2000, based on Data from AllTheWeb, English is the most common language, with 68.4 percent of web pages, followed by Japanese, German and Chinese. French is in fifth place with 3 percent and Spanish is sixth with 2.5 percent <cyberatlas.internet.com/big_picture/demographics/article/0,1323,5901_408521,00.html>.

and serve as a bridge between it and the community members. Community intermediaries come from the community itself. They can be midwives, teachers, agricultural extension workers, experienced elders or others with a formal or informal role in the local information system. The characteristics that make a good community intermediary include “proximity, trust and knowledge (including the ability to combine ‘techknowledge’ about ICT with ‘context knowledge’ about the environment in which it is used)”⁵.

Thus, while the Internet is one route for accessing knowledge, direct access to its infrastructure is neither the only way nor, in most cases, the best way to use it for development. As community intermediaries, local radio broadcasters have shown strength in the past and, with the right strategies and policies, they can play an essential role in the future.

Radio

More than ninety years after the world’s first station was founded, radio is still the most pervasive, accessible, affordable, and flexible mass medium available. In rural areas, it is often the *only* mass medium available.

Low production and distribution costs have made it possible for radio to interpret the world from local perspectives, and to respond to local needs for information. More than any other mass communication medium, radio speaks in the language and with the accent of its community. Its programming reflects local interests and it can make important contributions to both the heritage and the development of the cultures, economies and communities that surround it.

More than any other medium, radio is local. In Latin America, for example, while most radio is produced locally or nationally, only 30 percent of television programming comes from the region; with 62 percent produced in the United States.⁶ Quechua, a language spoken by some 10 million people in Bolivia, Ecuador and Peru, is all but absent from the region’s television screens, but in Peru alone an estimated 180 radio stations regularly offer programmes in the language. The same is true in Africa, where local radio stations produce their own programs and speak in the hundreds of languages of their communities.

Radio is also widely available. While there are only two telephone lines for every hundred people in Africa, there are twenty radio *receivers* per hundred – even in rural areas most households have access to a receiver. Radio *stations* are also common. Fifteen years ago there were only ten independent (non-State) radio stations in all of sub-Saharan Africa; now there are thousands, many of them located in small towns and serving rural communities. Rural residents, women, youth, ethnic and linguistic minorities and even children have benefited from the explosion of radio in Africa and can now see themselves reflected in the media for the first time. Latin America never had the same State domination of the radio, but it also experienced a boom of local and independent radio stations in the 1980s and ‘90s.

Long before the Internet popularised the notion of the convergence of media and telecommunications, local radio stations were fulfilling a role as a “community telephone” with several hours a day reserved for broadcasting personal messages, birth and death announcements, invitations to parties, ordering food and supplies from the store in the next village, calling for emergency medical assistance and even for receiving personal medical advice from the local doctor. Many radio stations were working in multimedia before that term was popular, too – often serving as a community hub, with communication activities including publishing, video production, and even operating cinemas.

⁵ Richard Heeks, *Information and Communication Technologies, Poverty and Development*, 1999, Development Informatics: Working Papers, Institute for Development Policy and Management, University of Manchester <www.man.ac.uk/idpm/di_wp5.htm>.

⁶ UNDP Human Development Report, 1999, p. 34.

In many rural areas radio is the only source of information about market prices for crops, and thus the only defence against speculators. It is used in agricultural extension programmes, is a vehicle for both formal and informal education, and plays an important role in the preservation of local language and culture.

While in some parts of the world we take radio for granted, seeing it as little more than an accessory for an automobile, in others it fulfils a variety of roles: it is the only mass medium that most people have access to; it is a “personal” communication medium fulfilling the function of a community telephone; and it is a school, the community’s primary point of contact with the global knowledge infrastructure.

Radio has demonstrated tremendous potential to promote development. Relevant, interesting and interactive radio enables neglected communities to be heard and to participate in the democratic process. And simply having a say in decisions that shape their lives ultimately improves their living standards.

Next Generation Radio

Probably the four most important characteristics contributing to radio’s success as a medium for development are: (1) its pervasiveness, (2) its local nature, (3) the fact that it is an oral medium, and (4) its ability to involve communities and individuals in an interactive social communication process.

While the first three are fairly straightforward, it is useful to clarify the concept of an *interactive social communication* in order to distinguish it from *interactivity*. The latter is usually applied to the Internet and refers to individual users’ ability to interact with a website or directly with another individual or a company via email. Radio also offers this possibility, via the use of telephone call in programmes, open microphone shows, letters, etc. However, radio excels at stimulating *interactive social communication* within a community. A local issues programme, for example, informs listeners about a community problem and thus stimulates interactive communication among members of the community as they go about their daily lives (now unmediated by the radio), possibly leading to development of a common understanding of the problem and proposals for its resolution. As time goes on, these proposals can be fed back into the loop in the form of another radio programme, and further discussed, refined and acted on in the community.

The Internet is characterised by interactivity, and, technically, its potential in this area is far greater than radio’s. It is also a store of useful knowledge and among its millions of pages there is a tremendous amount of information relevant to development issues. However, the barriers we have already looked at – access, literacy, languages, appropriate content – present overwhelming obstacles that will have to be overcome before most of the world’s population will be able to surf the net to find solutions to their poverty.

Alternative models are being explored, including telecentres and cybercafés, mentoring projects, translation and text to speech software. Some of these are already making the Internet more accessible. Over the past few years a number of experiments blending independent local radio and the Internet are creating new models.⁷ Similar experiments have also been undertaken in Africa, and donors are increasingly interested in the initiatives.

⁷ Many of these experiments were presented and discussed at a pair of seminars supported by the Friedrich Ebert Foundation, one examining Asian experiences and the other focusing on Latin America and the Caribbean. See *Converging Responsibility: Broadcasting and the Internet in Developing Countries*, <www.comunica.org/kl/> and *Mixed Media / Medios Enteros: Broadcasting and the Internet in Latin America and the Caribbean*, <www.comunica.org/tampa/>.

The One to Watch – Radio, New ICTs and Interact

In North America and Europe many radio stations offer their programming over the Internet, using “streaming” software such as RealAudio or Windows Media Player (including a growing number of Internet-only stations). Radio-Locator,⁸ a website that lists radio stations on the Internet currently has links to more than 2,500 audio streams from stations world-wide. Many of these stations are merely extending their reach, using the Internet to make their programmes available to geographically distant listeners, but some are using the interactive capabilities of the Internet to provide value-added service to local listeners. A few examples of this are provided in Robert Ottenhoff’s contribution about how public radio in the USA is using the Internet (chapter 5). While the value-added services described by Ottenhoff were designed for the USA, where many listeners have access to the Internet, they nevertheless provide ideas for innovative possibilities for using the Internet’s interactivity to enhance radio’s interactive social communication.

Development projects experimenting with radio and the Internet are emerging in very distinct environments and seeking to address very different sets of problems. In general these projects have taken the three main forms mentioned earlier in this chapter: projects to support radio networking and exchanges, gateway or community intermediary projects, and projects that link migrants to their home communities.

Networks

Radio networks for exchanging information and programming have been around almost as long as broadcast radio itself. In the United States, where commercial radio is the norm, CBS and NBC built national networks in the 1920s and 1930s. In countries where radio first emerged as a public or state service, it was a networked monopoly almost from the beginning. Later, when independent and local stations emerged (at very different times in different parts of the world) they too saw the advantages of networking information and programmes. Networks not only offer an economic advantage, since spreading the cost of programme production across several radio stations reduces the cost to each station, but they also permit a better and more complete service for listeners, incorporating, for example, national and international news and providing a distribution channel for third party programs. The problem was that, until very recently, the only infrastructure within the grasp of independent radio stations in less-industrialised countries was the postal system, slow and notoriously unreliable, especially outside major cities.

Despite the distribution problems, many networks did exist in less-developed countries, especially in Latin America, where independent alternative radio was invented more than fifty years ago. Initiated by Chasqui-Huasi in Chile and then taken over by the Asociación Latinoamericana de Educación Radiofónica (ALER – the Latin American Association for Radio Education), *Informativo Tercer Mundo* (ITM) was a weekly news programme distributed by mail on cassette tapes and based primarily on news from Inter Press Service, a global news service with a distinctly Southern perspective. Even though it was common for three to four weeks to pass between the time the news occurred and time the tape was finally aired, ITM was a fresh change to the normal international news carried by the stations, which usually consisted of reading news stories from newspapers bussed in from the capital (and often at least a few days old), or by retransmitting the news from the international short-wave services from Europe or the United States.

On a more global scale than ITM, the Developing Countries Farm Radio Network (DCFRN) has been operating a distribution network since 1979. In its earlier years DCFRN produced radio programmes and mailed the cassette tapes to stations in Africa, Asia and Latin America. Later the cassettes were replaced by scripts, which broadcasters could more easily adapt to suit local needs, languages and programme formats.

⁸ <www.radio-locator.com>

Long before the Internet was widely available a few small radio projects were using computers and modems to network radio stations. As early as 1987 a project based in Central America was sending a weekly radio news bulletin from the Salvadorean guerrilla station, Radio Farabundo Marti, to campus and community stations in Canada using a 2400 bps modem connection over an international telephone line. Once the bulletin reached Canada it was redistributed to stations via fax and a pre-Internet commercial email system.

By the mid 1990s the Internet started to become more widely available and the Agencia Informativa Púlsar began serving Latin American stations out of Quito, Ecuador (see chapter 11). The first major initiative to link independent radio stations via the Internet, Púlsar began operating in 1996, sending a daily text-only “rip and read” news bulletin to forty-eight subscribers. Introduced at a time when Internet connectivity was still difficult in the region, donors, existing networks and associations, and even the agency’s few subscribers were sceptical. By the time it ceased operations five years later it was offering a variety of services, including 15 to 20 news items every day and full audio for stations that had the capacity to use it, to more than 2,500 subscribers in fifty countries. Scaleability was one of the most important characteristics of the Púlsar experiment – stations with poor connectivity could receive the daily text bulletin by email, while those with better access and equipment could choose to receive audio clips or to download the full audio news bulletin from the website.

Internet news exchange projects also emerged on the national and global levels. Kantor Berita Radio 68H is an Indonesian radio news agency established in 1999, not long after the end of the authoritarian Suharto regime (see chapter 10). Suharto had banned independent news programs and obliged the country’s thousands of radio stations to carry an official newscast. Suddenly able to broadcast news, radio stations were unprepared. The only network was the government’s, as were the only trained radio journalists. The 68H news agency stepped in to support and broaden the country’s fragile democracy. Like Púlsar, 68H also began modestly, with fourteen member stations exchanging several one-minute audio programmes each day via the Internet. However, Indonesia’s Internet infrastructure is not up to the challenges of its geography, with 200 million people scattered across an archipelago of 17,000 islands and 68H now uses a low-cost satellite channel to distribute its programs from the capital, with the Internet primarily used for receiving programmes from member stations. By the time 68H celebrated its second anniversary, it was already Indonesia’s preferred news source, reaching 20 million listeners all over the country.

Initiated in 2000 as a joint project of Panos (London) and One World, *InterWorld Radio* commissions journalists to file reports on economics, the environment, science and technology, human rights and social change and makes them available via email or on the web (see chapter 12). Its services include both daily summaries of news stories and regular features. InterWorld Radio’s programs are intended to be equally suitable for radio stations in the North and South, although its claim to be a “global” service is a qualified one, since its services are only offered in English.

Technically, InterWorld Radio tries to provide something for everyone. If you have a bad Internet connection, you can get daily text summaries of its programs by email. If you have a highspeed connection, you can download broadcast quality versions in either MP3 or RealAudio format, and if you just want to listen online, lower quality *streaming* audio is available, also in either MP3 or RealAudio format. With digital technology, offering a variety of formats takes very little time and effort and helps ensure a wider distribution of the programmes.

Gateways

Making a streaming audio signal available on the Internet is a way of extending a radio station’s reach; gateway projects do the reverse, using the radio to extend the reach of the

Internet. In the same way that a single cybercafé or telecentre with a few computers can be an efficient way of increasing the number of people connected, providing access for dozens of people with only a few computers, a radio station with thousands of listeners that makes active use of the Internet can address the problem of access to the Internet's wealth of information with a tactic of *digital multiplication*, multiplying the impact of its Internet connection.

The UNESCO-supported *Kothmale Internet Project* in Sri Lanka is considered from two different perspectives in this book (see chapters 6 and 7). Kothmale is one of the best-known examples of a radio station adopting the role of a gateway or community intermediary between its listeners and the Internet. Located within Kothmale Community Radio, a semi-autonomous radio station located in an agricultural region, the Internet Project has two main components: a community telecentre, with a dedicated line; and *Radio Browsing*, a daily two-hour radio programme in which broadcasters take the Internet to the community by surfing the web in search of answers to listener queries. Sifting through the Internet's terabytes of data, *Radio Browsing* finds information that is useful to the communities and then interprets it – making *useful* information *meaningful*. It plays a role that is part search-engine, part librarian, part journalist and part translator (English is the language of the Internet, but not of most Sri Lankans).

Kothmale's *Radio Browsing* model puts the technology on centre stage, raising its status from back office research tool to virtual studio guest. At times this can seem needlessly distracting – reading URLs on the air or listening to the sound of webpages downloading is not engaging radio. However the decision to make the technology feature almost as prominently as the content is related to one of the *Radio Browsing* model's primary objectives to promote the use of the Internet. In addition to listening about the Internet, listeners are also encouraged to visit the station to access it directly via the public access computers located there. While Kothmale is best-known for its model of blending the Internet with radio, preliminary evaluations indicate that it has been more successful at promoting Internet use. As one observer remarked, “the reality of the place is considerably more impressive than the hype!”

Throughout the less-industrialised world there are hundreds of lower profile examples of stations taking on a gateway function. Some of these do little more than download news from CNN and other international sites, but a growing number are discovering the potential of the Internet and actively searching for and repackaging information to match local development needs. In Latin America, for example, it is common for magazine-format programmes to receive questions from listeners, research them, and then provide advice on the air. Research resources are whatever is available – a fifteen year old encyclopaedia set, a local agricultural extension worker, a health clinic – now the Internet is replacing the outdated encyclopaedia and supplementing local expertise.

A Peruvian experiment is planning something similar in conditions where local radio stations do not have access to even a basic community library, much less the Internet or a telephone. The radio stations will be equipped with short-wave radio transceivers enabling them to communicate with the Intermediate Technology Development Group's (ITDG) office, located in the provincial capital many hours away. Using the transceivers they will relay questions from the community to ITDG, who will research them using whatever sources they have available, including not only the Internet but also indigenous expertise and experience available in the communities. Answers and advice will be sent back to the station and also included in a database which will be available on the web and distributed on CD ROM to radio stations and other information centres in the communities that are equipped with computers. In this way the database will be not only a living record of the questions and answers most sought out in the communities, but also a tool for collecting, ordering and sharing local knowledge.

Of course, while the possibilities are increasing, many problems will have to be overcome before radio will be able to realise its full potential as a gateway. In their contribution to this book Attias and Deflander (chapter 4) detail many of the barriers that must be overcome by broadcasters in West Africa attempting to incorporate the Internet into their work. Access to infrastructure, cost of equipment and use, language and lack of appropriate and meaningful content are among the familiar factors that complicate efforts to incorporate the Internet into programming, but there are others, many of them more complex and more deeply rooted in culture and society. These include social hierarchies, inflexible administrative structures of the radio stations themselves, and cultural differences that make it more difficult to use the Internet. For example, the icons on a webpage that make it *intuitive* to one user, may be a code that has to be broken by another user with a different background and set of cultural symbols.

On the positive side, the barriers faced by a radio station are much easier to overcome than those by individual users simply because the reward is greater. While individual users might find it difficult to get training and impossible to have content produced to serve his/her particular needs, training, support and even customised content is more readily available to radio broadcasters. Attias and Deflander propose solutions that include national “flagship” stations with expertise and access to the Internet. These centres would repackage and redistribute content to other stations, using whatever means is available, including conventional means such as cassettes and CD ROMs distributed by mail. The Russian Rural Information Network, described by Nancy Bennett in Chapter 9 proposes another model for supporting and simplifying local broadcasters’ work by centrally packaging information for further processing at the local level according to specific community needs.

Communication with migrants

While the above initiatives build on expanding the reach of the Internet through traditional and geographically defined communities, the configuration and location of communities is also changing, creating new needs and opportunities. Radio and the Internet are playing a role here, as well.

With an estimated 75 million short and medium term international migrant workers and their dependants in the world today, international migration is both a consequence and a driving force of globalisation. Most of these workers retain, or would like to retain close ties with families and communities in their countries of origin.⁹ These ties, enhanced and supported by the use of ICTs, make a significant contribution to development in a number of important ways.

On the one hand, migration has an important economic impact. Twelve years ago migrant workers sent a total of \$65 billion home – \$20 billion more than the total amount of official development aid at the time. In many countries money sent home amounts to one of the largest single sources of foreign currency, often *the* largest.

Perhaps of even greater value than their financial contribution, migrant communities also contribute their knowledge and expertise to the development of their communities, often using the Internet. Quipunet¹⁰ and the Lanka Academic Network¹¹ (Lacnet) are two Internet-

⁹ Those who stay behind also want to communicate and one of the main reasons people in developing countries start using ICTs is to communicate with family members who have migrated. See, for example, the work of Ana Maria Fernandez Maldonado in which she argues that one of the main factors behind the growth of Internet in Peru is the desire of residents to communicate with the more than one million Peruvians living in the United States.

<www.bk.tudelft.nl/users/fernande/internet/Barcelona.pdf>.

¹⁰ <www.quipunet.org>

¹¹ <www.lacnet.org>

The One to Watch – Radio, New ICTs and Interact

based projects that have sought to make the Diaspora's resources available to support educational and development projects in Peru and Sri Lanka respectively.

Radio stations often play a role linking migrant communities with their homes and cultures. Stations in the home country will broadcast news from migrant communities, even to the point of maintaining correspondents in important migration destinations. In some cases migrant communities secure a few hours a week on community or multi-lingual stations in their new host country and broadcast programmes with news and cultural content from "home" mixed with content related to the new environment. New information and communication technologies are expanding the possibilities.

More than a decade ago, predating the Internet's appearance in the country, emigrants from the Kayes region of Mali living in France maintained regular contact with Kayes Rural Radio as a way of getting news from home. When the station faced a sudden financial crisis brought on, in part, by the sudden loss of donor assistance from Italy, the support group quickly went to work printing leaflets and raising money to keep the station going. Working together with the station, the group also came up with a novel idea for making money – a fax machine was installed in the station and the residents in France were able to pay a fee and have their faxed messages read out over the radio station.¹² A similar experience is discussed in the chapter on emerging developments in radio message services in Mexico (chapter 13). Radio stations located in rural areas without telephone service have always provided a messaging service, dedicating up to several hours per day to broadcast personal messages to and from people who may live many hours or even days from each other. The addition of the Internet to this "airwave mail" service extends its reach and its usefulness for linking migrants and communities.

Webcasting is becoming increasingly common, with thousands of radio stations world-wide making some or all of their programming available over the Internet. While there are few webcast listeners in developing countries, an increasing number of stations are making their programmes available. *Radio Ondas Azuayas*¹³ in Cuenca, Ecuador, a country that has seen 10 percent of its population leave in the past two years as a result of an economic crisis, directs its webcasts at Ecuadorians in the USA and Spain. In addition to informing them of local events, the station also maintains a voicemail box in the United States. Listeners to the webcasts can record messages which are then sent to the station as audio files via the Internet and broadcast over the air. In this way emigrants can not only listen to the station, but actually participate in programming.¹⁴ Also Ecuador-based, *Callos y Guatitas* (chapter 14) uses radio stations in two countries, the Internet and a satellite to facilitate a weekly interactive programme linking Ecuadorian migrants in Spain with their home communities.

The way forward

Like the ship radio operators in 1906 who were surprised to hear a human voice over their Morse code equipment, rural inhabitants in some of the remotest parts of the world are now tapping into the digital world via their radios.

¹² See Pascal Berqué, "The Hard Lesson of Autonomy: Kayes Rural Radio," in Bruce Girard (ed) *A Passion for Radio*, Black Rose Books, Canada, 1992. An electronic edition of this book is online at <www.comunica.org/passion/>.

¹³ <www.ondasazuayas.satnet.net/>

¹⁴ There are a number of services that offer free or low-cost voice-mail numbers in European, North American and a few Asian countries. A person living in the USA dials a local phone number and records a voice-mail message which is automatically forwarded to the subscriber's (in this case a radio station) email account as a .wav file for broadcast.

The 21st century challenge is to strategize the best formulation for ensuring the benefits of the Internet reach the digital deserts, where affordable access to the technology is not available and where effective use faces a series of cultural, linguistic and content-related challenges. Knowledge for development research has highlighted the imperative of spreading access to information resources. Building and improving ICT infrastructure will be an important element of a strategy aimed at making information *available*, but a successful strategy must also focus on ensuring that information is *meaningful* within an existing knowledge infrastructure. Radio broadcasters throughout the world are becoming aware of the role they can play in this.

There are many lessons to be learned from the contributions to this book. It is clear, for example, that the blending of old and new communication and information technologies has the potential of making a valuable contribution to development and democracy. It is also clear that there is no single model and that like all development communication projects, there are basic principles that must be kept in mind.

Technology is not necessarily the barrier

As we will see in the examples highlighted in this book, access to new ICTs need not be understood to be *the* significant barrier to participating in an information society or even to using the Internet for development. There is no need to wait until access to the Internet is universal before capitalising on the development opportunities it offers.

We should not underestimate what can be done when limited technology is combined with determination and imagination (nor should we underestimate the levels of determination and imagination available). ICTs are adaptable and if basic tools and knowledge are available, people will find a way to make the technology serve their communication needs. Adaptability and decentralisation are the fundamental characteristics that have made radio so enduring and effective because they have allowed for different approaches to its use in terms of range, interactivity and content, enabling it to integrate so effectively with existing social communication networks and practices.

Rather than convenient one-size-fits-all type solutions, radio ICT projects should emphasise adaptability and decentralisation, choosing, for example, technological solutions that are scalable – allowing users (both radio stations and listeners) to define and refine levels of sophistication and interactivity depending on communication needs, practices and the level of access that is available to them.

Technology is not a panacea

Technology can play an ambiguous role in the pursuit of goals such as pluralism, decentralisation and democratic development. The initiatives discussed in this book all aim at promoting these goals, but it is easy to identify uses for the technology that could efficiently deprive local communities of their autonomy and limit pluralism on the airwaves. In the United States, for example, the introduction of digital satellite technology that enabled relatively low-cost radio networks was accompanied by a frenzy of purchases that has seen thousands of independent stations absorbed by a handful of networks.¹⁵ Formerly independent stations have replaced local programming with network programming in a move that has limited the diversity of the nation's radio. The same is happening in Argentina, Brazil, Peru and many other South American countries.

¹⁵ One third of US radio stations changed hands between 1996 and 1999. In the more regulated UK market, the four biggest commercial radio groups owned only one third of the private stations but accounted for 70 percent of total revenues, with smaller groups and independent stations struggling to break even.

Fifteen years ago *rural radio* in Africa was not local. It was a model of State paternalism in which programs were produced by experts in the cities and beamed to “ignorant” peasants in the countryside on the State radio frequencies. This has changed and rural radio is now local and participatory. However, it will be sadly ironic if the introduction of network technologies results in the emergence of a new commercial paternalism. Similarly, while emerging models of community multimedia centres offer the promise of democratic development, it is a promise that can easily be corrupted if adequate policies and practices designed to keep them responsive to community needs are not in place.

Harnessing knowledge for democratic development

The injection of the Internet’s digital DNA is already changing the nature of radio and will undoubtedly mean that the radio’s next generation will be a new species, with a different sound and a different way of relating to its community. The projects discussed in this book offer some insight into what that might be like in the developing world, but they represent only the first few steps in the transformation of the two media. There are tremendous opportunities for broadcasters but in order to take advantage of them we will have to experiment and to develop visions that respond to the distinct needs and desires of our communities.

It has been said that the Internet is a window to the world – offering an view that encompasses a wealth of knowledge and information. Local radio is a mirror that reflects a community’s own knowledge and experience back at it. The convergence of the two just might offer us the most effective avenue we have yet known to combine research and reflection in order to harness knowledge for democratic and sustainable development.

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Chapter 2

Take Five: A handful of essentials for ICTs in development

Alfonso Gumucio Dagon



The point of the lance

New information and communication technologies (ICTs), especially the Internet, have shown a very rapid development during the past ten years. The number of Internet users has been doubling every year since 1995. No other ICT in the past has, by comparison, developed so fast. Radio took several decades to be adopted in the isolated and poor rural areas of the world until it became the most important means of communication for many marginalised communities. Television is still struggling to reach the periphery, through a combination of cable and an array of satellites, although portable video has proved its efficacy for educational purposes. The Internet, in its own right, has become fashionable and is being put forth as the “point of the lance” of a technological revolution that also claims to be a social revolution. We will see to what extent this might be true.

Symbiosis

The most important and interesting issue relating to the rapid expansion of new ICTs in Third World Countries¹ is not the Internet itself, but the potential of its interaction with other electronic media, such as radio and eventually television. This “convergence” is, no doubt, the best option for the future. Internet-based technologies will have to learn from the fifty-year experience of community radio, if they are to become the tool for social change that it is hoped. Likewise, radio and television will certainly benefit from the speed and reach offered by the new ICTs. This symbiosis is already changing the approach to technology development in industrialised countries, but the social concepts that should be embedded are lagging behind.

Radio is the most impressive communication tool for development, especially in the rural context. It is not only an important mechanism for the diffusion of development information in local languages and over widespread and remote geographical areas; it is also a great tool for reinforcing and strengthening cultural expressions and identities. Moreover, it can be a platform for democratic discussion and pluralistic expression of ideas and aspirations of rural communities, as well as a means to raise awareness on social issues and to collect data on local development issues. It can contribute to the development of local pride through the reinstatement of community memory and history.

Can the new ICTs do the same? They should and they must, if they are to be sustainable and to contribute to social change and development.

¹ I prefer to use the term “Third World” rather than “developing countries”, a fashionable way to call many countries that have actually been going backwards in terms of economic and social development.

ICTs – Field of Dreams

New ICTs are hailed as the long-awaited solution for the poor of the world. Some, either too optimistic or not very conversant with actual experiences in the field, are even talking about the “dramatic opportunity to leapfrog into the future, breaking out of decades of stagnation and decline.”² The argument is that ICTs can easily convey to the marginalised, poor and under-developed, the truth about development and the information that will enlighten them to take, on their own, the steps that will improve their condition.

ICTs are seen as the fire of knowledge graciously brought to the damned of the world by the wise Prometheus of industrialised countries.³ However, this modern Prometheus should know that the attempt is too similar to the failed *diffusion of innovation* trend that was fashionable in the world of agricultural development in the sixties. As Kunda Dixit wrote:

Like the fashion business, the Third World development debate seems to go through fads and styles. Mantras come, and mantras go. The latest buzzword is “knowledge”. The world is now a Knowledge Society, we are told, and the global gap between know and know-not is growing, therefore the only way to give the poor the chance to catch up is to pump in more knowledge with computers and through the Internet.⁴

Among the risks, adds Dixit, is that “the knowledge hype may tempt us to regard only formal modern knowledge systems as worthy of attention.”

A bit of historical perspective could help to avoid the same old mistakes and to better understand the deep roots of poverty. The real causes of underdevelopment are social injustice, exploitation of poor countries by rich countries as well the poor within each country by the rich upper classes that control government, financial institutions, services and the productive sector. Knowledge alone will not change that situation.

“If you build it they will come”.⁵ In the field of dreams of ICT promoters the picture is rather simple: ICTs and Internet connectivity are *per se* the solution for poverty and underdevelopment. Place computers and connectivity at the reach of the poor and they will magically defeat poverty. Some international consultants feel good when they arrive at the most isolated villages of Mali or Bolivia with a laptop under their arm. They show the magic screen in action, the same way the Spaniards showed shiny mirrors to subdue the Incas or the Aztecs during the Conquest of America.

In the process of generating ideas – or appropriating them – academics, commercial wizards and development bureaucrats in Europe and North America love to invent new acronyms and buzz words, often to name what already exists. Now we are in the middle of a fashion of placing an “e” – for “electronic”, before almost every substantive word: “e-commerce”, “e-care”, “e-learning”, “e-support”, “e-government”, “e-mail”, “e-forum”, “e-groups”... They have gone as far as to introduce “e-development”. Peter Ballantyne suggests that the “e” should stand for “effective”, “empowered” and “efficient”.⁶

Development is much more complex than planting ICT seeds in poor rural areas or marginalised urban neighbourhoods. If it were so simple, we would not have seen the dramatic events in Argentina early in 2002. A well-developed country, in the frontline of the

² The World Bank: “Increasing Internet connectivity in Sub-Saharan Africa”, 1996.

³ See Alfonso Gumucio, “Prometheus Riding a Cadillac? Telecentres as the promised flame of knowledge” in the *Journal of Development Communication*, Vol. 12, No. 2 (February 2002).

⁴ Kunda Dixit, “Exiled to Cyberia” *Himal*, Vol. 12, No. 11 (November 1999)
<www.himalmag.com/99Nov/cyberia.htm>.

⁵ Now a classic phrase from the Hollywood film, *Field of Dreams*.

⁶ Peter Ballantyne: “e-Development: What’s in a name?”. <www.icconnect-online.org>, Dec. 14, 2001.

adoption of ICTs and with a good telephone system and electricity service, is in the midst of a deep economic and social crisis, going backwards instead of “leapfrogging” into the future.⁷ ICTs are not a magic solution for anything.

This is not the first time we have been confronted with the idea that technology is a panacea for economic and social change. Those who have been active in development during the past thirty years know very well the theories of *innovation diffusion*, by which underdeveloped countries would magically join the industrialised world through the use of modern technology graciously provided by international agencies. Behind this recipe was the assumption that knowledge is the privilege of industrialised nations, and that countries in the South just didn’t have enough of it. It could only be that simple in the field of dreams of those who know little about the reality of Third World countries, but think they know what is best for them.

At the risk of repeating something that everyone already knows, we should remind ICT pushers that when we deal with technology we are only handling instruments, and we are not *per se* affecting the social, economic or cultural environment. A knife is just a knife, a tool that can be used to hurt someone or to carve a beautiful wood sculpture. Content and patterns of utilisation make the difference. A few organisations recognise this and promote a *social vision* of ICTs:

*It is clear that ICTs are neither a sufficient nor a necessary condition for development. However, it is also evident that ICTs, primarily driven by commercial interests, are here to stay. It is therefore urgent that a social vision that puts the Internet at the service of development be strengthened. The social vision proposed rests on four central elements: 1) Going beyond connectivity; 2) Promoting enabling environments; 3) Minimising threats and risks; and 4) Maximising positive results. In the social vision proposed, ICTs are not inherently necessary or beneficial. The challenge is, precisely, to be able to tell when, and under what conditions, the Internet can contribute to development.*⁸

Development priorities are to be analysed – hopefully by the *beneficiaries* – before deciding which technology is appropriate, where and how. Communities should adapt technology to their needs and to their culture, not the opposite. In spite of this, let’s not forget that most grassroots ICT experiences are less than five years old. It is too soon to claim victory and too soon to discard them, but not too soon to question whether they will be sustainable and benefit their communities after the external inputs withdraw. Today, ICTs in Third World countries are experiments with a potential. What is written in well-intentioned project proposals and triumphant reports to donors is one thing. What really happens at the community level might be quite another.

Let’s look at our fistful of non-negotiable conditions for ICTs in development:

1. Community Ownership

Problems

A rapid assessment of the large numbers of Internet based experiences that have been developed in the past five years, namely the so called “telecentres”, “cabinas públicas”,

⁷ In the early nineties President Menem decreed that Argentina was a “first world” country.

⁸ Ricardo Gómez and Juliana Martínez, *Internet... Why? and What for?*, IDRC and Fundación Acceso, 2001. <www.acceso.or.cr/PPPP/index_en.shtml>.

“telecottages”⁹, “telehuts”, “digital centres”, “information kiosks”, “infocentros”, “infoplazas”, “information shops”, “community multimedia centres”¹⁰, “village knowledge centres”¹¹ – among other names¹² – indicates that most of them were initiated with little regard for community participation and ownership. The contest between organisations, both public and private, to “connect” under-developed countries has resulted in the parachuting of thousands of computers into areas where safe water and electricity are not even available.

An assessment of ICTs for development conducted by the FAO in 2001 revealed that many projects are implemented without any consultation with the community. Among the findings:

- only a limited number of community-driven ICT initiatives were found and these had scarce visibility;
- participatory needs assessments are rarely performed prior to the establishment of telecentres;
- the emphasis is more often on providing access than on innovative ways of applying ICTs to the specific needs of communities and local groups;
- the priorities of many ICT projects tend to be influenced more by the interests of external organisations rather than community-based organisations;
- the thematic sectors applied often reflect an economic, market-related focus;
- there is a lack of local participation in the creation of content and selection of ICTs tools;
- there are many telecentres where computers are available but where a lack of awareness, ICT skills, and literacy hinder the process of local appropriation.¹³

We have all heard of ICT projects that have folded after one or two years because the computers were stolen or deteriorated so quickly that they needed to be replaced. This is more likely to happen when communities do not have the sense of ownership of the project and do not feel that the installations are essential to their social and economic development. It is not a matter of external supervision (although this may help), but a matter of community awareness and social appropriation of the project.

Challenges

The involvement of communities in ICT projects that are set up for their benefit – or any other project aiming social and economic development – is the first non-negotiable precondition.

In this area there is much to learn from the experience of community radio. We can not claim social change without community participation, and this should take place from the first discussions about the potential of providing ICT support to a particular region. It is certainly not enough to discuss with government authorities or even with local authorities. This may seem to be a good short-cut to get things rolling, but the short-cut syndrome that characterises some ICT pushers may do more harm than good. This is not a 100 meter race where speed is everything you need. Development projects are more marathons, and you will

⁹ Telecottages emerged initially during the eighties in Scandinavia. The term is currently used in some countries of Central and Eastern Europe.

¹⁰ These have been developed with support from UNESCO in Eastern and central Europe, and various countries of Asia and Africa (see chapter 6 for more information).

¹¹ This is the name given to their telecentres by the M. S. Swaminathan Research Foundation (MSSRF) in Chennai (India).

¹² Many of them are just cybercafés, purely commercial ventures.

¹³ Sabine Isabel Michiels and Loy van Crowder: *Local appropriation of ICTs*, FAO 2001. <www.fao.org/sd/2001/KN0602a_en.htm>

never finish if you use up all your energy in the first 100 meters. In the words of Simon Batchelor:

It has now been recognised by many people that working from the outside towards the centre is a recipe for unsustainable programmes. Programmes that consider local capacity start at the centre and plan outwards. Yet it seems that many ICT programmes and projects start at the outer edge of the 'onion', and with an acknowledged general need for information and communication, outside agencies put in significant resources. Computers are installed, infrastructure is established and some salaries are given to kick start the cost recovery process.¹⁴

As with any other development program, an ICT or community radio project should be first discussed and analysed with representatives from the communities. A good start would be to ask if they are interested. Many rural and even urban communities may prefer to have safe water and electricity first, rather than computers.¹⁵ If community leaders, representing a wide range of social sectors (youth, women, traditional leaders, service providers, local authorities, etc.) believe that ICTs are important, the discussion should focus on how to develop the project and particularly, what will be the role and responsibilities of the community.

The community may donate the land and take responsibility for building and maintaining the premises to house the computers and/or the radio station; and may provide volunteers to run the project. We have seen this happen in the past with community radio stations in both rural and urban areas. If we look at the perspectives of sustainability from a point of view that is not restricted to income generation, we will find that community involvement and the development of a sense of ownership over the project, will also be the best guarantee to keep the equipment safe and in running condition.

There is an opportunity to contribute to the process of community organisation through an ICT and radio project or any other communication project that truly aims to ignite the process of social change. A local committee composed of representatives from the various social sectors could be formed to oversee the activities of the multimedia centre.¹⁶ This local committee could also assume responsibility for conducting certain content-related tasks, as often happens with community radio stations, where the nurse is in charge of a health program, the teacher prepares a series on education issues, rural cooperative leaders arrange to find useful information for farmers, youth leaders deal with music and topics that interest their peers, and so on.

Simon Batchelor rightly criticises “planning like an onion” and points to the difference between development programs that are planned from the outside layers of the community, instead of from the centre. The arrogant attitude of planners convinced that they know best about community needs has resulted in decades of failures in development.

¹⁴ Simon Batchelor: “ICT capacity development issues” at www.gamos.demon.co.uk/sustainable/tfoa2/tfoa2.htm.

¹⁵ In north-western Romania, CREST – a local NGO, has established as a principle not to start a new telecottage unless the community really wants it and is ready to participate with some human and/or financial investment.

¹⁶ The Community Audio Towers (CATs) in The Philippines, are managed by a Community Media Council made of representatives from the various sectors of the community: women, youth, teachers, nurses, traditional authorities, elders, etc, and it works well. For more information see the chapter in Gumucio, “Making Waves: Participatory Communication for Social Change”, The Rockefeller Foundation, 2001.

www.rockfound.org/display.asp?Collection=3&context=1&DocID=423&Preview=0&ARCurrent=1

This is not to say that communities are always right and their word is divine. In development we usually learn the difference between the real needs of a community and the “felt needs”. For example, communities may easily identify the need of water and roads, but not of immunisation or education (let alone ICTs!). The key word is dialogue between the community and the planners. Communities are seldom homogeneous or fully democratic; as any human group or society, they are fractured in groups of economic and social interests. The challenge is to support dialogue through a democratic process of participation.

2. Local Content

Problems

It has been said many times: 90 percent of the content of the World Wide Web is totally alien to 90 percent of the world’s people. In terms of “providing knowledge to the poor”, the purpose is defeated, unless the whole perspective changes. This contradiction is more obvious when we consider the usefulness of the web for rural communities in the Third World. High school students, teachers or professionals in Islamabad, Rio de Janeiro or Dakar may find the web very useful (particularly if they are fluent in English), but what about a woman working in a factory or a poor farmer? What in the web will interest them? Where is the knowledge they can use for their own benefit?

One of the illusions of the Internet is that because it has no central management, everyone is free to shape it according to their own needs. In fact, the Internet it is very much controlled by commercial rules. The World Wide Web today looks very much like cable and satellite television in terms of content. Years ago some thought that satellite and cable TV would bring a better choice of programmes and more diversity of information to the world. Today we know it only helped to impose the mainstream points of view, one image of how life should be, and a very narrow way of looking at society and reality. The rest of the world only appears as exotic images in adventure or scientific documentaries. The corporations that regulate information flows in industrialised and peripheral countries have captured Internet. To land into a small oasis of difference in the web, one must navigate through the most implausible labyrinths.

Several reports of telecentres or multimedia centres in Africa, Asia and Latin America indicate that the main users are students or teachers, not the poorest of the community. They also indicate that the main services that are used in a multimedia centre are the telephone, the newspapers, the photocopier, the fax and the computer; not the Internet or the World Wide Web. In fact, many of Africa’s telecentres do not even offer Internet access. They are actually telephone call centres, perhaps with as computer or two available for word processing. When available, rural students and teachers may use the Internet to chat or send e-mail messages (if they have correspondents), but other social sectors, which account for the vast majority, approach the telecentre primarily to use the other services offered.

Challenges

The development of local content is the single most important non-negotiable condition for the use of ICTs for social change and material progress in urban or rural communities.

The web’s ocean of “knowledge” does not correspond to the needs of the majority of the population. Different countries have different needs, and within each country – particularly in the Third World – the diversity of cultures and problems calls for specific approaches. We need to invent and multiply mini-networks, small geographical webs or local community networks to make the World Wide Web really wide and really useful for the majority of people on the planet.

Again, community radio can teach us much about local pertinence. Only the development of local content can establish a radical difference between the telecentres for social uses, and the cybercafés that cater to customers who already know what, where and how to look for the information they need. Cybercafés do not need to develop specific content because their customers correspond to the typical Internet user world-wide: male, under 35 years old, with a university education and high income, urban based and English speaking – a member of the elite minority for which the Internet is shaped.¹⁷

Cybercafés offer Internet access, but development-oriented telecentres also generate local and regional information, making it available to the community. “A telecentre may well become a key auxiliary to the school and clinic, offering continuing education for local teachers and nurses (and doctors, if any).”¹⁸

To cater their users – again following the example of community radio – several community-based ICT projects produce local content, appropriate to the specific population of peasants, fisher folk or other groups that are seldom taken into consideration by commercial cybercafés. Relevant examples include the Village Knowledge Centres in Chennai, India.¹⁹

It is not difficult to anticipate the symbiosis between community radio and the Internet. A handful of community based radio stations have taken the lead in taking advantage of the technological convergence. The Kothmale Community Radio, in Sri Lanka, is one of these that uses the Internet to respond to requests for information from its constituency. The station receives requests, searches the Internet, stores information with content relevant to the local communities, and broadcasts this information, translated into local languages.

3. Appropriate Technology

Problems

When we think that one in every three people globally lacks electricity and that safe water is a scarce resource in large parts of the world, we are reminded that computers are still a luxury. The fashion of planting computers all over the world is a very costly one. How much or how sophisticated technology do we need, for example, in a rural public telecentre? In Central America there are rural schools with fewer than 100 students equipped with five or six state-of-the-art computers, that are only used at maybe five percent of their capacity. What criteria, if any, are used to determine what hardware and software to buy?

Radio and television has also known – and hopefully learned from – the distortions caused by planners mechanically applying their experience in Europe or North America to countries in Africa or Asia. My personal symbol of waste and distortion in development communication projects, are the huge Outdoor Broadcast Vans that I saw in Burkina Faso in the 1980s and 1990s, abandoned in the backyards of radio and television stations with the tires flat and almost swallowed by surrounding vegetation. A few were still in working

¹⁷ UNDP Human Development Report, 1999.

¹⁸ Scott Robinson, “Rethinking Telecenters: Knowledge Demands, Marginal Markets, Microbanks and Remittance Flows”, in *On the Internet*, Vol. 6, No. 2 (Fall/Winter 2000), a publication of the Internet Society <www.isoc.org/oti/articles/0401/robinson.html>.

¹⁹ See, for example, the example of the Village Knowledge Centers in Chennai, India in “Letters from the field”; Balaji.V., K.G. Rajmohan., R. Rajasekara Pandya and S. Senthilkumaran: “Toward a knowledge system for sustainable food security. The information village experiment in Pondicherry.” e-OTI – *On the Internet: An International Electronic Publication of the Internet Society*, March–April, 2001, pp. 32-37 <www.isoc.org/oti>; “Making Waves: Participatory Communication for Social Change”, by Alfonso Gumucio Dagron; “Connecting Rural India to the World”, by Celia W. Dugger, in the *New York Times*, 28 May 2000.

condition, not as mobile units, but as fixed transmission cabins. The whole purpose of mobility was defeated since the national broadcasters could never afford to operate and maintain them.

The lifespan of computer equipment is much more limited than radio equipment which can last ten or fifteen years. Computers rarely last for five years, and if they do last that long, they are probably obsolete, unable to run new software or to communicate with other more recent models. How sophisticated should computers that are placed at new telecentres be, especially in rural areas with very little history and experience in handling ICTs? What percentage of the hardware and software capacity will be utilised during the two or three year lifespan of the equipment? Can the computers be repaired locally? Are spare parts available? Where can one buy a computer designed to last rather than to be replaced?

Unfortunately, the practice of development aid does not follow any critical path or reasonable criteria. Once funds have been allocated to a project, they have to be spent; even if that means buying inappropriate equipment. With major players in the development world, such as the Open Society Institute (Soros), the World Bank and USAID competing for territory and influence, we may not see things getting better soon; unless other international players such as IDRC, APC, IICD or OneWorld – better known for their substance than their funding resources – can positively influence the general trend.

The Internet is now being driven strongly by commercial forces and the Internet sector in developing countries is now highly competitive, profitable and likely to flourish, with or without the help of donors. Sufficient demand for the Internet exists even in the poorest countries to make it a viable, indeed highly profitable, venture. If the market is ensuring rapid Internet growth, donors and NGOs need to focus on ensuring access and benefits for the less advantaged.²⁰

Challenges

The third non-negotiable condition for ICTs for development and social change is the use of appropriate tools: Technology that is adequate to the needs of communities, not in terms of technical standards alone, but in terms of utilisation, learning and adoption.

The tools are appropriate when the community develops a sense of ownership, through a continuous process of appropriation of the project. This appropriation should not be understood as mere adoption of technology or the development of skills to handle hardware and software. The acquisition of skills is an important step, but not the final one. Other issues are important: management, production of local content, research methods, training and outreach activities, to name a few.

Why use a Rolls Royce to drive to the corner store for bread when a bicycle will do the job just as well and be more sustainable? ICT pushers do not seem to get this concept, in spite of the fact that it has been around since the fifties in the development world. The terminology of appropriate technology was born after decades of failures in huge development installations that became white elephants –useless and empty structures that were never put to work for the benefit of communities. There is a wealth of literature on the missed opportunities for development, and most has to do with top-down planning and large investments.

As is done with many small community radio stations, it may be reasonable to start a telecentre or a multimedia centre with the basic hardware and software, and observe for year

²⁰ *The Internet and Poverty: Real help or real hype?*, Panos Media Briefing No. 28, April 1998
<www.oneworld.org/panos/briefing/interpov.htm>.

or two to see if there is a real need to upgrade. New technologies offer a wide range of choices, but unfortunately very few planners or external advisors seem to consider them. Most are locked-in to Microsoft and expensive Intel-based computers, and do not even consider, for example, the Simputer – a computer developed in India to sell for under US\$200, or Linux – the free operating system that can make any computer performs as a server.

Nevertheless, for community radio stations converging with Internet, the needs might be more sophisticated. More speed, better connectivity and more memory and storage capacity are needed. It is more convenient to edit and store radio programs digitally. Computers are of enormous help for laying out programme grids and for limiting the manual handling of cassettes, tapes and CDs. Many small community stations in the Third World already have computers, and have used them to improve the technical quality of their work. Others have websites with information on programming and even stored or live audio programmes.

4. Language & Culture Pertinence

Problems

Only five years ago, about 90 percent of the total web pages accessible through the Internet were in English. Today, according to some studies, this proportion has been reduced to 50 percent. Of the 6 billion people in the world, only about 341 million speak English as first language. Spanish is the mother tongue of 358 million people, but is represented in only 5.62 percent of web pages.²¹ English is not the most spoken language in the world, but it is by far the most represented on the Internet, to the point that websites in many non-English speaking countries of Europe and the Third World are often English.

This situation is quickly evolving. The Internet has been growing faster in Latin America than in the United States and Europe and over the past five years there has been a significant growth in the amount of Spanish-language content. This may be an optimistic signal for major modern languages, but what about the rest? Where in the web are the rest of the world's more than six thousand languages, and how many will disappear from the Earth before they appear in cyberspace?

Language is only the tip of the iceberg. Culture is the hidden mass of it. The rich diversity of cultures in our world is not represented on the Internet and the World Wide Web. Moreover, the expansion of the Internet in its current shape may be contributing to the annihilation of under-represented cultures. As a report from IDRC points out:

*The content, language, class, and culture that dominate the Internet can have negative effects by generating a uniformity of ideas, preferences, and world visions. The illusion of increased democracy and plurality produced by the interactive capacity of the Internet may be misleading if it, in fact, reinforces existing relationships of centralized control and domination in society.*²²

It is difficult to measure the presence of diverse cultures on the Internet, and some recent attempts are misleading and too subjective. The fact that very popular *Latin* singers or entertainment stars have an outstanding presence in Internet is not an indication of cultural diversity. How much do Ricky Martin, Antonio Banderas or Santana, artists known because of their success in the United States, contribute to cultural diversity?

²¹ Daniel Pimienta and Benoit Lamey: "Lengua española y culturas hispánicas en la Internet: comparación con el inglés y el francés", October 2001. At <funredes.org>

²² Op. cit. Ricardo Gómez and Juliana Martínez: *Internet... Why and What for?*

If culture is in the soul of development and social change, how much more beautiful would be, for example, to witness the “Eighth Art” emerge from Internet, something so new and innovative and culturally adaptable that it can repeat the extraordinary feat of the other seven arts and truly help advance human values.

Challenges

The fourth important non-negotiable condition for ICT projects in the context of development and social change is, therefore, language and cultural pertinence.

Without the presence of local cultures and languages, there can be no possibility of ICTs contributing to the progress of communities. Language and cultural identity are at the core of any successful intervention with ICTs.

History has taught us that it is healthy for cultures to mix and evolve through a process of dialogue and interaction. No great culture has ever remained “pure” or uncontaminated. Cultural interactions are responsible for some of the highlights of the advancement of humanity. However, the electronic age has made the terms of “cultural exchange” far too unbalanced, as uneven as those that characterise modern commercial exchanges. The rules of the game are dictated unilaterally. Cultures already weakened and divided are easily wiped out by the tidal waves of the market.

To balance cultural interaction in cyberspace is not an easy task. Even if we get to a point where more web pages are produced with content that is representative of our cultural diversity, we will have to make them visible. The web is more an ocean than a library. It takes a lot to fish the appropriate information, because, for example, most of the popular search engines prioritise the pages that recently had many hits, not necessarily the best pages on a particular topic. Many of the pages that pop up first are commercial sites that have paid the search engines in order to appear in a better position. It is hard for a website using a “marginal” language to be found, even by those who share the language, harder still if the subject of it is culturally irrelevant to the current mainstream.

This situation will only improve if more and better local content is produced. We need hundreds of thousands of new pages reflecting the diversity of cultures and languages, pages that revive the memory of communities, their collective history, their artistic expressions, past and current. Community radio has had this role during the past decades, and that is why it is so important for new ICTs to piggyback on its experience. The convergence of radio and Internet provides useful examples of how to create local content, relevant to local needs but also to local culture, and provide this content in local languages. The Village Knowledge Centres in India, Kothmale Community Radio in Sri Lanka and Púlsar in Latin America, are a handful of experiences from which to learn.

5. Convergence & Networking

Problems

Out of the blue, ICT projects are parachuted into places where there is no previous history of local participation in development initiatives, no convergence with other programs for development and social change or with existing community organisations or local grassroots media, and no networking with other ICT projects that share similar goals. Would it not be far more reasonable to search for institutional alliances with local organisations, with existing community media, with public libraries and schools, and with projects that are already affecting the social, political and economic tissue of the society?

Starting ICT projects with no connection to other initiatives has been questioned numerous times. “It is more beneficial to use ICTs to enhance existing practices than to

promote new activities for the primary purpose of using ICTs. In this light, the creation of telecentres that are disconnected from existing community organisations and initiatives is unlikely to contribute to development.”²³ Nevertheless, it continues to happen. This isolation of ICT projects from other initiatives with similar aims and perspectives may be one of the reasons for so many failures.

We also need to break the western concept of the isolated and closed relationship between the individual and the computer, and evolve towards the collective use of ICTs. Often, telecentre projects reproduce the pattern of individualism. There may be several computers and people in the same room but it does not change anything. From the point of view of sustainability it is crucial to think in terms of a larger community of networks of users with similar interests.

Various authors and organisations have noted the risk of building networks that separate human beings and establish patterns of communication that are mediated only by technology and not values. “Might the web of the future turn out to be a vast, fragmented network of isolated individuals –human bees in their cells– interacting with data instead of with one another?” asks the Pontifical Council for Social Communication.²⁴ “We must be sure that the virtual community is at the service of real communities, not a substitute for them,” adds the Anglican Archbishop of Canterbury, Dr. George Carey.

Challenges

Convergence and networking are non-negotiable conditions for long-term sustainability. ICT projects that are converging towards other communication projects such as community radio have better chances to succeed, because they will be inheriting a vast quantity of accumulated experience and a whole history of development and participation. Similarly, initiatives using ICTs that complement existing social development projects, for the same reasons above, are more likely to be accepted by the community and to strengthen ongoing activities aimed at social change.

This brings to mind several important examples of convergence of ICTs and existing local institutions or media. In Peru, ITDG is supporting the InfoDes project, which is converging with rural public libraries.²⁵ Púlsar in Latin America used the Internet to feed regional news to hundreds of community and indigenous radio stations. We have already mentioned Kothmale Community Radio in Sri Lanka, and the Indonesian network of local radio stations linked via e-mail.²⁶

Convergence between radio and Internet is the most promising, however it will face different challenges in the Third World and in industrialised countries. As Bruce Girard sees it:

It is clear that convergence will impact on broadcasters in developing countries in a very different way than in Europe and North America. While in the developed world there are predictions that new media and the Internet may soon become substitutes for broadcast services and distribution systems, in the developing countries this will not happen in the foreseeable future. Radio will continue to be the most important medium for the vast majority of

²³ Op. cit. Ricardo Gómez and Juliana Martínez: *Internet... Why and What for?*

²⁴ Jim McDonnell: “Virtual Communities – a comment”. *Cine&Media*, 3/2001.

²⁵ More information on InfoDes in “Making Waves: Participatory Communication for Social Change”, by Alfonso Gumucio Dagron; and <www.infodes.org.pe>.

²⁶ Editor’s note: The author is writing of a UNESCO-backed Indonesian network, not Radio 68H which is featured in this book..

*the world's inhabitants and television will continue to have a recognisable form in the first years of the 21st century.*²⁷

Schools are another important platform for ICT development, not only because they exist even in the most remote rural areas of our countries, but also because in terms of skills, teachers and students are more likely to adopt the new technologies. It is important, however, to ensure the interaction with the community as a whole, to avoid creating a closed structure for a small privileged group.

If what we are striving for is development for social change, the convergence between ICTs and development NGOs has enormous potential. Many have realised this and are already developing a handful of valuable experiences. We are not referring to NGOs equipping themselves with computers and connectivity to better perform their tasks; there is no major feat there. The real challenge is to use ICTs as another tool in the development work, as the M.S. Swaminathan Research Foundation (MSSRF) is doing in Chennai, India. The project goes far beyond providing computers and connectivity to poor communities: it has an important component of developing local content in “value addition” centres, and enabling users to easily access information that meets their needs. The Village Knowledge Centres are a good example, both of converging tools and networking on the local level.

Known as “citizen networks” these are described by Steve Cisler as “Internet technology projects that benefit people as citizens rather than as consumers; projects that help marginalised groups have more control over their existence and even give them a stronger sense of identity. Citizen networks are about inclusion and how the technology can be used for democratic goals and for economic development.”²⁸ In the same article Cisler mentions Manuel Castells, who believes that in our increasingly globalised world community networks are a key element in building social institutions.

Last but not least

I am aware of the potential of Internet for development because I am one of those privileged people in the world that:

1. Have electricity,
2. Have a phone line,
3. Have a computer,
4. Have enough to pay for the service provider, and
5. Reads and writes English.

However, I don't need just *any* kind of Internet, and that is precisely what we have now, any kind with little to do with the vast majority of people of the world. The same as for television, quantity seems to reign over quality.

It is becoming increasingly crucial to define communication projects for development and social change and to prevent the reigning confusion with commercial ventures. The five non-negotiable conditions discussed here may facilitate the task.

²⁷ Bruce Girard: “Converging Responsibility, Broadcasting and the Internet in Developing Countries”. <www.comunica.org/kl/girard.htm>.

²⁸ Steve Cisler: “II Global Congress of Citizen Networks, Buenos Aires, Argentina.” December 2001 at home.inreach.com/cisler/ba.htm

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Chapter 3

Linking Rural Radio to New ICTs in Africa: Bridging the rural digital divide

Jean-Pierre Ilboudo and Riccardo del Castello



Introduction

More than eighty developing countries suffer from chronic food deficits and about eight hundred million people live in hunger. By 2025, the world's population may exceed eight billion and food needs in developing countries may double. The challenge for these countries and for their development partners is to assist farmers in achieving food security – the basic right of people to have access to the food they need. This challenge is most critical in low-income, food-deficit countries where little progress in food production has been made in recent decades, leading to a dramatic increase in the number of chronically undernourished people.

The challenge of ensuring food security in developing countries calls for new technologies, skills, practices and ways to collaborate. Most importantly, farmers must be able to communicate with peers, local authorities and institutions and have access to relevant knowledge and information, including technical, scientific, economic, social and cultural information. It is essential for rural people to be able to respond productively to the opportunities and challenges of economic and technological change, including those that can improve agricultural productivity and food security. However, to be useful, information must be available to the users in appropriate languages and formats. At the same time, it must also be up-to-date and communicated through appropriate channels.

Since the beginning of the 1990s a dramatic expansion in information services and a proliferation of technological innovations has permeated virtually all spheres of human activity. The depth and the extent of these processes appear limitless and have had much greater social, economic and cultural implications than experienced during previous technological advances. The so-called Information Age, characterised by a world-wide increase in the reach of mass media and the emergence of the Internet, is affecting the way we communicate, create relationships and undertake transactions, opening up new opportunities and challenges. Developing countries have not been excluded from these processes. Despite the seemingly huge difficulties in infrastructure development, their governments have taken steps to adapt to the new digital environment and to avail themselves of new tools, products and services.

With the emergence of new opportunities there is however a growing concern about a new kind of threat to global development which has fuelled an animated world-wide debate over the social impact of ICTs on the lives of people. In the North-South context discussion has focused on the role of technology in widening or narrowing the knowledge gap between rich and poor countries. The situation is even more dramatic for people in rural and isolated areas of developing countries, where access to basic telecommunication services and educational resources can make a real difference in combating poverty and improving living conditions. These people have no access to the mechanisms that would enable them to voice their opinions, communicate with authorities and the main development actors or increase their participation in decision-making processes. The gap is thus growing not only between North and South, but also, and more dramatically, within the South, between the urban elite and middle classes and the most underprivileged populations living in rural areas.

Impressive breakthroughs in information technology and its increasing presence in everyday life have led some observers to believe that ICTs would provide immediate solutions to development problems. The initial optimism of these technology enthusiasts has been tempered in more recent years by a close scrutiny of actual technology applications at the local level.

ICTs are perceived as being able to facilitate speedy integration of rural areas and to enable the enhancement of a number of sectors including education, health care, small enterprises and agriculture. However, for this to be sustainable and effective, communities must have effective and affordable access to ICTs. For a variety of reasons, they do not. An option that is being increasingly considered involves developing communication strategies based on an integrated approach which relies on more traditional communication media serving as an interface between ICTs and rural communities.

This chapter highlights the work of FAO in the area of communication for development methodologies used in rural radio, and how radio and communication for development methodologies, coupled with technological innovations, can help rural communities access the knowledge and information they need to improve their living conditions.

FAO's Approach to Rural Radio

Mass media are of crucial importance in rural areas of developing countries to run large scale communication campaigns on health, nutrition, livestock breeding or agricultural technology transfer. Equally important, however, is their role in communicating the information needed for individual's every-day lives – from market prices and credit facilities to weather reports, music, entertainment and culture. Particularly in large rural areas where population density is low and telecommunication facilities are scarce or non-existent, mass media can reach rural dwellers helping them to be informed and able to express their own concerns, thus fostering national identities and reducing the rural/urban divide.

Media and communications have been effectively employed since the early days of development assistance. Their application was noticeably influenced by the various post-war development theories and, to a large extent a top-down approach has dominated the scene. Radio, television, cinema, print media and theatre have been regarded as instruments through which the masses could be exposed to new ways of thinking and taught new attitudes in order to stimulate economic development. However, over the years the so-called masses have begun to appropriate these tools and to stimulate a truly bottom-up development. One notable example is rural radio.

Created and established more than thirty years ago, rural radio originally referred to a service within the national radio broadcaster. Based in the capital city, its task was mainly to produce rural programmes which were then broadcast to rural areas on short-wave. Far removed from the reality of rural life, the programming that resulted from this top-down model was of questionable relevance to rural people. With the advent of low-cost FM transmitters and receivers, local radio stations were set up in remote areas of many developing countries. Community driven and above all local, these stations were distinct from their predecessors because proximity to their communities enabled them to be used for participatory communication processes – adding the voices, concerns and cultures of rural people to those of the experts from the cities.

Local rural radio promotes social interaction by bringing people closer together, stimulating communication and enhancing the value of local knowledge. It helps rural people to be better informed about their own environment and their community's problems. In this

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way, they can more actively participate in development programmes and activities which allow them to improve their own lives.

FAO and its partners are firmly committed to supporting rural radio initiatives as they strive to attain stability and durability. Since the early 1970s the FAO, through its Extension, Education and Communication Service, has provided assistance to local radio stations in rural areas in four main areas:

- direct support for setting up new stations or upgrading existing ones;
- training rural radio workers and developing and testing multimedia packages for the training of trainers;
- supporting rural radio networking initiatives; and
- providing research and evaluation services, especially in the design and application of methodologies for analysing the content of rural radio programmes and evaluating impact.

FAO's rural radio strategy is guided by four principles:

- **Integration:** Rural radio stations must integrate a large number of concerns, themes and actors related to rural development. It is therefore important to encourage inter-sectoral collaboration and government, NGOs, donors, as well as the associations or groups that represent the rural world must all be involved.
- **Interdisciplinarity:** Rural radio production teams have to engage a range of topics and approaches and thus team members must have knowledge and experience in a variety of areas.
- **Interactivity:** Rural radio programming must be based on the concerns of the rural world and be presented in the form of an ongoing dialogue with the community. Priority should therefore be given to field production techniques involving local participation and close interaction with community members.
- **Sustainability:** Appropriate and effective legal, institutional and administrative frameworks are required for the proper management of rural radio stations and will ensure better use of human and financial resources, efficiency and thus a more sustainable operation.

Listening to the audience

If local radio has been successful at promoting rural development, it is because broadcasters have learned how to listen to their audiences, got to know them, used their language, and enabled listeners to play a part in determining programming priorities and even in producing the programmes.

Successful rural radio practitioners have learned to focus on the following objectives:

- improving the quality of dialogue between farmers and technicians;
- facilitating people's participation in development;
- ensuring that the radio station's content reflects the concerns of the multiple audiences;
- restoring a voice to the people; and
- allowing people to participate in evaluation of the radio station and its programmes.

These objectives, however, are enmeshed in particular difficulties faced in rural environments such as that:

- people are often sceptical of their own ability to play a role in determining their community's priorities and are thus hesitant to get involved in public debates about them;
- it is difficult to gather accurate and locally authored information;
- it is difficult to know rural people in all of their diversity and thus to know what they really want or need.

Box 1 – Participatory Rural Appraisal (PRA)

PRA is a combination of research approaches and methods aimed at enabling rural people to share and analyse their knowledge of life and social conditions in order to plan, act, monitor and evaluate. It is a dynamic and interactive methodology which is reviewed and refined in order to adapt to different environments and priorities as they emerge during the process.

PRA was firstly developed in the 1980s by NGOs operating at grass-roots level as a means of gaining an understanding of the issues and priorities of a given community. Throughout the years it has evolved in terms of its methodology, the tools employed and particularly in the various ways it is applied. Compared to other research methodologies, which mainly aim at extracting information, PRA emphasises empowering local people to take an active role in analysing their own living conditions, problems and potentials with the intention of changing their situation. These changes are achieved by collective action and local communities taking responsibility for implementing the agreed upon activities.

PRA techniques and tools have been effectively used to examine problem areas in a variety of sectors such as health, agriculture, forestry, women's issues, nutrition; and facilitate inclusion of the direct beneficiaries in decision making processes, capacity building and development of new project ideas, methods and applications.

PRA is guided by the following principles:

- **Offsetting biases** – through different perspectives, methods and tools, sources of information, people from different background and places
- **Rapid and Progressive Learning** – flexible, interactive
- **Gender sensitivity**
- **Role Reversal** – learning from, with and by local people, using their symbols, criteria, categories and indicators; understanding and appreciating local people's knowledge
- **Focussed Learning** – concentrating on real needs, (limit objectives). Absolute measurements may often be unnecessary. Relative proportions, trends or ranking are all that is needed for decision making and planning
- **Seeking diversity and differences** – People often have different perceptions of the same situation
- **Attitude** – workshops are effective when they succeed in building positive relationships with local women and men. Outsiders must have respect, humility and patience, and a willingness to learn from the local people.

Over the years rural radio practitioners have been encouraged to adapt Participatory Rural Appraisal (PRA) techniques to help them realise their objectives (see Box 1).

PRA usually involves community level workshops lasting from three to five days and guided by a team of multidisciplinary facilitators who act as catalysts throughout the whole process. PRA can take a variety of forms when used in a rural radio station but is usually used for a range of particular reasons, including to discover community problems and priorities, to encourage community level discussion and action, and to generate content for the radio station.

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The FAO has successfully experimented with a multi-stage methodology that is well-suited to medium-size stations with a coverage area that includes a number of small villages.

During the first phase the radio team gathers information and documentation on all aspects, domains and sectors of the community and its people. In this task the team members work with specialists from other sectors and domains of development such as agriculture, health, forestry, youth, gender and culture. This is followed by a short visit to the community to collect more data through informal interviews with local representatives of different social strata. Information gathered during this phase includes the history of the village, the themes that the villagers hope to discuss, the problems they face and their aspirations.

When the preliminary research is done, the radio team returns to the village for seven days to produce the programme.

Day 1: The team arrives early in the morning in order to have time to conduct courtesy visits to local authorities and leaders before arriving in the village around midday. Once in the village, the members of the team will greet villagers and then make their way to the huts or lodging provided for their accommodation.

Day 2: The team begins to mix with the locals, participating in whatever events or activities are going on (baptisms, funerals, cultural events, agricultural work). All team members must take part in participatory observation in order to familiarise themselves with local faces and surroundings and to establish initial relationships. On the second night, the team may be able to organise a cultural evening, during which they can record traditional music, tales and proverbs for use in their programme.

Day 3: The team now knows many of the village leaders and has identified some themes and subjects which could be used for the programmes they will produce. This day will be dedicated to visits and informal discussions, and to preparing discussion guidelines.

Day 4: Informal discussions continue. When the team feels that a certain degree of trust has been established with the local people, tape recorders and microphones are taken out of their boxes and the first interviews are recorded.

Day 5: This day is dedicated to recording interviews, music, sound effects, testimonies, statements and proverbs.

Day 6: The recorded material is put together into a magazine format programme. In the afternoon or evening, the team organises a group discussion on the theme of rural radio, and listens to suggestions, comments and criticisms made by villagers about the radio station's programmes, broadcasters, listening hours, signal reception and so forth.

Day 7: At the end of the stay, the rural radio team thanks all the key people in the village, and the region. The team leaves all its remaining provisions with the villagers.

When the programme is later broadcast it is heard by people in villages across the station's coverage area, enabling communities to share their experiences and to learn about the problems, solutions, cultures and lives of other communities in the region.

This methodology works in many ways and at many levels. Within the village being featured, the participatory and research-oriented production process promotes discussion and reflection. This continues when the programme is broadcast after the programme producers have left the village. At its most successful it can provoke lasting change in a community that is empowered by the knowledge that its concerns are valid and its people's voices can be heard.

The programme also promotes communication between villages. Among other things, this can promote innovation as the members of one community learn the solutions that others have developed for common problems.

Finally, while participatory processes are not simple, for radio stations they provide an effective way of learning about community concerns, of producing relevant content, and of evaluating programming to ensure that it remains relevant.

FAO's approach to ICTs for Development

ICTs potentially offer powerful tools for providing farmers with the knowledge they need to put agricultural innovations and socio-economic opportunities to best use. They can make new information resources available and open new communication channels for rural communities. But for many developing countries this potential is not readily accessible and the ride towards the information society must follow alternative routes. There is a need to develop creative applications for these technologies which take into account existing local communication practices, networks and channels, such as radio, television and theatre. The introduction of new ICTs should be done in a way that takes into account the fact that rural populations are more receptive to innovations introduced through trusted and reliable sources of information – people and institutions they are already familiar with and that are already part of their lives. These can help them share experiences, find common ground for collaboration and actively participate in and manage agricultural and rural development activities.

The FAO approach to ICTs and development is based on the organisation's thirty-years of experience with participatory communication for development. The main objective is to assist farmers in developing indigenous communication processes through the use of media tools such as community radio, small format video and, as they have become available, new ICTs. This approach is not unique. It is as familiar to development workers as it is to people who do computer systems analysis and who know that their work (should) start with the needs of computer users. The communication for development approach does, however, provide development planners with a conceptual approach that puts rural people and rural organisations at the centre of any communication strategy design and in control of communication and information network development (FAO, 1990).

A communication for development methodology, for example, was adopted in small pilot projects in Chile and Mexico. The aim of these projects was to assist rural communities and associations of small agricultural producers in the design and implementation of appropriate sustainable Internet communication and information systems. On a small scale, these projects have achieved important economic and social benefits for rural users (see Box 2).

Box 2 – FAO's experience in ICTs for development: two model initiatives

Mexicali, Mexico

In the Fall of 1995, ninety farm organisation representatives took part in a workshop on development communication where they developed an Internet based computer communication system. Most equipment was purchased by the farmers' organisations and preliminary technical support was provided by a local private technical university already offering commercial and not-for-profit Internet services in the region. A communication for development expert from FAO provided initial coordination and technical support for the first nine months of the initiative. A computer network server was installed at the university and each organisation was issued an account for dial-in access to a small pool of three modems connected to the server. By June 1996, twelve farmers' organisations were connected and through the system, which enabled them to access several online information services. Plans were made to upgrade the system and involve all twenty-three farmers' organisations in the Rio Colorado Valley. Users submitted daily reports on irrigation quotas and planting activities to the local irrigation water authority.

Chile

In Chile, the FAO Communication for Development in Latin America Project pioneered a participatory approach to the development of Internet-based information and communication networks among organisations of small-scale producers. These networks provided the organisations with data on crops, international crop status, market timing, prices, market conditions (regional, national, international), weather, technical and training information, and information about the various organisations that support their work. The users also had full access to the Internet to find other information relevant to their lives and communities (health, social service, education...), and they could use electronic mail to communicate with other farm organisations in Chile. The most important aspect of this initiative was its attention to local information needs assessments and provision of assistance to farm organisation personnel to help them develop the skills necessary to analyse and disseminate locally relevant information. This methodology emerged from previous development communication experiences using small format video, print media and rural radio. It was very likely the most user oriented approach to developing Internet services in the developing world at the time, and it was focused on rural and remote agricultural communities that would normally have little opportunity to access the benefits of the Internet.

Source: Internet and Agricultural and Rural Development, FAO 1997
<www.fao.org/sd/cddirect/cdpub/SDREpub.htm>.

The Electronic Information Systems Group

Since 1996, FAO's Communication for Development Group has been monitoring the rapid evolution of information and communication technologies and their impact on the social context of developing countries. In an effort to explore the potential of such technologies to support sustainable development processes, a multi-disciplinary working group on Electronic Information Services (EIS – see Box 3) was created with the participation of various representatives from other technical units within the organisation such as Forestry and Fisheries.

The objectives of the group were to stimulate reflection on ICT for development issues that could lead to concrete action in various developing country locations, and to formulate suitable applications of the technology in support of agricultural research, communication, extension and training.

EIS activities were based on local user community needs and enhanced information access and sharing at regional, national and international levels. The design of activities, whether for agricultural teachers and their students, extension agents and farmer clients or

other intended audiences, incorporated the perceptions, attitudes and behaviours of intended users, along with the socio-economic, organisational, technological and information-content context in which EIS pilot projects were implemented and evaluated.

The group held regular meetings to discuss and organise activities, not only within the organisation but also in close collaboration with other UN agencies and NGOs which shared the same interests in ICT applications for human development.

Box 3 – EIS Activity Areas

- Promoting policy and regional coordination of Internet strategy for rural development
- Establishing pilot projects
- Promoting FAO's communication for development approach
- Supporting efforts to liberalise telecommunication policies in developing countries
- Supporting local Internet entrepreneurs and other service providers in developing countries
- Assisting stakeholders in advocating Internet service provision and telecommunication infrastructure and policy improvements
- Orienting existing Internet information services to users in developing countries
- Supporting rural and agriculture educational sector Internet capability
- Providing Internet awareness building and demonstrations
- Supporting rural and remote infrastructure development
- Supporting creative Internet applications and information services for rural development

One of the first activities sponsored by the group was a fact finding mission which included Canada, the United States, the Netherlands, South Africa, Zimbabwe, Zambia, Senegal, Egypt, Mexico and Chile. The mission was organised in collaboration with the University of Guelph (Canada) through the FAO's Programme of Cooperation with Academic and Research Institutions. It resulted in an extensive report, *The Internet and Agricultural and Rural Development*, which outlined the elements of a communication for development approach applied to the Internet and rural development, together with recommendations for strategy and activity areas, and an overview and evaluation of Internet activities in developing

Box 4 – Twelve common elements of successful rural and agricultural Internet communication and information systems:

1. Preliminary participatory communication and information needs assessments with intended users.
2. Awareness building campaigns designed to sensitise decision makers to the possible uses of Internet services.
3. Executing agency commitment to participatory rural and agricultural development.
4. Local "champions" identified and supported.
5. Open participation of user community in design, implementation and management of communication and information services.
6. Institutional and user commitment to manage and sustain Internet services.
7. Involvement of the full community of users, including women and youth.
8. Ongoing provision for technical training, user support and outreach within the user community.
9. Combination of centralised and decentralised information production, analysis and distribution.
10. Ongoing provision for technical support and system maintenance/ upgrading.
11. User community financial commitment in communication and information systems (e.g. ownership of hardware, user fees, salaries, infrastructure, etc.).
12. Social service orientation of local private sector or not-for-profit (university or NGO) Internet service providers.

countries (Box 4).

A key recommendation of the report called for FAO's support and advice on the design of an appropriate Internet for development strategy focused on rural and agricultural communities and the intermediary agencies that serve them. The cornerstone of this strategy was to be capacity building activities for rural organisations in order to enable and enhance locally managed Internet access, use, tools and resources.

Linking Rural Radio to the Internet

The EIS group's experience significantly influenced the work of the FAO Communication for Development Group in designing appropriate ICT applications for rural and agricultural development, especially by placing emphasis on enabling rural people to access knowledge and information according to their own needs, values and perceptions, and in the use of approaches and tools most suitable for rural areas.

Despite widely-held beliefs regarding the importance of knowledge for development and the need to bridge the digital divide, the gap between the information rich and the information poor has continued to widen and technology alone will not be sufficient to bridge it. There are many reasons why poor farmers and food insecure residents of rural communities rarely put computers and the Internet at the top of the list of things they need to improve their lives. Knowledge is a long-term investment while water, food and health care are more immediate priorities for people without them. Further, they do not know how to use the Internet, there is little information of value on the Internet in their own languages, often they cannot read (most of the world's 600 million illiterate adults are rural residents), and consequently little of the Internet's content seems immediately relevant to their own lives.

Fortunately the Internet is not the only way of communicating knowledge and information. In rural areas people are more likely to get information from the Internet indirectly via intermediaries – people and institutions having access to the Internet and who serve as bridges between information from outside the community and the information needs of the community. Examples of good intermediaries include extension field offices, rural NGOs, small and medium enterprises, health clinics, local government offices, and church organisations. These intermediaries combine their technical knowledge of the Internet with knowledge of and proximity to the community. In developing countries where rural radio stations are already a key component of local information and communication systems, they can also be valid and efficient intermediaries.

FAO is working to narrow the digital divide in rural areas by connecting community radio stations to the Internet and training broadcasters to collect and adapt information for improved agriculture and food security. (see Box 5) In addition, FAO is working with member countries and other UN agencies to formulate national communication policies that integrate the Internet with conventional media, especially broadcast radio.

A project proposal for an integrated rural information and communication system using the potential of new ICTs in combination with rural radio stations illustrates the FAO's approach. This new project will build on an existing project in the south of Mali, where four radio stations were created to serve the development information needs of rural populations. Meeting these needs requires a variety of information from the national, international, as well as local levels, and thus calls for the implementation of an appropriate ICT methodology for the rural context and for the development of national expertise to help ensure sustainability. In addition to providing technical support, the project will train broadcasters in the use of new ICTs, with an emphasis on learning techniques for collection, processing and adaptation of information for broadcasting.

The overall objective of the proposal is to promote the exchange of scientific and technical information between farmers and development agents, by establishing an integrated rural information system. It also seeks to develop a better understanding of the importance of information and communication in agricultural and rural development processes.

Box 5 – Simbani: A News Agency for Development

Another good example of an ICT/radio application in support of rural populations is the Simbani News Agency, a joint initiative of the World Association of Community Radio Broadcasters (AMARC) and FAO. Prioritising information needs for development and food security, Simbani News will develop a multi-thematic approach covering human rights and democracy, gender and development, environment, HIV/AIDS and food security. Complex but vital information will be selected, adapted for use by rural communities, edited into easy to understand radio scripts, and distributed, via the Internet, to radio stations throughout Africa. The information will also be sent to national distribution points which will redistribute it via post or fax to stations without Internet access. Simbani works in English and French (Portuguese will be added later), but its text-based services will be translated into local languages by broadcasters in order to reach as many people as possible.

As an important part of this service, AMARC will access specialised content on food security via a dedicated web portal within FAO's World Agricultural Information Centre (WAICENT). The Simbani News Agency will inform, educate and sensitise both urban and rural populations on food security issues.

Simbani's approach is innovative in other ways, too. Rather than content with a one-way news and information service, the news agency is adopting a participatory approach and it has equipped and trained fifty-four correspondents throughout Africa. Their task will be to ensure that the experiences and perspectives of their communities are distributed to the entire network, ensuring that indigenous knowledge is shared and that many African perspectives are represented.

Bridging the Rural Digital Divide to Reduce Poverty and Food Insecurity

In response to the increasing number and variety of requests from member countries for advice and assistance related to the challenges and opportunities presented by new ICTs, FAO has developed a strategic programme to address the rural digital divide. Drawing on the recognised status and expertise of FAO on rural issues, the programme entitled *Bridging the Rural Digital Divide to Reduce Poverty and Food Insecurity* focuses on three main areas:

1. promoting development of locally appropriate content based on the information needs and preferences of rural communities (men, women, old, and young);
2. strengthening human and institutional capacities in rural areas to harness and exchange information using a variety of media, from songs and stories, to rural radio and the Internet; and
3. mobilising and sharing FAO's vast information resources related to sustainable agriculture, forestry and fisheries, particularly in relation to enhancing food safety, food security, poverty reduction, environmental sustainability and disaster prevention.

The lead technical divisions for this programme are the World Agricultural Information Centre (WAICENT) which is an interdisciplinary programme for information management, and the Communication for Development Group which has considerable experience in participatory communication and rural agricultural knowledge and information systems.

Conclusion

In recent discussions on the *digital divide*, many voices have been raised to remind us that there is a more alarming *development divide* which threatens opportunities for improving the livelihoods of millions of people on this earth. Access to relevant knowledge and information are critical to this concern. ICTs are powerful tools for knowledge and information sharing, for informing and educating people about new agricultural ideas and technical innovations, but cannot alone reduce this divide. To the contrary, if not properly used, with the intention of eliminating social inequality, they can worsen the situation.

It is difficult to determine whether a specific medium is appropriate for development programmes. Often a mix of media may be more effective and efficient than any single medium. Effective use of a communication medium first requires an understanding of the knowledge and information needs of farmers and rural people. Only when this understanding has been achieved can there be the application of appropriate communication strategies, media and messages that better respond to those needs.

Linking rural radio and ICTs is a good example of how two communication tools can benefit from each other and how the potential of one can be extended by the characteristics of the other. New digital technologies can help rural communities in their fight against hunger but in order to do this they must be based on innovative techniques and strategies that are built upon existing and trusted, communication networks. Only in this way can we transform the digital divide into digital opportunities.

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Chapter 4

The Information Highways are still Unpaved: The Internet and West African community radio

Lynda Attias and Johan Deflander



Community Radio and the Internet: A Promising Union

Since our radio has been connected to the Internet, our telephone bills are four times higher, but I've also seen that we communicate four times less with our community.

– Zane Ibrahim, Bush Radio; Cape Town, South Africa

Africa's community radio stations play an active role in the process of local development. They inform the population, help people share experiences and knowledge, and facilitate exchanges. These stations are often integrated into the community and are accessible to members from all social strata, including the illiterate and speakers of non-written languages. Radio stations must cope with many difficulties, however, because they lack documentation and are usually located in isolated rural areas. The use of new information and communication technologies (ICTs) can potentially enable them to face some of the challenges. Given that radio is already well-established, plays an important role in the community, and encourages participation, we believe that, connecting it with the Internet, a highly interactive and information-rich medium, offers many prospects for local development.

Nevertheless, simply praising the virtues of a linkage between community radio and the Internet does not take us very far. There is a need to examine the perceptions, expectations, and needs of the community radio stations and the practical obstacles that this linkage entails. One of the major risks involved with introducing the Internet into community radio is that it may remain foreign to those it is intended for and therefore be useless. The process of applying the new medium is a delicate one, and this means that consideration must be given to whether or not radio broadcasters are able to use it in their daily work and whether they are prepared to invest in it.

Community Radio and the Panos Institute of West Africa

In the early 1990s, pressure exerted on West African national authorities by many players in civil society, including non-governmental as well as governmental organisations, produced a liberalisation of most countries' airwaves and, as a result, a new kind of media – associative community radio – appeared in several countries. New radio stations, owned and managed by their communities were then able to go on the air – usually in difficult financial situations, but with levels of development and conditions that vary significantly from one West African country to the next. They have been broadcasting in Mali, Burkina Faso, and Benin for the last ten years, whereas in Niger, Guinea-Bissau, and Senegal they have come into existence only in the last two years. Because these radios are young and lack professional training, they all face significant organisational problems. Senegal has a total of only eight stations, but Mali has 106 private radio stations of many different varieties.

The Panos Institute of West Africa (PIWA) has been involved throughout the process, supporting civil society efforts to change broadcast regimes, providing training and technical assistance to the radio stations and producing and distributing programmes.

As part of its work supporting the new radio stations, PIWA has undertaken a variety of initiatives to promote the understanding and use of the Internet by community radio stations. One of these is *BDP on line*, an Internet-based alternative to shipping CDs or cassettes by mail, a service that is both slow and expensive in West Africa. Using *BDP on line*, twelve participating radio stations in ten French-speaking African countries¹ are able to use the Internet to upload or download programmes free-of-charge. The service serves twelve radio stations² in ten French-speaking African countries.

Internet training for West African community radio broadcasters has been another of PIWA's activities. Since 1998 a number of courses on Internet for radio broadcasters have been offered. Among these was a series of courses conducted to support the launch of a network linking radio stations in certain regions of Mali³ and another series that began in the summer of 2001 for seven Senegalese community radio stations.⁴

This chapter weaves together comments from participants at the Internet workshops in Mali and Senegal and the authors' observations of the workshops and other PIWA activities conducted since 1998. It presents a picture of community broadcasters' perceptions of the Internet, including its importance for development, its usefulness in their journalistic work, and problems associated with the introduction of the new medium. The chapter concludes that a new approach is needed if the Internet is to be of use to Africa's rural radio stations.

The Internet: A New Development Indicator

In Europe and North America computers have become an everyday household appliance, with most people having both access to them and knowledge of how to use them. However, African levels of computer use, especially in rural areas, bear no resemblance whatsoever to those of industrialised countries. During the Internet training workshops in Senegal and Mali, several broadcasters felt their hands shake as they grasped a mouse for the first time.

If you're not familiar with the machine, and you sit down with a computer expert, you think that you have a genius sitting next to you. I thought that I needed to have a superior intellect to be able to use it. (Radio La Côtère; Joal, Senegal)

Computers are considered to be complicated, inaccessible, and frightening tools associated with researchers and "superior intellects". The ability to use a computer is seen as a guarantee of learnedness. The technology, nevertheless, does not lack supporters.

With the evolution of new ICTs (new information and communications technology), it won't be long before you'll be considered illiterate or

¹ Those radio stations are the following: Anfani (Niger), Femmes Solidarité (Côte d'Ivoire), Golfe FM (Benin), Kledu (Mali), Korail FM (Madagascar), Minurca (Central African Republic), Nostalgie (Togo), Oxy-Jeunes (Senegal), Pulsar (Burkina), Sud FM (Senegal), Tabalé (Mali), and Studio Ijambo (Burundi).

² Those radio stations are the following: Anfani (Niger), Femmes Solidarité (Côte d'Ivoire), Golfe FM (Benin), Kledu (Mali), Korail FM (Madagascar), Minurca (Central African Republic), Nostalgie (Togo), Oxy-Jeunes (Senegal), Pulsar (Burkina), Sud FM (Senegal), Tabalé (Mali), and Studio Ijambo (Burundi).

³ Participating stations were from Timbuktu, Gao, Mopti, and Ségou.

⁴ Awagna FM, Gaynaako FM, La Côtère, Jeeri FM, Jiida FM, Niani FM, Oxy-Jeunes, and Penc Mi.

The One to Watch – Radio, New ICTs and Interact

unschooled if you don't know how to use a computer. (Radio La Côteière; Joal, Senegal)

Rural and urban, men and women, young and old, all of the broadcasters said they urgently need to know how to use computers and the Internet for fear of becoming “the illiterate of the 21st century.” These words have a strong meaning in countries such as Senegal, Mali, and Burkina Faso, where more than 70 percent of the population is illiterate. That a failure to use new technologies could produce a new form of illiteracy represents a serious threat: the emergence of another cause for backwardness. It would seem that radio broadcasters now see the use of the Internet as a new development indicator.

We can't develop without this new Internet technology. We all have to understand that very clearly. We Africans are aware of it. (Radio Jiida FM; Bakel, Senegal)

New technologies are essential, and we have to go the way of the rest of the world... We all talk about the global village, but we have to be part of that village. (Radio La Côteière; Joal, Senegal)

The Internet is a symbol of modernity. Not making use of it could mean not taking part in the global process, standing by as the gap between developed and developing nations widens, and being excluded from the highly touted global village.

Finding Information on the Internet

The community broadcasters say that the Internet is useful primarily because of its informational potential. By being better informed themselves, they believe that they can more efficiently do their job of informing their communities.

What's most important about the Internet is that it enables us to broaden our knowledge and improve our programs so that we can help our listeners. For example, there are many diseases that rural people don't know how to fight at the present time. The Internet can give us information on malaria, tell us what its effects are, which areas are the most affected, and how to prevent it. The Internet makes it possible for us to move toward information, to process it, and to provide people with it. (Radio Jiida FM; Bakel, Senegal)

Their Internet searches were directly related to local concerns such as agriculture, health, malaria, the rights of women and children, growing vegetables, fishing, and composting. They wanted to obtain clear, concrete, and precise information on certain issues from in the form of instructional and educational presentations so that they in turn could put together programs on specific topics. However, they often found theoretical presentations or the kind of content that they felt could not be directly transferred into their radio programs.

As for content, well, maybe you can find some things with advanced searches, but you don't usually come up with what you need. For example, while we were browsing with AltaVista I wanted something on turtles, but all I could find were pictures. In my opinion, that was just a waste of time and money. (Radio La Côteière; Joal, Senegal)

During the workshops the broadcasters usually included “in Senegal” or “in Africa” in their searches. For example, they typed “human rights in Senegal” or “agriculture in Africa.” They spontaneously wanted to assess how well their nation or culture was represented. The results were usually foreign content, even when the topics directly concerned them.

It hurts when you browse the Internet and the only information you can find on Africa comes from the USA or Europe. It simply means that Africa is very poor in terms of information. (Radio Jiida FM; Bakel, Senegal)

On the subject of Africa, from the time of my first search it seems that I've only seen reports. This tells me that foreign intellectuals are the ones who are reporting on us. What I would like to see is an African village presenting its own cultural life and history. I haven't seen any of that so far. I don't know if it exists or not, but, the way I see things, it should. (Radio La Côtère; Joal, Senegal)

West African radio broadcasters would like to feel that they can identify with the content of the Internet. However, the scarcity of sites allowing for them to do so makes them believe that Internet information on Africa is mainly a story about them, whereas what they want are not sites that talk about them but rather sites created by people like them.

Influence or Provocation?

Considering the disproportionate amount of Western information on the Internet, as compared to African information, the radio hosts wondered what kind of consequences the flood of Western content might have on Africa.

I think that the Internet is a melting pot where people can do and show whatever they want. In my opinion, here in Africa we have to protect our culture. Too much information from foreign sources could put our culture in jeopardy and change the thinking of young people and intellectuals. They could start to think that if the Canadians or Europeans do certain things, then we're entitled to do the same. All these things coming in from the outside are not good for us. (Radio La Côtère; Joal, Senegal)

I've been told that you can find some real scenes. That's no good for my conscience or for anyone else's. We can't allow that kind of thing. You open up the Internet, and you see a nude woman or words that don't go very well with our moral standards in Senegal. (Radio Oxy-Jeunes; Pikine, Senegal)

Pornography, on-line “encounters”, and information on subjects such as delinquency or prostitution can be contrary to customs and moral standards. Furthermore, some of the broadcasters mentioned that such information could be perceived as a provocation from dominant economies and as a risk to social stability. Therefore, it can be said that the Internet is seen as a showcase for the Western world in a context of underdevelopment.

I think there can be risks because we can come upon sites that are incompatible with our own way of life. We can be influenced because we're living in Africa in underdeveloped countries. Therefore we experience things in situations that are always difficult. We may aspire to live like Europeans even when we don't have the means to do so. (Radio Oxy-Jeunes; Pikine, Senegal)

Broadcasters are having a difficult time trying to position themselves somewhere between their fear of being backward and their will to affirm their own culture. Opening up to the rest of the world is a necessity, but protecting themselves is a priority. The Internet has only recently arrived in Africa, and community broadcasters are still only *receiving* information, using it as a one-way medium. There is still none of the kind of participation that will enable them to actively participate as information providers. However, many of the broadcasters in the workshops expressed their desire to see Africa and its radio stations develop their own sites.

Africans have to understand that it is a very useful tool and that they need to put information into it. We need to have lots of sites talking about development and about subjects relevant to Africa. (Radio Niani FM; Senegal)

Why not have Internet sites and also broadcast information on the radio? We can create sites just like anyone else can. There is some information that only we can provide. Why shouldn't we use it just like other people from other societies do on their sites? (Radio La Côtère; Joal, Senegal)

The broadcasters believed that the only way for them to make Internet content more relevant is to become involved in the Internet. This desire to participate opens the door to having the Internet serve radio. Even though most broadcasters do not yet have the technical skills required, it is relatively easy to learn and the Web offer a real possibility for exchange.

Creating Networks

During the workshops, broadcasters said they would like to use the Internet's interactiveness in two ways:

We'll be using the Internet mostly for the purpose of sharing information with other radios. It's important that we share programming with other rural radio stations. I want to be able to pick up other stations and find out what kind of content they have and what's going on with one radio or another. I want to gather information if I think that it's useful for my own village or locality. I think that it's important to have a network of rural radio stations. (Niani FM)

The Internet will make it possible for them to find out how other stations operate and design their programming. It will also encourage mutual aid among stations for the purpose of improving practices and helping to avoid isolation in different regions of the country. The Internet can also help radio hosts to find new funders more easily.

The Internet is important on the public-relations level. It can allow us to link with other organisations that would like to act but don't know where they can do it or with those that want to invest in radio on the European level but don't know where they can be useful. (La Côtère)

Broadcasters identified two kinds of partnerships that they can establish via the Web: with other radios and associations involved in the same work as they are; and with possible funding organisations. These partnerships could help to enrich content and provide funding.

Local and Global Media: Complementary or Contradictory?

Rural radio broadcasters clearly understand how useful the Internet can be. Whatever its prospective use, the goal remains the same: to make their radio station better.

I don't think that using the Internet will prevent us from doing our local work. The Internet is an aid, and it can help me to develop themes in my own local area. It's not going to change our approach to rural radio; it's only going to complement it. (Niani FM)

With the Panos Institute's e-mail project we'll be receiving information every day from Bamako or Gao⁵. That's important because Timbuktu doesn't

⁵ Bamako is Mali's capital and Gao is another city in Mali.

receive any newspapers during the rainy season. (Radio Lafia; Timbuktu, Mali)

The Internet is seen as an informational supplement and a tool for exchange, but their own communities and realities remain at the heart of the process.

The Internet is important, and it has some good stuff, but you can't spend all your time with it. You can't make a priority of things coming to us from outside because, if you do, you'll forget about your own reality. (Oxy-Jeunes; Pekine, Senegal)

The broadcasters feel that using Internet means falling into line with the rest of the world, but also that they have to ensure that the flow of foreign information does not distance them from their communities. The Internet must be included in the station's mission and should not lead them astray from it. The objective is to support existing communication processes, not to replace them.

A Democratic Tool that is not yet Democratised

The Internet is often called a “democratic tool” because it supposedly provides an opportunity for everyone to participate and because it is difficult to censor. However, if it is to be truly democratic, it must be accessible. At the moment there are many barriers that restrict radio stations' effective use of the Internet. These include financial barriers, organisational barriers, linguistic barriers and infrastructural ones.

Financial Barriers

After setting up the computer, we surfed for a few hours. A month later, we received a telephone bill for CFA200,000.⁶ Our journalists didn't know that they had to disconnect after using the Internet. (Radio Hanna; Gao, Mali)

Financially speaking, community radios have a hard time surviving. They get along by charging small amounts for broadcasting dedications, death notices, community announcements, and personal messages. They are located primarily in rural areas where income-generating activities, including fishing and farming, do not provide people with enough to help their media to survive. Despite the potential of the Internet, the scarcity of money means that radio stations cannot use it.

The costs are even higher in the case of audio distribution projects like *BDP on Line*. It takes an average of one hour over an expensive telephone line to download a 15-minute program. It is not very realistic to imagine that rural radios can exchange sound files or conduct regular searches on the Internet.

Internet will become a tool that radios can use only if national and international access strategies are implemented. A priority for rural radio stations might be to lobby authorities for free or low-cost Internet access. This would certainly be a useful step toward a real democratisation of the Internet.

Organisational Barriers

Even though a radio station may have a computer that can be connected to the Internet, there are significant access problems for the members of the radio team. One facet of the access problem in rural areas is clearly related to organisational deficiencies in the radio

⁶ 200,000 West African Economic Community francs equals approximately US\$265. Mali's per capita annual income is US\$230.

stations: the computer, a precious asset, is kept in an office, where only the director or president will have access to it. Management of community radios is often not community-style. Even when it is, there are good reasons for limiting access to the equipment.

The current problem is maintenance. There are no maintenance specialists in Bakel (a city located 750 km from Dakar). When a computer breaks down, we have to take it to Dakar. With the cost and all the risks along the way, that's a real problem. There may have been just a slight memory block, but, if we're not experts, we have to stop our work, and the computer is useless. We know that people here won't have the means to repair it. (Jiida FM; Senegal)

This kind of difficulty causes radio directors to limit computer access strictly to the most skilled radio hosts, the result being that most hosts will remain unacquainted with the Internet tool.

Linguistic Barriers

The kind of language used on the Internet poses a problem. Rural broadcasters often have a fairly low level of schooling, and, although French or English may be the official language of a country, most speak their regional languages better than the official one. At the same time, much of the useful information on the Internet is written in a complex academic language that is inaccessible to many people. Some broadcasters are so disconcerted by the kind of vocabulary that they give up using the web.

Infrastructural Barriers

Although using modern software does not constitute a major difficulty, local infrastructure does. In theory, every Senegalese city has enough bandwidth for the use of all Internet services. (Other countries are still suffering along with the old analogue exchange systems.) However, service interruptions are frequent and sometimes very long. Even in Bamako, Mali's capital city, the coordinator of *BDP on Line* has sometimes gone for days without access to the Internet, shutting down the entire network. In rural areas, service can be even less reliable. The electricity grid is also susceptible to failure, with power being cut for hours or even days at a time.

Furthermore, although other equipment is at times needed, many radio stations have nothing more than the computer itself. Printers, for example, would be useful in limiting the amount of connection time, particularly in the case of distribution lists or long documents, but most stations do not have one and even paper is expensive.

The practical obstacles mentioned above all pose serious questions concerning how the Internet can be used in community radio.

What about Another Approach?

At present, new communications and information technologies can probably not be of direct use to Africa's rural radio stations, at least not in the same way in which they are in more developed parts of the world. It is possible, however, to combine the most advanced technologies – Internet audio, for example – with more traditional broadcasting techniques such as “radio relay”. Audio files could be exchanged over the Internet between national “flagship” stations located in the capital (these could be community-radio associations) and then sent out by more conventional means (cassettes, CD Roms) to the member stations. Other Internet options, such as exchanging text instead of audio are more realistic for everyday radio use.

For this strategy to be feasible, however, the national flagship stations need financial resources to pay for connection and communication costs, and they themselves must belong to a network comprising several countries with the ability to produce sufficient quality programming. Such a flagship network would also need a regional hub capable of providing training, financial support for its equipment, and full-time distance (electronic) service for advice and assistance.

In addition, several “intermediary” organisations with strong local roots – such as the Panos Institute of West Africa – could help to link new technologies (the Web or satellites) with local radio stations by selecting and formatting information from the Web and by supporting the development of networks.

Paving Highways

Making the Internet serve the needs of West African community radio is a work in progress. There is still a long road ahead, and the time it takes to get there will depend on the road conditions. That is why we need to provide routes free of potholes and obstacles, highways that are paved, fast, and efficient.

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Chapter 5

Public Radio and the Internet in the United States

Robert Ottenhoff



Confronted with the power and ubiquity of broadcasting, most countries reached the conclusion that its potential impact justified careful regulation and special treatment as a cultural and communicational infrastructure. In the United States, it was determined that a free and unfettered broadcasting system was paramount and from the beginning it was based on private rather than public ownership. Unlike most of the world, public broadcasting was only introduced to the United States after commercial broadcasting was in full swing, almost as an afterthought.

In order to encourage diversity and independence within this commercially-driven system, and thus to better reflect local needs and interests, legislators and regulators also adopted what they called the “bedrock of localism.” According to this principle, each station was licensed to serve a specific locality and tight controls were placed on the number of stations that could be owned by one company. This principle applied both to commercial and non-commercial broadcasters and, again unlike most of the world, public broadcasting in the United States was, from its inception, locally-owned and controlled. National and state governments are prohibited by law from owning or operating radio stations directed at domestic audiences.

Over the years, ownership restrictions for commercial stations were gradually loosened until, in 1996, a new telecommunications law dramatically lifted virtually all remaining restrictions, resulting in a wave of mergers and consolidations that dramatically changed the broadcast environment. Localism was abandoned and companies were permitted to own as many as eight stations within a single market. One company, Clear Channel, now owns nearly 1,200 radio stations, more than ten percent of the commercial radio stations in the country. Commercial radio is now a very big business, dominated by a few huge conglomerates, with very little local ownership or control.

Although a late-comer, public radio plays a unique and distinctive role in the American media environment. It is one of the few places left on the radio dial to hear solid news coverage and eclectic cultural programming, including classical, jazz and folk music. And unlike commercial radio, public radio is still locally owned and controlled.

There are nearly 700 public radio stations operating in the United States, licensed to about 360 different bodies, most of them non-profit organisations and universities. Another 1,500 smaller non-commercial stations are operated by religious, student and community organisations. Most of the public radio stations are members of National Public Radio (NPR), a national radio service that provides stations with news and cultural programming.¹ Virtually all NPR stations and most of the smaller ones have access to programming, from NPR and other sources, via satellite. NPR stations are independent and make their own programming decisions. A typical station will produce about one third of its programming locally and get the rest from NPR and other programming sources available via satellite. Each station is

¹ For more information about National Public Radio, including a list of member stations, see <npr.org>.

locally owned and operated, with its own board and management and is responsible for raising its own operating funds.

Funding for public radio in the United States is also primarily local. Listener contributions are the single largest source of revenue, with 2.1 million people donating more than US\$150 million per year directly to their local stations. In contrast, support from the federal government averages less than ten percent of a station's budget. Much of the rest comes from sponsorships, often from local business. In addition to financial support, most public radio stations also depend on volunteers to undertake many of the station's activities.

With almost 60 percent of US adults online, public radio stations know they cannot ignore the new medium and most are enthusiastically exploring how to use it to build even stronger relationships with their listeners. A recent survey on the ability of the Internet to build communities underscores the potential value of the Internet to public radio stations. Undertaken by the Pew Internet and American Life Project the study found that 90 million Americans have participated in online groups.² Of those, 28 million have used the Internet to deepen their ties to their local communities and 23 million Americans call themselves "very active" in online communities. Over half of Internet users surveyed say they joined an online group after they began communicating with it over the Internet. The report concludes:

[I]n the face of widespread worries that community activity is ebbing in the United States, these findings demonstrate that the Internet, while not necessarily turning the tide, has become an important new tool to connect people with shared interests globally and locally. In some ways, online communities have become virtual third places for people because they are different places from home and work. These places allow people either to hang out with others or more actively engage with professional associations, hobby groups, religious organisations, or sports leagues.³

The unique set of conditions described above – commercial dominance of radio, a small but significant and reasonably well-funded public broadcasting presence, and significant access to the Internet – it is not surprising that there are a number of unique possibilities for broadcasting and the Internet in the United States. For public radio stations in the United States the challenge has been not how to use the Internet in their programming, or how to make use of it to exchange programming with other stations (satellite access to programming was readily available to public radio long before the Internet was). Instead many have chosen to experiment with how to use the Internet to be more interactive, to provide programming on demand, and to offer more detailed information to their communities than they could over the airwaves. Three examples of how public broadcasters are using the Internet are presented here – one national, one within a single state, and one within a single city.

² Online groups are Internet websites and mailing lists that facilitate communication among a community of interest or a geographical community.

³ Pew Internet and American Life Project, *Online Communities: Networks that nurture long-distance relationships and local ties* (October 2001). The full text of the study is online at <www.pewinternet.org/reports/toc.asp?Report=47>

New Hampshire Public Radio

New Hampshire Public Radio (www.nhpr.org) operates four public radio stations that blanket this small New England state. Several years ago it started a daily news program called “The Exchange” focusing on state-wide news and current events. The program works in conjunction with an extensive web site that provides additional information, connections to other web sites, an opportunity for feedback and discussion and a weekly email bulletin telling listeners what is coming up on the program.

When the state legislature proposed four different state tax plans (in a traditionally anti-tax political environment), the station introduced a three-pronged effort to help citizens sort through the issues. On-air, the station produced a series of reports, interviews and call-in programs. On their interactive web page, they scored over 32,000 hits to an “On-Line Tax Calculator” which enabled listeners to calculate their individual taxes under the four different plans. And finally, the station developed a series of live civic forums with local partner organisations throughout the state.

Jon Greenberg, senior editor and director of new media at the station, points out that the web is a way to get involved with listeners. “Radio news is essentially a one-way activity. With the web, we can say for certain that over 30,000 people took a positive action.” The online analytical tools helped to overcome some of the confusion and obfuscation that often colours political debate. Also by attracting public attention, the Tax Calculator demonstrated to listeners that the web site is a source of important information that merits their continued attention.

KPBS-FM

KPBS-FM is the public radio station based in San Diego, California and licensed to San Diego State University. It worked with the California League of Women Voters (LWV) to test methods of providing on-line access to non-partisan news and ballot information. Reciprocal links between LWV’s site facilitated sharing of information related to local races and ballot initiatives. The project created three key resources:

The LWV web site, www.smartvoter.org, provided content about San Diego candidates and propositions.

A KPBS campaign 2000 web site featured local, regional and national election news information.

My Election Folder site was created, with news, resources and a special feature allowing users to save their favourite election information.

Overall, there were nearly 11,000 visits to My Election Folder and the majority of users visited the site the week of the election. On the day before the election, the site received over 56,000 hits.

PUBLIC INTERACTIVE

Over 160 public radio and television stations depend on a service called Public Interactive, or simply PI,⁴ a company, primarily funded and owned by public radio and television stations. PI offers packages of content and technology tools for enhancing public radio and television websites. In effect, PI acts as the wholesaler, providing national content and a technology template, while stations fill in the local information and make the local contacts. One package, called *Public Events*, is a local events publishing system that allows stations to highlight station-sponsored events, local arts activities, entertainment and community events. Partners of the station can easily add events to the station’s site through a password protected web page. Tom Lix, the President of PI describes it as a calendar with local publishing capability. “Each station can enter local events; everything from concerts to poetry readings. But after the September 11th event, we also had stations posting blood drives and other community support events. We provide the application, the training, the infrastructure. The station provides content, local connection to the community and importantly on-air activity.”

Other PI services include *Public Arts*, for arts, entertainment and culture and *Public NewsRoom* for on-line news and information resources. PI also started *Public Store*, for e-commerce activities, in the hopes of generating a new source of revenue, but have found the margins to be extremely small and the

⁴ <www.publicinteractive.com>

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total revenues not very significant. PI also makes streaming services available in Windows Media and Real Audio formats and stations are slowly adding on streaming when economics permit.

In an interview in the Radio and Internet Newsletter (RAIN),⁵ Tom Lix said he believes that public radio stations are at least a year ahead of commercial stations in using the Internet because they are more interested in the concept of public service. Public radio, he said, has “a focus on service. For their listeners, their viewers, and their members. They realised, early on, that the Internet could help them better “serve” their audiences. Sometimes it was as simple as putting up a program guide, or a pledge page...but everything they did focused on serving their community better.” Even more importantly, they are realising that building a relationship really requires two-way communications. It is great to get individual financial support and volunteer activity, and radio is great for getting information and entertainment disseminated. But to get feedback and really build a true two-way relationship, a public radio in the United States needs the Internet.

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⁵ <www.kurthanson.com>

Section II

Gateways

Making a streaming audio signal available on the Internet is a way of extending a radio station's reach; gateway projects do the reverse, using the radio to extend the reach of the Internet. In the same way that a single cybercafé or telecentre with a few computers can be an efficient way of increasing the number of people connected, providing access for dozens of people with only a few computers, a radio station with thousands of listeners that makes active use of the Internet can address the problem of access to the Internet's wealth of information with a tactic of *digital multiplication*, multiplying the impact of its Internet connection.



The chapters in this section examine a number of different models from different perspectives.

In her chapter, *Community Media Centres: Creating digital opportunities for all*, Stella Hughes examines the concept of community media centres (CMCs) as developed by UNESCO and looks at two examples of CMCs on the ground in Sri Lanka and Mali.

Kothmale Community Radio in Sri Lanka is probably one of the best-known projects combining radio and the Internet. In their chapter, *The Kothmale Model: Using radio to make the Internet visible*, Ian Pringle and MJR David look at the same CMC introduced in the previous chapter from a different perspective, examining how the radio station not only serves as a gateway but also heightens community awareness of the Internet.

Birgitte Jallof's chapter, *Creating and Sustaining ICT Projects in Mozambique*, looks at how ICTs can be used by media in Mozambique, a country with one of the poorest telecommunications infrastructures in the world.

The Russian Rural Information Network, by Nancy Bennett, looks at how a methodology devised by the Developing Countries Farm Radio Network to provide broadcasters with technical agricultural information was adapted in Russia.

Chapter 6

Community Multimedia Centres: Creating digital opportunities for all

Stella Hughes



In the era of the knowledge society and the knowledge economy, access to the infrastructure to share knowledge is paramount for social and economic development. Within the international development community, there is now strong consensus on this. It is widely agreed that information, communication and knowledge cannot remain the preserve of development experts in tackling poverty but must become the basic tools of the poor in improving their own lives. There is equally strong consensus on the dangers of the accelerating inequity of access to knowledge both within and between countries.

Strategies to increase access to knowledge for development need to integrate fully both their approach to the new knowledge resources and their approach to traditional knowledge systems. On the one hand, the introduction of new ICTs into poor or marginalised communities works best when it draws on traditional channels of communication and information, on the reservoirs of indigenous knowledge within the community and on its existing information resources. On the other hand, traditional forms of knowledge acquisition are insufficient to foster an inclusive knowledge society. People in poor and marginalised communities need access to mechanisms that provide multiple sources of rapid information and information exchange. The Internet and associated technologies are pivotal to the new means of knowledge acquisition. The question is: how should new ICTs and traditional knowledge systems be integrated at the community level in order to maximise the development potential of both?

Kothmale, Sri Lanka

In response to this challenge, UNESCO examined two areas in which it already had a well-established track record: long-standing involvement with grass-roots community radio; and more recent involvement with the multipurpose community telecentre. The result of bringing the two together in a novel manner is the Community Multimedia Centre (CMC). This combines community broadcasting with community telecentre facilities and offers a strategy that integrates new and traditional information and communication systems at the local level.

When community radio and new ICTs are actively combined, they offer far greater possibilities for engaging a community in its own development. The possibilities generated by the combination of the two are not confined to quantity or range; the qualitative nature of these possibilities also changes. This is because of the particularly dynamic relationship between communication and information, between contact and content. The combination of a grassroots public platform with access to information highways promotes the public debate and public accountability that are essential for strengthening democracy and good governance. The combination of local radio with a community database developed by local people, building up a store of relevant data for educational, informational and developmental requirements, provides a solid knowledge base for the community and an open learning infrastructure for all its members. It also takes into account the preference of rural communities for a collective assimilation of knowledge, in contrast to the prevailing mode of individual access to Internet.

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This summarises the rationale behind the first pilot project supported by UNESCO in this field. The CMC is a recent development and the first of its kind, the Kothmale Internet Radio project in Sri Lanka, only reaches the end of its pilot project phase, with an independent, external evaluation at the time of writing (last quarter 2001). Kothmale Community Radio (KCR) was set up 20 years ago by the Sri Lanka Broadcasting Corporation when the construction of the Kothmale dam displaced entire villages. Local radio was chosen as a strategy for helping to rebuild the social fabric for those displaced within this rural community and KCR became an important part of many people's lives. The Kothmale Internet Radio project added a community telecentre facility to the radio station. From the outset, access to Internet was considered both in terms of direct access for members of the community, through training courses or the help of facilitators, and also in terms of indirect access through "radio browsing" programmes. In this way, community radio is used as a gateway for a poor community to actively participate in the global knowledge society through "radio browsing" of websites, by encouraging the use of Internet access at the station and encouraging the use of radio as a platform for public debate.

This approach overturns many assumptions about Internet and related technologies: that they are primarily useful for professionals, business people, academics and students or that they are intrinsically part of a consumer life-style, offering new services almost exclusively in the domain of leisure, entertainment, travel and consumer spending. In Kothmale, radio browsing programmes focus on local economic activities, development and governance issues, culture and entertainment. The daily programmes respond to queries from listeners. Presenters first select relevant, reliable websites and broadcast the programme with local resource persons as studio guests (e.g. doctors for a health programme) who discuss the contents of the mostly English-language sites directly in the national languages. They also describe the websites and explain how they are browsing from one web page to another. Thus, listeners not only get the information they requested, but they understand how it is made available on the web. They can respond to the programme and they know that essential data will remain available in the community database if they wish to make individual use of it. With this daily radio programme, there is continuity within a common learning process encouraging greater inter-activity with and by the community.

The impact of this new way of creating shared meanings and interpretations of information for development is a key marker of the success of the project. The radio programme has triggered a greater interest among community members in receiving information related to poverty alleviation efforts, health, formal and non-formal education, livelihood skills and individual empowerment. The assumption behind this approach – that Internet can be useful for everyone – was readily taken up by listeners, most of whom had probably no idea that there could exist a more elitist approach to new ICTs. This echoes the experience of many projects introducing new technologies to poor communities in the developing world: there are few psychological barriers to overcome among people who have had little or no access to information and communication technologies in any form – new or traditional. A CD-ROM is no more intimidating than an encyclopaedia when one has never used an encyclopaedia.

The Kothmale log book filled by each individual user of the telecentre shows a very wide range of subjects researched by a wide range of users. With an adult literacy rate of 82 percent, Kothmale offers fertile ground for this approach to new knowledge resources. Log book reports vary from one farmer researching information on organic tomato farming to another looking for new varieties of seeds, to a baker seeking new recipes, the local undertaker looking for an on-line funeral business management course, a health worker printing data on mosquito-borne diseases and young people looking for international job opportunities. The radio browsing programmes have also prompted illiterate people to go online with, for example, an elderly woman seeking the help of a facilitator to visit the site of a sacred Buddhist shrine in India. The radio browsing programmes cater in a similar way for

different interest groups. A tea farmer who presents a radio browsing programme found a Tamil-language website explaining new tea drying techniques in southern India and shared this information with the local tea farmers on a browsing programme. Many farmers cultivate bamboo and new uses for bamboo were introduced to Kothmale after a programme browsed a website in the Asia region and found new crafts using bamboo.

When looking at the remarkable ease and speed with which KCR moved into this new, multimedia centre approach, certain pre-existing conditions stand out clearly as having an important impact within the project. The fact that the CMC was built into a well-established community radio station with a core professional staff and experienced grassroots volunteer staff meant many development topics were already covered regularly on air and in ways that sought systematically to convey locally-relevant information in context and with a degree of interactivity between listeners and programme makers. Local resource persons with a traditional role as “knowledge-brokers” for the local community had already been identified and mobilised to participate in community broadcasting. Well-adapted local programming by trusted and familiar broadcasters offered an excellent foundation for the introduction of new ICTs. At the same time, high literacy rates and the generalised secondary-school level of education of the younger generations in Kothmale also impacted positively on both the range and the number of people using ICTs.

Building on these favourable conditions, the project strategy of reaching out to the entire community ensured a continuum of information and communication, involving both the spoken and written word, the most educated and the least educated. The daily browsing programmes provide a crucial link between those more likely and those less likely to use ICTs individually. Even those who would never go to the telecentre themselves have a basic understanding of and share a common language to discuss ICTs, because the radio browsing programmes have made cyberspace familiar territory. The clearest illustration of this is the number of cases in which a senior family member has listened to a browsing programme, then encouraged a younger family member to go onto Internet in search of information useful for the small family business. In Kothmale, there may be a noticeable “generation gap” in terms of individual access to ICTs, but not in terms of appreciating their usefulness.

Such positive factors for developing a CMC did not remove the need for carefully planned outreach activities targeting all groups within the community. Those hardest to reach have been young girls. In spite of messages on the radio announcing free training for women and girls, few came from the poorest hamlets of Kothmale. Only door-to-door “canvassing” finally convinced some of the most marginalised women that the training really was meant for them. One of the lessons of the project has been that proactive gender policies have to be pursued at every level, from targeting women and girls for training opportunities to ensuring that men do not jump the queue for the computers when women are in line. Again, the combination of direct and indirect access to ICTs helps to bridge the gender gap. In Kothmale, 41 percent of telecentre users are women, but they constitute over 50 percent of “radio browsing” users who also interact with new ICTs by telephoning or sending questions to the “radio browsing” producers, then listening to, reacting to and using the information broadcast from the Internet.

Lack of Sinhalese-language materials on-line was a major obstacle, only partly overcome by local efforts to train users to create webpages. Although web skills are so widespread that 40 percent of those making web pages in Kothmale are now peer-taught, only when there are many more “Kothmales” producing their own web pages in Sri Lanka will the lack of locally relevant information in national languages be made good. It is worth noting here that it would take just 50 CMCs in Sri Lanka to ensure that every Sri Lankan is within reach of ICTs and on the right side of the digital divide. The language barrier is less of a problem for Tamil-speakers, thanks to the relatively large number of Tamil-language websites emanating from the large Tamil population of southern India. At present, the radio browsing formula is the only means to overcome entirely the language barrier, as information on

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English-language websites is explained and discussed directly in Sinhalese and Tamil. One advantage for Kothmale is the existence of many regionally-based English-language sites carrying a vast range of information relevant for much of the Asian region. The number of school-students at KCR after school hours, surfing the web in English and using English for their email exchanges, indicates that language is far less of a barrier for the younger generations.

Achieving a satisfactory supply of relevant content involves more than the vital matter of identifying and using suitable websites, locally-created or across the Internet. The Kothmale database is building up a collection of useful on-line data, including administrative forms, fact sheets and so forth. On-line governance is a promising future prospect as local and national government documents begin to go online. The CMC has great potential to evolve into a community learning centre, with a library of multimedia learning materials and access to distance education and training courses just some of the possible uses. Already, two access points at public libraries in nearby towns extend access to Internet to many more users and make the physical link to library collections. Local schoolteachers use the Internet to enrich their lessons and take their classes to visit the centre. Some unplanned outcomes of the project can have a significant impact on contents creation and local use of online resources. The combination of individual and community interaction fosters the emergence of new democratic initiatives with a focus on e-campaigning. A new, active and influential environmental NGO, Green Lanka, germinated from the Internet browsing of some young Kothmale residents who decided to “do something” with their new-found IT resources. Green Lanka must be one of only a few NGOs around the world awarding a national “green label” for exports from headquarters in a village (although demand has obliged the NGO to open an office in the capital, Colombo).

The strategy of combining direct and indirect access to new ICTs has also to be assessed in terms of scale and capacity. At present, the number of computers made available to the public through this project is minimal – about six machines in all. While the small telecentre facility and two access points in public libraries can receive up to one or two thousand visits a month, the radio browsing programmes attract many times that number of listeners every day. In this way, a minimal investment in ICT equipment can have an quasi-exponential impact within the community. In the future, some local people and, crucially, other local institutions can be expected to acquire their own equipment as usage generates revenue and purchase costs come down. As the number of users increases, it may become commercially viable for small, private Internet kiosks to set up business. There is no reason to believe that any of these developments would obviate the need for or the usefulness of the present system of mass access through radio browsing and the proactive approach to broad-based participation fostered by community telecentre outreach activities. The CMC formula not only looks set to remain relevant for the medium term, but could become a permanent feature alongside the individual user approach of wealthy consumer societies.

As a pioneering pilot project, Kothmale saw a considerable proportion of the project budget allocated to research and evaluation. From the outset, the project was supported by the national authorities and national institutions – with government ministries supplying the dedicated Internet connection, the Sri Lanka Broadcasting Corporation responsible for the radio station and its professional staff, and Colombo University providing technical support for the computers and networks. This support was important in order to start up a completely new activity in a poor rural area where the level of awareness had not yet created a demand for ICTs. It also needed strong public support for another reason: there was a major credibility barrier to overcome. What did poor, rural people speaking Sinhala and Tamil need with Internet? What could justify making ICTs a development priority when there were other, pressing needs? What motivation would people have and would they sustain their interest for any length of time? Today, that battle for credibility has been won and will not need to be fought again – in Sri Lanka, at least.

With the example of Kothmale to build on, it is likely that future CMC projects in Sri Lanka will follow a somewhat different model: establishing business plans and sustainability strategies from the outset in order to reduce the degree of dependence on public support, reducing the research component as the model becomes more established and networking with each other to pool resources, training and so on. Links with other institutions such as educational and training institutes, development networks or agricultural co-operatives could become a core component of a CMC.

It is conceivable that, as in other countries where broadcast regulations permit it, the community radio component of a CMC could eventually be started up by the community and be fully owned and operated by the community. However, the intrinsic value of building the CMC on an existing local station that is part of the national public broadcaster cannot be overlooked. In the case of Kothmale, the high standard of broadcasting at the station was without a doubt a key to the success of the radio browsing formula. Paradoxically, this model might be of particular interest in those developing countries where chronically under-funded public radios struggle to compete with flourishing new FM stations that are free from public service constraints. By forging a new public service role integrating ICTs, the local stations of national broadcasters could find a new lease of life and benefit from public revenue going into national IT plans.

Timbuktu, Mali

While in Kothmale the CMC grew from the community radio station, in Timbuktu, Mali, it is the community telecentre that has become the basis for a CMC, with the four radio stations of the town sharing use of a new radio studio within the telecentre. The Timbuktu community telecentre, a pilot project backed by a consortium of partners (UNESCO, IDRC, ITU, SOTELMA (national telecom company), WHO and FAO), opened in April 1999 and was planned as a fairly large-scale infrastructure eventually able to offer specialised services such as telemedicine and distance learning as well as basic services to all members of the community. UNESCO added the radio equipment to the telecentre in September 2001 in order to enable the local radio stations to make full use of new ICTs and start radio browsing programmes. The local municipal station, Radio Bouctou, and the three private or associative stations, Radio Alfarouk, Radio Lafia and Radio Jamana run on minimal revenue, equipment and human resources.

Timbuktu and the surrounding area have a far smaller population than Kothmale and an adult illiteracy rate of 50 percent. Its telecentre – three times larger than Kothmale's, with 18 computers – is constantly busy. When this ICT project was proposed and even though the literacy levels, income levels and population density are far lower than in Sri Lanka, there was no credibility barrier to overcome. Timbuktu suffers from such extreme geographical isolation – with currently just one flight a week made by a 14-seater plane and river boat services taking four days from the capital Bamako – that the contact potential of ICTs was embraced with great enthusiasm from the outset. A remarkable indicator of this support and degree of faith in the benefits of these technologies was the substantial financial contribution made not only by townspeople but by the inhabitants of 43 outlying villages.

The telecentre made a series of attempts to encourage the town's radio stations to use its services. Timbuktu's four radio stations broadcast in a total of six languages to the townspeople and to villages within a 100 km radius. The first users of the community telecentre were not surprisingly the local elite – teachers, office workers, doctors, business people and so on. In order to expand access, a study was made of user needs according to social groups – women, youth, nomadic herders, traders, media etc. – and outreach activities organised. The results were not necessarily what could have been expected: some categories that might have been thought the hardest to reach became aware of the value of ICTs much sooner than, for example, the radio staff of the town.

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Several illiterate and semi-literate Touareg camel herders were among the quickest to use the centre in order to open email accounts and deal directly with their tourist clients overseas. While these users now know how to navigate, open their mail box and access their mail with ease, they have to print out each message as they read with great difficulty or only with assistance. Similarly, writing a reply is a difficult task and some use the telecentre email-writing service. This does not appear to be an obstacle as the total cost is cheap and the message instantaneous. As a measure of motivation, one Touareg travels 400km about once a month to access his email. If he cannot get a lift with a tourist convoy, this takes him up to a week by camel. This link enables him to run his small tourist guide business and launch projects in his oasis village of Arawane. Most other herders working as guides and using the centre travel in daily from camps some 10 km out of Timbuktu.

The hardest-to-reach group – young girls – still forms a minority of users. The single most successful strategy to encourage Internet access among schoolgirls was to find them email pen-friends, mostly from neighbouring countries in French-speaking West Africa. For women's outreach activities, as for those targeting other groups, existing structures were mobilised and local women's associations still provide the key link to the female population. Most women users are however still from the more privileged groups such as office workers and health workers. Illiterate adults were targeted with great success. Computer-based literacy classes are in demand and three literacy tutors run courses in the telecentre in which they take a discreet, low-profile approach, allowing their "students" to blend in with other computer-users. A self-tutoring literacy software package is currently being finalised.

In contrast to the successes of outreach activities for these groups, attempts to attract radio staff initially had significantly lower impact. Only two people working in radio stations came to use the centre spontaneously. The heads of the radio stations or their representatives were first given an introductory course. This was followed by a full basic computer training course given free to two staff members from each station. The telecentre then donated a computer to each station, stipulating that these should be used to train colleagues by those who had followed the basic training course. Another training session was carried out for radio staff on use of CD-ROMs and the telecentre staff then visited each station, presenting the contents of development CD-ROMs and loading contents onto the stations' computers. Almost a year after these efforts began, the computers in the radio stations were however still visibly under-used and radio staff in a noticeable minority among telecentre users. Usage of the computers in the radio stations appeared to be inhibited by problems of social relations in the workplace: those who now had computer skills were not in a hierarchical position that allowed them to take initiatives with "high-status" equipment – the computer.

Only when the telecentre got a high-speed line and was able to offer a good Internet connection did radio staff use of computers pick up. A free Internet course was given to one staff member per station (offered to those who had not benefited from previous training sessions) and free access to Internet and print-outs of information for programmes offered to all radio staff. At this stage, the first real numbers of radio staff began using the centre, opening email accounts and surfing the web. However, the only radio programmes for which web searches were used regularly concerned sports, music stars and horoscopes. Attempts by the telecentre managers to organise the making of development programmes in the telecentre failed. As in many other parts of the developing world, in Timbuktu development partners – NGOs and IGOs – have been in the habit of paying local radio stations to broadcast development programmes. Although the development partners may view this as general support for community media, the hard-pressed radio directors naturally enough come to view development programmes as a legitimate source of revenue and are reluctant to use their own resources to make relatively time-consuming, high-input programmes.

The radio equipment donated by UNESCO and housed in the telecentre, a Wantok FM radio station-in-a-suitcase, was intended to break this pattern and encourage greater use of Internet by radio staff for making programmes on development issues as part of their regular

programming. Training was given in radio browsing techniques: pre-selection of useful websites, advanced search methods, methods of saving or “storing” selected webpages, techniques (for both presenters and resource persons) for describing or visualising web contents and so on. The radio browsing concept was embraced with great enthusiasm by the generally young radio presenters who were eager to use the technique to cover development issues and clearly enjoyed this new dimension of radio presenting, experiencing it as enhancing their role and status as information-brokers. This high level of motivation is crucial as these presenters are paid very little or not at all. With the introduction of the suitcase radio, their use of the telecentre immediately rose.

However, none of the radio staff had sufficiently good web browsing skills to be able to prepare browsing programmes with ease after the initial, limited number of training sessions. Under the agreement made with the radio and telecentre directors, the telecentre staff will continue Internet training and assist in radio browsing production, at least until the presenters become fully competent. The telecentre now plans to budget for digital audio editing software and a minidisk, which will further encourage radio staff to use the centre and to develop radio/telecentre co-productions. The advantages of a co-production system benefit both parties. The telecentre needs to expand its user-base in order to increase its revenue to the point of being fully sustainable and radio browsing programmes should stimulate demand. Although the radio stations, in return for free services at the centre, had begun broadcasting adverts for the telecentre and its services, it is clear that radio browsing can raise far greater awareness among many more listeners than an advert can.

One of the reasons for low levels of production of development programmes cited by the directors, along with the revenue issue, was the difficulty in getting resource persons to go to the radio stations to take part in programmes. This difficulty should greatly diminish when the resource persons are asked to go to the telecentre to make a programme, as their motivation for going there is far higher: they have email accounts, use Internet and word-processing and would generally make good use of a visit. Another benefit for the radios lies in the fact that none of the radio stations previously had a production studio and were only able to make pre-recorded programmes in the few hours per day when they were off air. They now have the option of using the equipment in the telecentre for recorded or live programmes.

The telecentre’s regular users also represent a reservoir of valuable interviewees. The telecentre plans to begin producing regular “how to” programmes on ICTs with users as studio guests. The impact on target audiences of a semi-literate Touareg explaining in Tamacheq how he navigates and uses his email is likely to be far higher than if the same explanation is given by a computer engineer. A teenage girl describing in Arabic or Songhai the correspondence she exchanges with email pen friends may, like the nomad, serve as a role model for listeners in her target group.

New programmes are still in the planning stage but a number of existing programmes have been identified as lending themselves to development into browsing programmes. Radio Bouctou has a three-hour programme every evening for the villages of the region and takes calls from relatives abroad with urgent messages, relays announcements and so forth. These villages, which supported the telecentre with donations, have seen little return for their support so far. The director of Radio Bouctou believes that radio browsing for rural audiences could quickly become the first concrete benefit for villagers arising from their investment. One possibility would be to organise a shared email account for each village, enabling distant relative to send news more often and far less expensively. Browsing programmes could target fishing and farming villages with appropriate information for their economic activities and development needs. Radio Alfarouk uses very young volunteer presenters during the school holidays and these young people could quickly become the “ICT-interface” for school children and students. Not surprisingly, the telecentre has already become a centre of attraction and something of a meeting place for many young people who spend time there every day. Youth browsing programmes could direct them to the best websites for young

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people and show them that many of their concerns are experienced and discussed by young people all over the world.

The impact of the new telecentre-based radio studio will be monitored for both quantitative and qualitative impact. The number of browsing programmes will be monitored and compared to previous levels of development programming. The number and range of resource persons and the frequency of their participation in browsing programmes will be logged. The topics covered and websites used will be recorded and information on the best web sources made available to all radio staff. Impact will be evaluated in terms of listener response to programmes and request for particular browsing subjects and also in terms of changes in telecentre user patterns. New users will be asked if they decided to come to the centre after following radio browsing programmes and both the number and the range of new users will be matched against radio browsing topics aired.

There are certainly many challenges ahead for the Timbuktu telecentre/radio partnership. There are fewer relevant websites emanating from and intended for developing countries in the French than in the English-speaking world. One response may be to have a focus on CD-ROM browsing as well as Internet browsing. If the telecentre builds up a good library of educational CD-ROMs, for example, this will not only enrich browsing programmes but stimulate demand for use of the computers for learning activities. Another challenge lies in the fact that radio browsing in Timbuktu will have to be done in many more languages than in Kothmale and will have to cater for a far wider range of economic, cultural and social contexts. The radio stations will not derive any direct financial benefit from radio browsing and much will depend on staff motivation. However, indirect financial benefits could include greater support by development partners in response to more effective development programming.

Above all, this is not a new project with a project co-ordinator and it depends on a new dynamic being “spontaneously” created within existing structures: the community telecentre will be seeking to stimulate use of new ICTs by radio stations struggling to compete for very limited advertising revenue. The most immediate motivation for the radio stations lies in the high potential for raising the quality of their programming and therefore getting a very positive audience response, in the availability within the telecentre of excellent equipment for programme-making and in the readiness of telecentre staff and resource persons to contribute to contents development. In the future, networking is likely to improve the situation for contents development, further easing the problem for the cash-strapped radios of time-consuming development production. Mali’s *Maison de la Presse* in Bamako already has a daily on-line radio information service. The telecentre plans to equip each radio station with a modem and a connection to the telecentre as a next step.

The CMC formula adopted in Timbuktu is now being considered as a model in national plans for ICT access in Mali’s 703 “communes” or local districts. The plan to build a national network of telecentres, ultimately in every commune, is in the final stages of preparation. An initial target will be to set up telecentres in the 50 main administrative centres of Mali. Originally, planners had decided that the best way to link ICT access with broadcasting would be to equip every radio station (of which Mali has over 100) with a computer and a link to the nearest telecentre. This is now being reconsidered in favour of creating a radio studio within each telecentre for all nearby radio stations to use. First and foremost, this should be more cost-effective in a context where funds for the ambitious national access plan are likely to be hard to come by. Crucially, it will also ensure that radio staff are brought into an ICT-rich environment in which they can benefit fully from training and specialist support. As a first step, this appears preferable to the alternative: introducing minimal ICT equipment into radio studios where there is no specialist back-up to facilitate use of the equipment and where there is no assurance that the equipment will be used adequately.

The contrasting examples of Kothmale and Timbuktu show just how many factors quite extraneous to the actual technology have a determining influence on these two communities' access to new ICTs. In both cases, the goal of *knowledge-sharing* for development is reached through the essential channel of radio broadcasting. It can be argued that individual access to ICTs is also shared in some ways by the individual's circle of family, friends and colleagues. In fact, these two processes together – individual direct access and mass indirect access – offer the optimum formula for achieving both breadth and depth of impact of new ICTs within the community. This is not only because they combine individual empowerment and community empowerment but also because together, they involve the community as a whole in its entry into the knowledge society and knowledge economy. The continuum in the flow and exchange of information between the educated and uneducated, those with and without international languages, between the spoken word and the written word is a force for community cohesion. It also acts as a conduit for the flow and exchange between new knowledge resources and traditional knowledge systems, in which both are able to express their full potential.

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Chapter 7

The Kothmale Model: Using radio to make the Internet visible¹

Ian Pringle and MJR David



Spectacular growth in information and communication technologies (ICTs), and specifically the internet, has the potential to offer a new generation of tools for rural development. The internet, with its huge quantities and variety of content, is increasingly becoming an effective delivery and exchange system for information and knowledge, continuing education and learning. However, [rural ICT] requires special efforts to create appropriate models for those who can neither afford the Internet access nor have the language capacity to understand the content.²

New information and communication technologies (ICTs) represent perhaps the greatest tool to date for self-education and value-addition to an individual or community's efforts for development, yet people in poor rural communities do not have the necessary awareness, skills or facilities to contribute to their development using ICTs. Most people in South Asia, especially those in rural areas, are excluded from the revolution that ICTs are ushering in.

Parallel to other increasing forms of inequity, there is a gap, widening at an exponential rate, between those with access to media and ICTs as productive tools and those without. Closing what has become known as 'the digital divide' is particularly important precisely because digital ICTs cut across and add value to all fields of development and offer opportunities to bridge the spectrum of inequities of which the 'digital divide' is only an extension or a symptom.

The communication scenario along with the political context in the island nation of Sri Lanka is very much similar to most of its South Asian neighbours. Urban centres are witnessing rapid expansions in telecom and media, while telephones, electricity and clean drinking water are still luxuries for many in the countryside.

Beyond the question of access, the lack of experience with ICTs is major barrier for their use in rural areas. One example that offers some insight and elements for a successful model is Kothmale Community Radio and Internet in central Sri Lanka.

Kothmale

The internet project at Kothmale was initiated in 1998 – by UNESCO in partnership with a number of Sri Lankan³ and international agencies – to address 'the digital divide' by piloting a model for rural ICT use. The elements that make Kothmale stand out in the field of ICT

¹ This paper would not have been possible without the work and inputs of Tanya Notley. The authors would also like to recognise the contribution of K.M. Karunaratna of Colombo University.

² Unpublished UNESCO documents related to the replication of the Kothmale project; Wijayananda Jayaweera, 2001.

³ Partners included the Sri Lankan Government, Sri Lanka Telecommunications Authority, Sri Lanka Broadcasting Corporation, Sri Lanka Telecom and University of Colombo.

projects are the ‘marriage’ of internet with local community radio and the innovation in raising rural community awareness of ICTs that this convergence has allowed.

Combining internet with radio and approaching radio listeners as potential internet users has significantly raised awareness of ICTs in an area that five years previously had neither a computer or a telephone. While there are still only a handful of computers and telephones, by interfacing internet through radio, both directly through the physical availability of computers at the radio station and indirectly but with more dramatic results by making web-browsing into the basis for daily radio shows, thousands of people have been exposed to the internet. A significant portion of these people have been able to use the internet themselves and some have benefited directly in terms of education, business and livelihood, entertainment and enjoyment.

The presence of computers and the internet along with the accumulation of skills, largely through peer-based training, has led to an expanded local capacity to use ICTs, one of the project’s key achievements. The Kothmale model clearly demonstrates the potential development impact of access to the internet, both for the individual and the community-at-large. However the demand that has been created exceeds the availability of access points and appropriate content, two other key considerations in rural ICT application. Two and a half years into the project, the benefits appear to be concentrated in certain demographic sectors and the project has not delivered a recipe for sustainability.

Kothmale Community Radio

In South Asia where localised media channels are rare to non-existent, Sri Lanka was the first country to introduce non-government radio and, predating that by more than a decade, the first to introduce any sort of community radio.

The Sri Lanka Broadcasting Corporation’s (SLBC) community radio programming and local FM stations, from their origins in the Mahaweli community radio initiatives in the eighties,⁴ to the Kothmale internet project in the nineties, are an unusual example of community media. SLBC’s ‘community radio’ stations exist officially through the government broadcasting system and SLBC provides an operational infrastructure: salaried and trained staff, studio facilities and equipment. More importantly, SLBC provides permission to broadcast. While the stations are top down in terms of licensing and core operations, their day-to-day functioning and impact are clearly at the local level.

This is certainly the case at Kothmale Community Radio (KCR), located at Mawathula in the Kothmale Valley in the central hilly area of Sri Lanka, not far from the former capital, Kandy. The towns of Gampola and Nawalapitiya as well as some 50 villages and 17 schools are within the station’s broadcast range, giving the station a total potential listenership of over 200,000 people. KCR has one functioning studio that feeds to a 300-watt transmitter, putting out 11.5 hours of programming a day, during a morning and an evening shift. The station has a small paid staff – some full-time, some paid on a per-programme basis – and some volunteers.

Kothmale is a local radio station. While it has received much international attention in the past few years because of the internet project, in Sri Lanka it goes largely unnoticed outside of its broadcast area. Although it is officially part of SLBC, Kothmale has a high

⁴ Community radio in Sri Lanka, including Kothmale Community Radio (KCR), came into being during the resettlement of hundreds of thousands of people as a result of the Mahaweli irrigation project. Community radios were identified as a means to mitigate the relocation of people into new areas. For more on the Mahaweli Community Radio project see David, MJR, “Mahaweli Community Radio” in Girard, Bruce, *A Passion for Radio: Radio Waves and Community* (1992). Available online at <www.comunica.org/passion/>.

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degree of autonomy, if not editorial independence. The station raises funds through advertising, as much as 75 percent of its budget, and makes independent decisions about programming. Management and staffing are local. The station makes use of a significant number of volunteers, features an active listeners' group and has a high degree of community interaction.

There are, however, limits to this autonomy and the station's potential for growth as a rural communications vehicle, is limited by its dependency on SLBC. In effect, KCR has more capacity than authority in decision-making, and it has greater potential than impact.

A frequent scenario that flashed across our minds was rural youth with little or no ICT skills being marginalised in the job market. There are kids in village schools who do not receive their text books on time while their counterparts in urban schools are sending emails and surfing the internet for supplementary information for school projects. Inevitably, all these children will be queuing for employment in the near future and most probably the ones who lack familiarity and skills in ICTs will be sidelined

Sri Lanka has seen enough blood spilled in its fifty years of independence. There have been two violent youth insurrections in the south and a civil war continues in the north. Marginalisation from the mainstream and frustration of the vernacular-educated youth are often sited as the main reasons underlying these violent reactions. In this context the digital divide is not something academic but something real, something that provokes shocking memories and impulses for action among those who have seen the social cost incurred by unequal opportunities in Sri Lanka – MJR David in recollections about planning the Kothmale project.

Kothmale Community Radio and Internet

When the internet project began in 1998, KCR changed location and upgraded its technology. Previously situated on an isolated hilltop, the studios and offices were moved to a more accessible location with a relay sending the signal from the new studio to the transmitter on the hilltop. The new location was also equipped with a telephone line, a 64 kbs microwave connection to the internet, a server, and three work stations with internet access – one for the station's use and two for community access.

Some key points from the operational guidelines developed at a workshop to review the Kothmale project's initial needs assessment:

- The Internet and other new communication technologies should not be presented as a technological gimmick or marvel. They should be presented as a something that is useful in day-to-day life.
- The first precondition for success is active community participation. For this, the computers and other facilities should be placed and operated in a user-friendly manner.
- Simple step-by-step instructions should be prepared on how to use the Internet and there should be someone at the radio station ... to explain the Internet and how it is used.
- As many do not have telephones the importance of postcards [for listener feedback] should be emphasised within the radio program.
- Internet content should be put across the radio program with reference to the local context.
- Women should be encouraged to participate.
- The staff should not be over cautious about breakdowns in computers. The users should be given a free hand.

At the same time, an initial needs assessment was conducted by project and station staff, giving them first hand knowledge of how the community perceived computers and internet, what their information and communication needs were, and what was expected from the project.

Modelling Rural Community ICT

The Kothmale project targeted different elements that are essential for the success of ICTs in a rural context: community awareness, capacity development, public access and locally appropriate content. Although the model represents an integrated approach of these elements, the achievements of the project are primarily in the areas of awareness and capacity development.

Awareness

The design of the Kothmale project takes as a starting point that awareness of ICTs and of their potential is essential if members of a rural community are to be motivated to use ICTs. The critical lack of awareness of the uses and benefits of information and communication technologies is evident not only in rural areas, with farmers and labourers, but also with the implementers of development programmes, from NGOs to local and district governments.

Before people will use the internet, they must have some sense of what it is. Before they can use it productively, they need to have a sense of what it can do. While this is true everywhere, in rural areas of regions like South Asia basic awareness is a formidable barrier. ICT coverage in the media tends to come only once a market has been established; likewise, word of mouth functions only when there is something to talk about. In most of rural South Asia there are no computers – not in schools, offices nor homes – and there is no visible or affordable internet access. One of KCR's main objectives was to make the internet visible

Radio Browsing

Before its inauguration at a musical event that drew thousands, the project staff had visited schools, temples and government institutions to talk about the merits of new communication technologies. They used the radio to introduce computers and the internet to listeners. As it got off the ground, the internet began to receive a lot of attention in the community.

The morning programs generally announce the daily exchange rates and the daily wholesale agriculture prices from the Central bank of Sri Lanka. The weather report is also read from the internet. The afternoon broadcasts will often incorporate Sri Lankan and world news from Reuters and other web sites.⁵

To some extent, many of Kothmale's radio programmes benefit by having the resources of the web at their disposal as a research tool. However, the project and the programmers have taken it further, introducing the concept of 'radio web browsing', an innovative programming format that has been successful not only in addressing information needs, but also in terms of raising awareness of the internet and how it can be used in the community.

Radio Web Browsing

The community radio station broadcasts a daily 'Radio Browsing the Internet' programme, and in this programme, the broadcasters, supported by resource personnel, browse the Internet on-air together with their listeners and discuss and contextualise information in local language. The radio programme thus contributes to raise awareness about the Internet in a participatory manner, the listeners request the broadcasters to surf the WEB on their behalf and the programme transmits information in response to their requests. This information is explained and contextualised with the help of the studio guests, for example: a local doctor may explain data on a health website." (UNESCO Project Documents)

⁵ Unpublished report on the Kothmale project; Tanya Notley, 2000.

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Radio web browsing has opened a window onto the internet for the local community. After researching their topics and choosing websites to feature, Kothmale's programmers browse the internet live on the radio using a computer in the studio. The content of each programme focuses on specific information within a different topic: health, legal issues and ICTs themselves. Staff, volunteers and guests interpret, contextualise and translate web-based information and broadcast it to the station's listeners. A huge amount of information becomes accessible, firstly because it is explained in simple terms, secondly because it is contextualised to suit the local environment and thirdly and most importantly, information is presented in the local languages⁶. The programmes have significant appeal because the type of information broadcast is not available to listeners anywhere else and, especially in the early stages of the project, because of the novelty of the internet.

Important features of the radio web browsing are the format and the timing of the programmes. Significantly, the internet is not used simply as an additional tool for programme research. ICTs and the web become the focus of the programme in terms of both content and format – the shows are essentially live web-browsing broadcasts. Nor is the programming isolated in the broadcast week. Radio browsing is a one hour daily programme block.

As with other aspects of the Kothmale project, of importance is the fact that groundwork has been laid for future growth. As Kothmale's station controller put it, "At this stage I cannot say these are superb programs, but in the future they will be."⁷ Whatever the format, radio combined with internet offers powerful educational possibilities.

Capacity Development

*Kosala Keetharatne, an 18-year-old regular student to the centre, had never used a computer when he first came to the station one year ago. Like many of the students, he heard about the access centre from the Kothmale FM broadcasts. Now he is creating web pages, animations and computer art. As a volunteer of the station he now teaches computer programs to other students and hosts an internet radio broadcast once per week. "It has changed my life...I have learnt a lot about computers because of this centre...Most of the people who come here don't know how to use a computer. They get their first lesson from here."*⁸

Experience in ICT applications for marginalised and rural communities has shown that the ability of local residents with no prior computer or internet experience to master basic skills and even move on to more advanced levels should not be underestimated.⁹ Kothmale certainly reinforces this lesson, especially with youth.

One of the most important achievements of the Kothmale project is in the area of capacity development. Although there are several factors at play including high literacy rates and a good education system relative to other South Asian countries, the willingness to allow for learning by doing and learning from peers is significant. The project guideline that says "staff should not be over cautious about breakdowns of the computers" and insistence that "users should be given a free hand" has been followed and with considerable success.

⁶ KCR broadcasts in both Sinhalese and Tamil.

⁷ Sunil Wijisinghe, Kothmale Station Controller, quoted in a unpublished project report; Tanya Notley (2000).

⁸ Unpublished report on the Kothmale project; Tanya Notley, 2000.

⁹ Report on UNESCO Seminar on Integrating New and Traditional Information and Communications Technologies for Community Development held at Kothmale in January 2001; Ian Pringle (2001).

At the outset of the project and in follow-up stages, there has been formal and informal training for staff and the volunteers who have become facilitators of greater community involvement. In particular, the project benefited from the services of an Australian volunteer who trained and supported a core group of staff and volunteers and was a consistent presence in skills development over the course of two years.

In 2000 a survey was conducted of 93 users of the community access computers located at the station. Thirty-one percent of them reported they had been trained by station staff, but 44 percent reported they had received their training informally from other users. Kothmale has demonstrated that once participants, especially youth, have basic skills to build on they teach each other and themselves.

Public Access

The absence of any public access facilities for the internet in rural areas is a huge barrier and a central concern for projects like Kothmale. Rural connectivity is a complicated issue involving the inadequate and expensive telecom and electricity infrastructures, commercial reluctance to invest in rural markets, unsupportive government policies, and the lack of appropriate technical solutions. Phone lines in rural areas of South Asia are scarce and, when they exist, are often not of sufficient quality to maintain an internet connection. Internet access through commercial telecom centres and cybercafés is concentrated in urban areas. If the internet line at Kothmale is down, the nearest place to check email is in Kandy, over an hour away.

Kothmale employs a microwave leased-line for its connectivity. The 64 kbs dedicated connection has worked extremely well for the station's three computers and offers unexplored potential for remote access from other sites. However Kothmale's connectivity model is not as yet sustainable. Initial equipment and installation costs were high, but were borne by the project and its partners as a capital investment. Of greater concern are the operational costs. The internet line was down for most of 2001 because the original agreements for the project expired and no one was in a position to pay the costs or renew the agreement.

While the roughly US\$300/month needed to keep the line up is not necessarily prohibitive cost, it represents a major investment for a small radio station KCR. If the station had to pay the cost, it would require shifting to a more commercial model. From the outset, access for users has been free of cost and this has unquestionably been a factor in whatever success the project has enjoyed. Although the current trend in ICT projects is towards passing on access costs to users, in the case of Kothmale, this shift would change the nature of the project.

Asking people to pay for internet use or computer lessons is very problematic. Unless you can find a way around charging for access, unless you can find a way so that the really poor kids — who ARE the majority of users, the ones who walk 7 kilometres to school rather than pay Rs 2 for the bus — are not disadvantaged by having to pay, then the project FAILS.¹⁰

Although the internet line was restored in November 2001 through an agreement between SLBC and UNESCO, it is unclear for how long this arrangement can be sustained. KCR must begin to look at the issue of sustainability and weigh the cost of different options, including changing the means of connectivity or generating revenue through the substantial technical capacity that it provides. KCR could for example offer dial-up accounts and email addresses to groups, businesses and individuals who can afford pay for these services and thereby continue to subsidise access by members of the community who cannot.

¹⁰ Tanya Notley: Observations about the Kothmale project in email correspondence (2001).

The One to Watch – Radio, New ICTs and Interact

Between 150 and 250 people in a typical two-week period use the two computers at the radio station making the internet room a fairly busy place. The station has tried developed a supportive system and environment for users, including girls who form a minority amongst users. The greatest success in access has been with youth. Of the respondents to the user survey mentioned earlier in this chapter, 95 percent were between the ages of 10 and 25 with 60 percent between 15-20. Although the majority are still boys, gender equity in access has improved. In the first year, there were very few girls using the centre and it took a door-to-door campaign to increase the number of girls and young women participating in orientations, training and using the computers. By the time the survey was conducted, two years into the project, 41 percent of users were female.

This level of impact is extended and reinforced by the presence and popularity of the radio browsing programmes. Although access is concentrated with youth, there are wider benefits for the community-at-large through extension media like radio and newsletters and significantly, through teachers and peers in schools.

The access point at the radio station itself has worked well, but with only two computers in an accessible but not otherwise busy location, direct access to the internet is limited in the greater community to those who have the time, the funds and the freedom to travel to the radio station. In a two-week period in 2000, 56 percent of users reported travelling over one hour to use the facility. The technical model for the project envisioned two or more remote access sites using the station's server computer and leased-line as a mini-ISP. There are internet computer terminals set up in both of the towns in Kothmale's broadcast area which would considerably expand access if they were connected, however these remote access centres have never been fully operational due to logistical problems and bureaucratic barriers. As with other aspects of the project, Kothmale's technical set up has greater capacity for access and potential for revenue generation than is being used.

Content

The project's design recognises the need for content that is appropriate to local interest/needs and in languages they can easily use. That rural residents have a right to be digital consumers is one issue; another is that rural users of the internet should also have the right and the ability to author their own materials in their own chosen fashion. The Kothmale project has tried to address content issues in two ways: 1) through the creation of an online database and 2) by promoting local web content production.

The project's first website, largely intended to address the first issue through the creation of an appropriate information database, has had problems with the partnerships intended to support it.¹¹ Maintenance of the site in Colombo disconnected the content component from other activities at the station itself. Updating information quickly became a problem. Without appropriate systems and administration, the station was unable to jointly manage the site. Although content was developed for the site, the link to local issues and needs was tenuous. Most of the site was in English and there were no mechanisms for direct feedback or input from the rural aspects of the project to the site managers in Colombo. New and useful information was posted irregularly and the site quickly became stale.

Staff at the station launched a second website.¹² While it does not have the same level of organisation or planning, it has succeeded in getting local content on the web, addressing interests if not needs. Young people who two years ago had never used a computer are now creating webpages and using a variety of sophisticated digital production tools. Within a year,

¹¹ <kirana.lk>

¹² <kothmale.net>

over thirty webpages had been designed at the station, including content on local history, culture and religious traditions as well as poetry and artwork.

Local solutions to developing content and extending access to it are ongoing and innovative. In November 2001, KCR launched a small production centre in one of the nearby towns. Volunteers are being trained in the use of computers, internet, writing and layout. The project will publish a regular newsletter to further extend the reach of Kothmale's internet services with goals of greater awareness, access to web-based information in local languages and a greater capacity for the community to manage its own media.

Organisational capacity and project sustainability

Unfortunately, the project guideline stipulating a limited concern for breakdowns and a free hand for users, was not applied to the overall technical set-up or to the management of the project's systems and the station was never fully put in the driver's seat of the project. While the project appears to be sustainable in terms of local human resources, local staff were not able to control certain key aspects of the project, which negatively affected the ability of the project to adapt to changing local conditions.

Management and coordination between the project's key partners has been an evident factor in the limited use of potential and sustainability of the project. The partnership of government agencies in broadcasting and telecom along with Colombo University's computer department was a defining factor in the project happening at all – a remarkable achievement in a country with very tight government control of information and communications – but it has also complicated day-to-day logistics. Components such as the leased-line connection, website maintenance and technical administration were intended to be managed from Colombo and as a result of the distance and the lack of urgency – out of site, out of mind – success at the organisational level, in terms of a model for sustainability and in other areas has been limited.

The reasons behind the problems are largely organisational and of course financial. With bureaucratic central agencies like Sri Lanka Telecom and Colombo University responsible for key elements in the project design, the radio station itself is disempowered to effectively deal with technical and organisational problems when they inevitably arise.

While the station does have capacity in many areas, the project has not provided the necessary mechanisms to allow KCR to further develop its organisational capacity and apply it to the internet aspect of its operations. For example, the station did not have the passwords for the project's main website as this aspect was to be managed from Colombo. Staff were therefore unable to update information, upload individual webpages or manage the site locally. As a solution, they launched a separate website. While this improved the situation in many respects, it was a limited solution in terms of the project's greater objective to use the university's resources to develop a database of locally relevant content.

The station unfortunately had no such home-grown solutions when computers broke down in the first year or when the lease-line was cut off at the end of the project's two-year agreement with the telecom authority. Nor was Kothmale in a sufficiently independent position to seek the funds elsewhere or re-orient services in such a way as to generate funds to pay for the line. Poor rural communities, with a lack of political power and limited influence, are unable to leverage the financial support they need and are limited in their abilities to plan and implement self-reliant alternatives.

Local communities cannot initiate and fully develop the infrastructure of an ICT project without financial inputs and other support from national/international centres and yet the project cannot fully develop or sustain itself without local ownership and overall

management. Just as local capacity must be developed in terms of skills and awareness of potential ICT benefits, so must organisational capacity be developed in order to make services sustainable.

Conclusions

The Kothmale project sought to demonstrate a model for constructive application of ICTs in a rural environment and to show that rural residents and youth can innovate and benefit from access to internet-sourced information. There is good quantitative, qualitative and anecdotal evidence to suggest that the model is effective in this respect, and the potential for this type of project has been clearly demonstrated.

Kothmale has laid the groundwork for the local community to use ICTs for a variety of purposes, including economic improvement, the development of new skills, networking and of course for entertainment and enjoyment.

Kothmale's experience also demonstrates the value of converging local media services and centres, in this case, using community radio as a model and base for rural ICT applications. This success is especially evident in terms of raising awareness, overcoming language barriers and extending the reach of the internet using radio and in particular the innovation of radio browsing.

Assessing impact is difficult. This aspect of evaluation needs far greater attention for ICT projects and experiences. Throughout the project, a number of efforts, including monitoring, focus groups and a survey, were made to study impact. These efforts make it clear that no dramatic change has taken place, but rather a slow qualitative change has begun to emerge, starting with subgroups within the larger community. The initial sign of this process was a dramatically increased awareness of the benefits of new communication technology.

The impact of initiatives like those in the Kothmale project is long term, in no small part because rural Sri Lanka is so far behind its urban counterparts. There is no question that the introduction of ICTs has an impact. In less than ten years, the internet has fundamentally changed life for those who use it and has made a unique imprint on the nature of work and society for those who are directly or indirectly part of the so-called 'information age'. Although the signs may be somewhat ambiguous in this early stage, there is no doubt that the Kothmale project is having a positive impact. Hundreds of youth have computer skills and knowledge about the internet; thousands in the community know what the internet is and what it can do. This is significant because it represents a foothold and foundation on which the Kothmale community itself can build.

The potential that the Kothmale model demonstrates however cannot be realised without addressing the limitations: The internet connection itself was down for the better part of 2001, raising the issue of sustainability. Remote access sites using the station as a server are not yet fully operational. Content development is only a mixed success. And direct access to the internet is not widespread. The greatest barrier to Kothmale making full use of the model is the lack of local control over the project elements, from the technical side of connectivity, networking and site maintenance to financial operations, wherein lies the potential for self-reliance. This is not to say that Kothmale does not need support, both financial and technical, however the station needs to be the centre of attention and squarely enabled as an organisation.

Although Kothmale remains an isolated case and the model has yet to be replicated either in Sri Lanka or other parts of South Asia, in all likelihood new initiatives inspired by Kothmale will take root in 2002 in Nepal, India and other areas of Sri Lanka. With the leased-

line at Kothmale once again in operation, one can only hope that the model will be revitalised in Kothmale itself.

However alongside more projects and initiatives, certain pre-requisite efforts must be made in several key areas. Detailed evaluation and impact assessments must be carried out as part of rural ICT projects. Similarly, research is needed on many fronts, including new technical models for connectivity, systems for community management of information and creative solutions for sustainability and means of self-reliance. In all cases, there must be greater sharing of information and evaluation of successful and unsuccessful practices amongst those with a direct stake in community ICT initiatives.

Greater cooperation and more constructive engagement is required between local people and organisations and central support mechanisms and agencies that have the know-how and funds to support these type of projects. At the regional or even global level, the search for quick-fix formulas ‘to bridge the digital divide’ needs to be put to an end. Community ICT applications will have a higher rate of success if they are part of a cohesive strategy supported by international, regional and national policies that are genuinely interested and invested in empowering rural men and women, girls and boys to use ICTs in positive ways.

Stories from some KCR volunteers

Kumuduni Aponso – Teacher

I listen to KCR regularly and when I came to know that there is an Internet facility, I thought that I should show it to my class. I brought my class to KCR and it was unbelievable to find out that the facility could be used free of charge. My class and myself became frequent visitors. I make it a point to come every Wednesday to collect information for my classes and higher studies.

I am getting ready for my Bachelors Degree in English. Earlier I had to go to the British Council but now all the information needed is available at Kothmale. Later the staff invited me to present the Internet program ‘Travelers Inn on the Horizon’ and now once a week, on Wednesday, I present the program. Since presenting this program I always carry pencil and paper because there are so many who meet me with specific requests. I make it a point to answer these requests in the program. Also there are people who leave messages for me all over the community i.e. at school, the temple and women’s society etc. They first thought that I was a very knowledgeable person who is a know-it-all so I had to explain that I was no wizard but the Internet was an immense resource. I am astonished with the wealth of information in the Internet. On a Poya day (religious holiday) I had to talk on Buddhism and was surprised that even in Ethiopia Buddhism is practised.

My favourite topic of the Internet program is the use of English. I download learning games and adopt them to suit radio. The kids pick up very fast. Fortunately, most web sites on the Internet use simple English. We are people who did not even have a typewriter to use, now we are surfing the Internet. It is a dream come alive for me. I have motivated a large number of teachers and students to use this facility. The greatest thing about this is the friendly environment and courteous staff. The doors are open and the staff is ever ready to help.

Andrew Udaya Kumara – Student

I first came here to serve tea for those who came from the University of Colombo to set up the Internet. They motivated me to surf the net and within a few weeks I mastered the Internet and now I can find whatever I want within a few minutes. Now I am very popular in school because I help my fellow students to prepare their school projects. Recently there was a special meeting convened in school to appreciate what I have done using the Internet and computers to improve our studies. I have decided to make my future with computers. It is a hard way ahead. I am the youngest of a family of ten but with these computers I have some hope.

D W Abeykoon & Martin Thekharage – Lawyers

As a tool of technology, the Internet is very easy to use. The challenging part of it is how to select relevant information and use it appropriately. That's what we have been trying to here with the Internet. We present a programme once week because we think that we have to be of some service to the community. Only when information is interpreted within the social context does it become useful. Let us give you an example. We downloaded information on mosquitoes and generated a discussion that went well beyond the information that was on the Internet. In addition to the information on the internet we discussed several traditional ways to get rid of mosquitoes i.e. growing flower plants, burning leaves etc. that mosquitoes are allergic to. A week later, a villager met me and said "*I listened to your program and I have been thinking of making a mosquito coil using these locally available materials*". He came up with a paste and rubbed it on a thin bamboo stripe like a jockstick. The fume was much better than the mosquito coils available in the market. It could have been an ideal product for the local market but unfortunately the villager did not have enough capital to invest.

If you want to present Internet based information through radio, first you must be able to digest the information. For instance we presented a program on tomatoes the guest in the studio was a farmer from the area. We used the downloaded information to tease the farmer in the studio. We said, this is how the Internet based information tells us to grow tomatoes and the farmer responded saying, no it would not work that way. This dialogue may have helped the listener to arrive at a realistic conclusion. We had a program on Bamboo. There were several requests for further information because there are many in this area that are engaged in the craft. One of them, an art teacher, was so much encouraged by our program that he held an exhibition at the Town Hall. Some of the exhibits were adaptations of Chinese and Japanese products which he had seen on the Internet at Kothmale. The teacher surfed the net to find out how bamboo could be treated and made more flexible. The information we presented on marketing white pepper and tea also motivated young people to explore foreign markets.

Jeyaraj Pavithran – Tea plantation owner

I own a small tea plantation and as that brings me some income, I can devote some time for KCR as a Tamil presenter. First of all, I learned a lot about tea plantation in other countries from the Internet. An Indian web site visited advised that tealeaf should not be crushed because it degrades the quality of the final product. I checked it with the experts and they confirmed it. I was able to share this information with my listeners. I also worked with Tanya, Kothmale's volunteer, on a story for our website on kitul juggery. I did this because I see an export potential for kitul juggery and honey for our community.

Ian Pringle and MJR David – The Kothmale Model

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Ian Pringle is a media development specialist based in South Asia. Pringle has fifteen years experience in the use of information and communication technologies as tools for social change, development, pluralism, governance, public awareness and peacebuilding. Email: ipringle@pcmedia.org

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MJR David was the project director for the Kothmale Community Radio Oproject. He has a degree in development communication and has been a radio producer for more than fifteen years. He is currently a producer for the BBC. Email: mjrdavid@london.com

Chapter 8

Creating & Sustaining ICT Projects in Mozambique

Birgitte Jallof

Introduction

We are standing on the threshold of the knowledge society, in which access to and command of knowledge and knowledge-systems are decisive factors for cultural, political and economic development. As a result, educated and affluent populations all over the world, including in Mozambique, find themselves increasingly part of a knowledge-based and ICT-driven economy.

But what does this mean to the majority of people living in Mozambique – who are neither educated nor affluent and who live in one of the poorest countries in the world at the very early stages of democratisation. What promise does the knowledge economy hold out for a country in which even mid-level education is the privilege of a small urban elite and where thirty years of war have resulted in a basic mistrust within communities that has all but destroyed the social norms necessary for the holding and passing on of traditional knowledge? What role will ICTs have in a country with a virtually non-existent telecommunications infrastructure and in which bad infrastructure and unfavourable weather conditions make crossing the country by road impossible for most of the year, while crossing by air costs some four month's salary of a well-paid civil servant? What will be the role of the media in a place where as recently as three years ago most senior journalists outside of the capital had never seen or touched a computer, many had never watched TV, and where the media are still largely concentrated in the capital, some 2000 kilometres south of the northern border with Tanzania?

This reality places most Mozambicans so far away from the digital divide that one might ask whether modern information and knowledge systems are even relevant to the majority of the country's population – a provocative question that can be addressed by highlighting a few important points.

First, the right to development is shared by all people. If relevant information is not accessible, it is impossible for individuals and communities to become aware of important aspects of their situation, analyse it, and take action to improve it. Denying access to information and knowledge systems to certain parts of population also denies them the right to (participate in) their own development.

Second, even a remote community in Mozambique is interconnected with the outside world through family, political, administrative, economic, cultural and environmental ties. In order to influence their own development, rather than being the object of external decisions and developments, communities and individuals need access to information and knowledge, and they need the means to make their voices heard.

A more interesting – and difficult – question is how to provide access, and thus empowerment, to much larger parts of the Mozambican society than is currently the case. The next section of this chapter looks at a number of opportunities and obstacles to ensuring access to both infrastructure and relevant content. Following that we will look at UNESCO's approach to creating relevant and sustainable media for the Mozambican context with



community radio. Finally, the last section deals with the question of how these (and other) approaches can further develop in order to reach a growing segment of the population.

New developments – against all odds...

Mozambique enjoys a relatively free press. Public media are in a gradual process of decentralisation and independent media are becoming increasingly familiar on the media landscape, though still with limited impact. The community radio movement is in early stages, but could develop into a powerful force. At the same time, the slow but constant introduction of computers and Internet connections is opening up new possibilities.

The cultural richness and complex geography of the country present a series of important challenges for the media. Mozambique has no fewer than thirty national languages that can be grouped into fourteen different language groups. There is a corresponding number of distinct local cultures, with eighty percent of the population living in rural areas. National solutions to Mozambique's information and communication problems must take these factors into account, and must be directed at the needs of the whole country, not only educated Portuguese-speakers in urban centres.

Media also face challenges of sustainability. Of the seven community radio stations in Mozambique in 1999 and 2000, five were off the air for technical, financial or organisational reasons for periods ranging from a low of five months up to the entire two years. Other media projects have proven equally difficult to sustain. For example, half of donor-supported independent print media outside the capital stopped publishing as soon as the donor funds ran out, while the other half struggled on with varying degrees of irregularity.

There are many new media initiatives in Mozambique. Their success will require appropriate solutions and structures that can capitalise on the existing political, legal and technical openings. The development of these solutions can only happen through strategies based on an in-depth knowledge of the local situation. This will be decisive for the successful and democratic development of independent, pluralist media projects – especially community radio and ICTs projects in Mozambique.

Waiting for the Community Magic on the air!

Maria Limamo stopped in the middle of the road, looking at the beautiful building prepared for the radio station. The team from South Africa had just arrived with the materials for the tower and antenna. They were working right outside the building now. For two years they had prepared the community for arrival of the equipment for the station. After this period of mobilisation and intensive training, they were ready. The editorial policies and all the internal regulations were ready. The membership cards had been prepared and distributed to the more than 200 community members of the radio association. Audience research had been carried out and the responses analysed and a community programming grid prepared. Forty trained volunteers had signed contracts with the management committee of the radio and were eagerly waiting to go on air – so now was the time!

Maria Limamo is one of the community members initially elected to the community radio installation committee by her community, one of eight in which UNESCO supported community radio stations between 1999 and 2001. UNESCO is one of several development partners working to support the establishment of community radio in Mozambique. UNESCO's radio efforts initially grew out of a major media development project: "Strengthening Democracy and Governance through Development of the Media in Mozambique". The project seeks to establish the basis for generating and disseminating local

knowledge and community radio was selected because it is a very appropriate response to development issues in a country like Mozambique, with low literacy rates, multiple languages and cultures, rural population, and large land mass.

In preparation for setting up the stations, UNESCO carried out a number of studies to assess sustainability potential and obstacles. One of the important factors confirmed by the studies was that rural areas lacked experience in setting up and managing any type of organisational structures, let alone the specific types of experience that would facilitate the establishment and operation of a radio station. To succeed the project would have to develop local capacity in many areas. Four factors were identified as essential to minimise vulnerability and thus to ensure the sustainable functioning of the stations:

- 1) a strong sense of community ownership;
- 2) an effective training programme;
- 3) technically sustainable systems; and
- 4) long-term financial viability.

1. Community ownership

In many parts of the world, community radio stations grow out of civic movements that set up radio stations to voice their concerns and pursue their objectives. Few such movements exist in Mozambique and UNESCO's first challenge was to design a social mobilisation process in each of the eight targeted communities, identifying the key actors, organisations and sub-communities, and then ensuring dialogue with and mobilisation of all of these. This stage culminated in a large public meeting at which all were invited to participate in the election of a representative and credible *installation committee*.

The first challenge for the *installation committee* was to form a legally-recognised association that could be granted a license and a frequency. This required the committee to achieve a certain level of consensus on the objectives and modalities of the association, and thus of the radio station. Later, once the provincial governor confirmed the association's legal status, the general assembly elected various bodies, including the president of the association, the management committee, and the supervisory inspection committee. With each step of the process, community members gained more experience working together, but they also discussed the radio station itself, gradually identifying a common vision of what it would be and do.

In addition to skills development, the training programme, which will be discussed in more detail in the next section, also had an important objective of mobilising community participation and ownership of the radio station. Of particular importance was the "Process Coach Scheme" in which community programmers were recruited and trained by a locally employed community animator. This scheme proved to be extremely effective, creating a basic nucleus of between 20 and 70 knowledgeable, trained, committed and highly motivated community members around the station. It also ensured that other community members were informed about the processes and plans, thus ensuring their "ownership" of the process.

In addition to these two parallel processes – creation of the association and the process coach scheme – a number of other, very different measures were undertaken in order to facilitate community ownership of and participation in the project. These include recruitment, registration and documentation of members and public involvement in the identification of a strategic location for the future station.

2. Creating adequate training solutions

Communities in Mozambique have virtually no experience in many of the key areas that are crucial to running an effective community radio station. This includes radio station management, organisational development, staff and volunteer relations, administration and

financial management (including donor relations and fundraising), programme design, production, audience research, technical operation and maintenance. Based on a needs assessment, a five-point training strategy including the following components was designed:

2.a Intensive Community Radio Training Courses

UNESCO ran a series of intensive eight to ten day training courses in starting and managing a community radio station, community radio programming, audience research, and preventative maintenance. Up to four representatives from each community participated in each course. On their return, participants organised seminars for local community volunteers, thus sharing the skills they had acquired. In addition, tailor-made training materials in Portuguese were developed for the five course areas. Participants were able to take these back home and use them as a basis for further community training.

The strength of these courses is the special, intensive training and capacity-building dynamic of bringing people together for an extended period – day and night – to learn, discuss and live with new concepts, insights and skills. The effect of this type of training covers all three of the well-known *KAP* set of factors, providing *Knowledge*, working on the participants' *Attitudes*, and imparting new skills through *Practice*. All of these factors are crucial to obtain a broad-based insight into the many factors that bring life to the community's radio dreams.

The downside of these courses is their high cost (travel, board, high level trainers, course and material development and printing), the need for a full-time person in charge of their organisation, and the fact that the courses can only provide training for two to four representatives from each community. The "Process Coach Scheme" was designed as a complement to minimise these negative aspects.

2.b Process Coach Scheme

Process coaches are individuals who work part time in the community as facilitators, animators and trainers. The challenge for the coach is to empower people who have very little experience in seeing themselves as dynamic forces in their community's democratic development. The coaches were recruited locally, mostly from the national public radio network. Some were local school teachers or community organisers.

After receiving training, each coach worked approximately thirty hours per month in his/her community. Once the stations are up and running, the functions of the process coach, including community mobilisation, management and training of the volunteers, is taken over by an *animator*, filling one of the four paid posts in the station. Together with the coordinator, the animator is responsible for organising and managing the volunteer programmers, general support for the station and training.

With this scheme in place, the crucial question was how to turn the themes that had been discussed in the training into radio programmes of interest to the community. Most participants had never seen a radio studio, and had only a vague idea of what it might look like. It was therefore important to couple the formal courses and the work of the coaches, with some exposure to radio station realities – as diverse and different as possible.

2.c Exposure to Related Realities, including Study Trips

As an important part of our training strategy we encouraged – and often actively planned and organised – visits to as many other related realities as possible. This was so the project volunteers and 'owners' could pick and choose the elements most suitable to their

context from various real-life models. Study visits were made to provincial facilities of the public broadcaster, Radio Mozambique, and to other community-oriented radio stations.¹

2.d Management Seminars and Workshops

On the basis of continuous needs assessment, a number of tailor-made management seminars and workshops were developed. Examples include revamping and strengthening financial systems, and devising effective and efficient organisation structures and workplans. They are implemented between three and five times per year for the management committees and staff of the radio stations.

2.e Establishment of a Training Station

At the time of writing, in early 2002, three of our eight partner stations are on air, with the remaining five to start later in the year. One of the stations will be designated to function as a training station. Teams from new stations will come and “shadow” existing staff members. The visiting team will stay for two to three weeks, and ensure time for analytical assessments of what they are seeing, what they want to copy, and what not. It is expected that these internships will provide training that is more detailed and targeted than is possible in traditional courses.

3. Technically sound and sustainable responses

While relevant and effective community content is key to community radio, nothing will get on air if the technical side does not work. In a country like Mozambique, the importance of this cannot be exaggerated. UNESCO’s initial studies had examined at similar stations in Mozambique and neighbouring countries and found that many were off the air because of a combination of factors related to insufficient technical planning. In an attempt to learn from these sad and painful experiences, UNESCO encouraged the stations to adopt a series of technical policies and placed importance on technical training.

3.a Technical policies and configurations

For the Mozambican situation the best technical configuration will emphasise sturdiness, standard brands with spare-parts easily accessible, ease of maintenance and compatibility with other brands and simplicity of use. Whenever possible, a station should have two studios, ensuring redundancy of facilities in the event of breakdown and to reduce intensive use of facilities, which translates into better maintenance and longer equipment life. As Mozambique also lacks qualified repair technicians, it was necessary to look for suppliers (usually from neighbouring countries) that were more than sales-people. They also had to provide adequate after sale service and the necessary initial training of the staff and station members in maintenance and repair.

Finally, none of the above will have the needed impact unless the station adopts precise technical policies and regulations governing such things as: who has access to what equipment; who is responsible for the scheduled maintenance routines; and when breakdowns occur, who carries out which diagnostic routines, and with which sequence of reactions?

3.b Training for technical sustainability

¹ Four different types of community-oriented stations can be found in Mozambique: those initiated by the State communication institute, by Catholic associations, by independent community-based associations, and by municipalities.

To prepare the community programmers and technicians we devised a four part sequence for technical training. First, a formal training course was organised in Preventive Maintenance. This course focuses on the prevention of problems, front-line maintenance, and basic diagnostic routines. Both the core technician and the co-ordinator of the station were requested to be amongst the three to five people from each station participating in the course.

The second part of the technical training involved sending the main technician from each station to Cape Town, South Africa. There they participated in a ten day intensive process of learning-by-doing, during which they assembled their own future studios. After the South Africa training, the technicians and the volunteers foreseen to be active within the technical area installed the studio onsite with support from the South African installation technicians. During this practical installation-cum-training process, the local group of technicians works with a technical manual, which the supplier has developed specifically for each individual studio.

The final part of the technical package within the first phase of the UNESCO Media Development Project, will be a more in-depth Preventive Maintenance training course. This will take place once all the stations have been operational for a few months and will specifically address the real-life problems encountered.

With these measures, it is expected and hoped that the stations will be able to avoid many of the initial technical problems identified in the initial studies of the community radio environment in the country. For the more complex technical problems that will unavoidably arise in the future, UNESCO is planning to establish a national pool of technicians.

4. Sustainability: Looking to the future in anxious expectation

UNESCO in Mozambique has aimed to ensure that the community itself forms part of the active creators, promoters and beneficiaries of an appropriate knowledge-based local development. We believe that the training activities described above form one part of the response to the complex and persistent challenges at hand. Once on air, each station will have four paid staff members: the co-ordinator, the administrator, the animator and the technician. In addition, the volunteers will be organised in editorial groups, preparing adequate community programmes in their area of specialisation (health, education, culture, agriculture, environment, youth, women, etc.).

Mozambique needs functioning, community-based and community-controlled media for long-term social, economic, cultural and political development. The preceding sections of this chapter have presented a number of the crucial sustainability factors that were identified and for which the project attempted to define a series of adequate, working responses. We will need to continue to closely monitor the development, and to find adequate and creative responses to emerging needs by developing a range of diverse models and experiences that work.

One potential development involves the transformation of the radio stations into community centres, providing not only production of radio programmes and increased community empowerment and capacity, but also becoming centres for a variety of other community activities. This is already developing in the first three of the eight radio stations to go on the air. The stations become centres, where community members can make photocopies, use a computer, and have texts printed out. Once the Internet connections are in place, it is expected that the radios will also come to function as national message centres, an extremely important function since the national mail service is non functional.

Making it all work: challenges for a sustainable future

As noted at the beginning of this chapter, Mozambique is on the extreme end of the digital divide and needs to actively address this challenge, with radio being an area where this is actually happening in partnership with UNESCO. This chapter has highlighted the process followed, the challenges encountered and a number of the concepts and strategies designed and implemented in response to these. While we know we have come a long way in our attempt to create a set of adequate responses to the challenges, we also know that we will need to continue on this path for a long time to come.

Moving towards the end of the chapter, it is appropriate to discuss emerging possibilities for combining radio with new ICTs, and what impact that may have on development.

Future considerations

Community radio provides communities with a medium for local debate, sharing of information, and giving voice to formerly voiceless members of the community. It is also conceivable that community radio stations with Internet access will develop into a system of informal message centres, covering not only the 40-70 kilometre radius of their 250 watt transmitters, but in principle the whole, vast country. With a view to develop appropriate responses to the lack of a functional basic mail system,² it is appropriate to consider whether the rural community radio stations should include a public access telecentre component. Conversely, communication centres could include a small radio component, becoming multi-purpose communication points, or Community Multimedia Centres (CMC), as described by Stella Hughes elsewhere in this book.

UNESCO's media project in Mozambique is currently considering such developments, keeping sustainability perspectives clearly in mind. So far we have been taking small steps – and we will continue to do so. One of the interesting questions is, however: what is a small step? Experience within and outside of UNESCO shows that people who have had no access to ICTs at all are much less inhibited in their access to these than those who have some knowledge and feel very alienated. The step towards CMCs may, for the local community, not present a huge development jump.

National policy development in the ICT area will have an important impact on these possibilities. In Mozambique, broadcasting is not mentioned in the present media law, and regulations only exist for public and commercial broadcasters. However, progress is being made. The Government of Mozambique has spearheaded the development of a national ICT policy, the implementation of which is presently being concretely planned. The objectives of the policy are to extend the coverage of ICTs, to raise the quality and the number of professionals in the area, to modernise the support infrastructure and provide access for the greater part of the population by means of telecentres, and to create an electronic government network which will raise the effectiveness and efficiency of state institutions.³

At the same time the Prime Minister's information office is working to develop a set of regulations to complement existing media legislation in the area of broadcasting. In this context it is being discussed whether an independent body should be charged with the granting of licences to public, community and commercial broadcasters alike. It is hoped that

² Today the best way of getting a letter from one part of the country to the other is to go to the airport and find someone travelling to as close as possible to the recipient, and to ask him or her to bring the letter or package.

³ Cited from: "Summary of the ICT Policy Implementation Strategy" produced by the official Comissão para a Política de Informática.

the new regulations will facilitate future independent community broadcasters' access to broadcasting licenses.

Conclusion

Mozambique has had its share of white elephants, the remains of optimistic development plans that do not succeed for a variety of complex reasons. The collapse of dreams carries along disappointment and frustration among the development beneficiaries – and the loss of yet a bit more willingness to strive for things to ever change.

After years of war, natural catastrophes and a life at the bottom of all international economic and human development statistics, Mozambique deserves better. UNESCO Mozambique is presently one of three parties spearheading the initiation of a national community radio network, with the core mandate to establish sustainable systems in the area of training, technical maintenance and appropriate financial solutions. These efforts are at an initial stage of development. But we need to start somewhere. And without such concerted efforts, we will not go anywhere. While real magic seems to come from nowhere, we know that in Mozambique, the *community magic* for social change will only work if it is a result of concerted efforts of development actors based on understanding and analysis and directed by empowered community commitment.

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Chapter 9

The Russian Rural Information Network

Nancy Bennett



Introduction

Since the mid-1990s the Developing Countries Farm Radio Network (DCFRN) has been thinking about and experimenting with the Internet as a way of supporting its work with radio broadcasters and farmers in developing countries. While not all of our efforts to link broadcast radio and the Internet have matched expectations, we have learned from them. This chapter presents some of the ideas we have had and discusses how they were put into action. It is hoped that the case of Developing Countries Farm Radio Network and its evolving efforts to bridge the development divide using a combination of radio and Internet will serve as example, idea, or lesson for others.

In 1997, the Canadian International Development Agency (CIDA) expressed interest in providing financial support to adapt the DCFRN methodology to support rural development in Russia. CIDA and the proposed Russian NGO partner, the Foundation for Agrarian Development Research (FADR), were particularly interested in including an Internet component to complement DCFRN's use of radio as a support for agriculture extension. The project, which piloted DCFRN's combined radio and Internet approach, was launched in 1998.

This chapter begins with a description of DCFRN and its work and then goes on to critically examine the experience of the Rural Information Network in Russia. The conclusion describes some of the lessons learned and plans to apply these lessons to future projects.

Developing Countries Farm Radio Network

Using radio to share information and promote discussion that leads to sustainable livelihoods in rural areas has been the primary *modus operandi* of the Developing Countries Farm Radio Network (also known as DCFRN or the Farm Radio Network) since its start-up in 1979.

The Farm Radio Network is a Canadian-based non-governmental organisation (NGO) that works to improve food security by supporting and enhancing development communication in sub-Saharan Africa, Latin America and the Caribbean, and South- and South-East Asia. For many years, DCFRN has focused on identifying useful well-researched information about food production, post-harvest, and nutrition, and then putting that information together in an accessible way and distributing it to community, private and public radio broadcasters in almost 100 countries. The information disseminated by DCFRN takes the form of print packages with simple radio scripts, background information about the farming, food security and health issues discussed in the scripts, and ideas for how to incorporate the information into radio programmes. Broadcasters can select, adapt and translate the materials to suit their own radio programs and the needs of their listeners.

Two central elements of DCFRN work are: the recognition that farmers and rural communities need information; and second, the conviction that broadcast radio, alone or in combination with other methods, is the most effective and efficient way of communicating that information.

Farmers need information on agriculture inputs, innovative and affordable technologies, drought, pests, diseases, credit, market prices and competition. Communities and families need information about nutrition, sanitation, healthcare and so on. But they also need that information to be relevant to their own situations and for it to reach them in an accessible and appropriate way, and from a source they trust. Unless it is successfully communicated, information makes no contribution to food security or human development. “Experience demonstrates that sustainable agricultural development is based less on material inputs (e.g., seeds and fertiliser) than on the people involved in their use. Investments in scientific and material inputs for agricultural production bear little fruit without parallel investments in people.”¹

The rationale for radio in rural communications

Radio is an immensely powerful technology for communication and education. Radio enables disadvantaged groups to engage development agendas that are sensitive to their own needs and aspirations. No other medium has the potential of radio to create conditions that provide people with genuine access to useful information, and to enable them to express their sentiments, opinions, views, dreams and aspirations, fears and insecurities, strengths and capabilities, and of course, their ideas. Radio is a useful tool for engaging communities in participatory processes, and for helping them come to a consensus on their development priorities. Radio can be a conduit between social planners, policy makers and beneficiaries of development programs.

High illiteracy rates and low levels of schooling among disadvantaged groups, especially women, continue to limit their ability to lift themselves out of poverty. Existing educational systems are unable to respond to massively increasing demands for education. Consequently, disadvantaged groups continue to be denied access to information, knowledge, and skills. In response to these conditions, radio can be used at the community level to address directly local issues and needs.

Some of the undeniable strengths of radio include the following:

- It reaches a wider audience than any other medium (ten times more than television).
- It builds on oral tradition, making it more readily adaptable to many indigenous cultures.
- It is the most affordable mass medium. Production and equipment costs are a fraction of television's.
- It is a broadcasting medium (conversely, the Internet is not).
- Receivers are widely available, comparatively cheap and portable.
- More effectively than any other medium, radio can reach people who are isolated by language, geography, conflict, illiteracy and poverty.
- It can facilitate assistance in the early stage of emergencies when other aid is not possible.
- It can play a role in the preservation of local language and culture.
- It can be used both for formal and non-formal education.
- It can add credibility and effectiveness to the efforts of development workers in the field.

Exploring new communication technologies

The appearance of new technologies in the 1990s did not diminish the value of radio for development communication strategies. These technologies do present, however, new

¹ Loy Van Crowder et al, Knowledge and information for food security in Africa: from traditional media to the Internet. FAO 1998 <www.fao.org/docrep/w9290e/w9290e00.htm>.

opportunities for comprehensive communication strategies supporting sustainable development. DCFRN was excited by these opportunities. Radio delivers information to many listeners; but the Internet could enable them to send back information, to ask questions, to request and seek information, and to communicate with specialists. The Internet enables access to information from both national and international sources; radio can localise, repackage, translate and broadcast that content to a wider audience. The benefits of integrating Internet into the radio communication for development program began to be explored.

Of particular interest was the potential of using the Internet to address issues such as the isolation of many rural broadcasters, their lack of formal training (in radio, in food security issues, and in agriculture) and their inadequate financial resources for thorough research and innovative production. An Internet connection in conjunction with radio could deliver:

- better communication between development radio practitioners;
- easier sharing of program ideas, scripts and even audio files;
- increased collaboration amongst agricultural researchers, technicians, agricultural extension workers, rural radio broadcasters and farmers
- more advocacy for radio use amongst donors and aid policy makers; and,
- a cost-effective way of training radio professionals in the specific skills needed for using radio to support food security.

Thus, interest was focused on the use of Internet at an intermediary level, by broadcasters, rather than on trying to reach farmers themselves. DCFRN insisted that there was a continuing role for radio, despite the growing interest in using the Internet as a tool to *directly* serve people in rural areas. It was felt that the convergence of radio and Internet was the most appropriate strategy, rather than using Internet to bypass, or “leapfrog” tried and true methods of communication.

The emerging strategy was based on our understanding of the people being served, in partnership with farm radio broadcasters. Would the average woman who grows, processes and prepares food for her family access and use the Internet in this current lifetime? We were sceptical.

Digital developments

There is no doubt that availability of the Internet is on the rise. However, as knowledge goes online, the Internet is also dividing the educated from the illiterate, the rich from the poor, men from women, young from old, and urban from rural (and, in most cases, English-speaking westerners from the rest of the world²). Women need particular access to information. The majority of food producers, family caregivers and household managers in developing countries are women. In rural areas, they are often uneducated and illiterate. They live without access to electricity and telephones. They are unlikely to use a computer in their lifetime.

Furthermore, access was not the only issue grappled with in exploring the use of the Internet for development communication programming. It could not be assumed that simple connectivity would bridge the information gap. Were we, in our enthusiasm to embrace this new technology, overlooking the need for useful information processing and knowledge creation? Were people able to use what they found on the Internet to promote sustainable

² Approximately 86 percent of web pages are published in English, and 97 percent of Internet hosts are in developed nations.

development? Or were they accessing information that was of no practical use or benefit to them?

Our vision of communication technologies for development encompassed the premises articulated by Gómez and Martínez:³

- connectivity is important, but not sufficient to contribute to development;
- equitable access, meaningful use and social appropriation of communication technologies and resources are all necessary to take advantage of opportunities and achieve positive results;
- certain enabling environments must exist for communication technologies to contribute effectively to development;
- risks and threats exist and should be avoided or minimised in the use of communication technologies for development.

This was the same approach to using communication technologies that had served well when applied to a more traditional technology – broadcast radio. In the case of Internet, we remained cautious. How could we ensure equitable access? Could its use be meaningful if the content was overwhelmingly from the North, and generated to serve commercial market interests in the North? Were rural communities in the South equipped to appropriate the technology and use it for their own benefit?

What if we could use the Internet to enhance communication with and amongst the radio broadcasters in the Farm Radio Network? Could they then become access points for their communities? If so, the Internet could be used to deliver information packages to broadcasters, and could also improve the quantity and quality of feedback from them. We began to explore the use of the Internet to strengthen our network and to further develop the capacity of the broadcasters in the network to communicate effectively with their rural audiences.

Early research into the feasibility of converging radio and Internet in the network, however, provided a cautionary note. By the mid-1990s, only a small minority of the radio broadcasters and agriculture extension workers – our key points of contact for the farming communities we serve with our program – reported e-mail addresses. Most had no regular access to the web, and very few had visited our website. We felt we could not yet generate enough participation to test our strategy to combine radio and Internet. Soon, however, we were presented with a new opportunity to develop and test our ideas.

Rural communication in Russia: Context and potential

The dramatic political changes in the former Soviet Union removed the framework within which the rural economy operated. During the Soviet period, political infrastructure was responsible for the distribution of agricultural inputs (including information), and the purchase of agricultural outputs. In the state and collective sectors, all decisions about agricultural practices tended to be made centrally and implemented at the farm level. There was no need to distribute information about appropriate or alternative agricultural practices because officially sanctioned methodologies were determined centrally and disseminated through the channels of political control.

In Soviet Russia, consistent pressure to industrialise agricultural production resulted in a systemic bias against small-scale, intensive and low-input agriculture. Nevertheless, it flourished and innovative small-scale farmers working private plots provided a

³ Ricardo Gómez & Juliana Martínez, *The Internet... Why? and What For?* (Acceso, IDRC 2001) <www.acceso.or.cr/PPPP/index_en.shtml>.

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disproportionate amount of food produce. However, because they operated on the fringes of the agricultural economy, there were few opportunities for sharing innovations within the sector.

Furthermore, everyone involved in food production – not just farmers but also the millions of people who planted allotment gardens, and indeed, the entire rural population – needed new information. Printed materials and other potential sources of information had become prohibitively expensive after Perestroika. A new generation of publications, oriented to *dacha* plot owners, had a strong bias towards the marketing of inputs. Russians who had formerly worked on large farming collectives were struggling to make the transition to increased responsibility for farm operations and management, whether as an agricultural cooperative member or as a small-scale private farmer with responsibility for an entire farming operation. They needed advice on how to make the best use of their limited resources in a rapidly changing environment. Some techniques that might have been appropriate to their situation had fallen out of general use. Information about appropriate production and marketing methods, widely applied in other countries, was not accessible to the average Russian farmer.

There was a pressing need for an economical, efficient and non-political means of communication. Small-scale farmers in particular, hampered by inexperience, needed information and communication to help them adapt to the market economy. A communication network which promoted the innovative techniques of small-scale farmers on a wider scale, and which could influence state policy to support their activities, would contribute to food security in rural areas.

Based on our experience with radio and rural communication, we were confident that our program could be adapted to the Russian context. In Russia, radio is ubiquitous. Most farmers listen to it and it is a primary source of information. Radio Russia, a national network with significant resources, is primarily an information network. There are also many independent commercial stations and some not-for-profit stations with a local orientation, frequently including agricultural programming. These local stations, in particular, could provide feedback from the farmers that would provide direction to our program.

Furthermore, there was significant opportunity to converge radio and Internet in our project in Russia. Rural telecommunication centres (telecentres) were being opened in rural areas to provide farmers with community access to the Internet and by 1997 Internet access was available in about 70 rural centres. Some agriculture collectives already had their own e-mail access.

The situation in Russia appeared to meet three conditions that would enable us to take our project beyond mere connectivity:

- connectivity was available at a reasonable price, ensuring some degree of equitable access (despite somewhat unreliable telecommunication connections);
- there was a potential for meaningful use of the Internet, due to high literacy rates and some familiarity with information and communication technology in rural areas;
- with some provision of content to inform and “kick-start” discussion of issues, there was an opportunity for people to use the technology to solve concrete problems, contributing to decentralised decision-making and innovation diffusion, which were important to promoting sustainable livelihoods in rural areas.

Project objectives and methods

The broad objectives of the four-year project (April 1998 to March 2002) were to enable farmers to increase food production, to improve the health and living standards of the rural

population, and to support sustainable, appropriate communication among farmers and other rural stakeholders.

These objectives would be achieved by:

- providing agricultural information to farmers (with a particular emphasis on helping farmers adapt to agricultural privatisation initiatives);
- providing information about practical ways to improve health and build sustainable livelihoods in rural areas;
- developing close links with the intended users of the information, thereby creating opportunities for increased participation and horizontal communication, ensuring the relevance of information provided and discussions facilitated.

A further objective to decentralise DCFRN operations and decision-making processes was to be achieved by structuring the project to be managed largely by FADR in Russia, with DCFRN having responsibility for consulting, monitoring, and providing project information when appropriate.

Approximately 300 members were recruited to the network. As planned, members used information provided by FADR and DCFRN to enhance communication with their audiences. Information was distributed in hard copy (printed “scripts” and newsletters), and was also available on the Internet. Information stimulated discussion and generated feedback from farmers and other rural people to the project partners. This feedback was used by the project partners for further project planning.

The project quickly gained popularity. Agriculture communicators in regional training centres and *technicums*, and others from large-scale agriculture development projects such as the World Bank-funded ARIS project, responded immediately to information that dealt with the current situation in Russia. A farmer information needs assessment had revealed an overwhelming demand for practical information about marketing, the changing legal environment for farmers, and farm/business management. There was also a need for information about low-input agriculture, due to the limited financial resources of farmers, exacerbated by currency exchange rates. Print journalists also joined the project, using the scripts and newsletters as a source of information for magazines and newspapers directed at farming communities.

The Rural Information Network website⁴ was popular, and was continuously enhanced and made more interactive. In addition to posting information that was also available in hard copy, the website featured:

- a virtual library of agriculture-related information;
- an electronic conference, FADRnews, with various and changing streams of discussion;
- links to other on-line resources related to Russian agriculture;
- AGROMARKET, a bulletin board where visitors can post notices and seek buyers and sellers for agriculture-related products and services;
- Farmer-to-Farmer, a bulletin board where farmers could share on-farm experiments, innovations, questions and concerns with their peers.

In the fourth year of the project, the website was generating more than 500,000 hits per month, by approximately 55,000 unique visitors.

⁴ <fadr.msu.ru>

Lessons learned

Two main aspects of the project were particularly successful.

First, the information generated by the project was both welcome and widely respected. Farmers, agricultural extension workers, and community leaders all reported that it met a real need for current, reliable information in a changing environment. The project also generated new, localised, information. In the first half of the project, much of the information shared amongst members was based on DCFRN scripts, adapted by project staff, or was a result of staff research. By the final year, however, half of the scripts were based on information from farmers and other network participants. This made it possible for the project to focus on local issues, and to explore international issues from a local perspective.

Second, the information was accessible to farmers and other people in rural areas. Prepared scripts – responding to needs at the local level – were distributed to 300 Network members in 59 regions in Russia, who were points of contact for an estimated 1.4 million people. Workshops offered by project staff provided basic orientation to the site and training in Internet search techniques, giving them access to the discussion groups and other information on the project website and the Internet. Even farmers who did not use the Internet benefited, since community centres, regional agriculture colleges and extension centres were now better served by educators and extension workers actively participating in the Network.

There was, however, little evidence of effective convergence of radio and the Internet. In adapting the DCFRN methodology to the Russian context, FADR had concentrated on DCFRN's approach to content – making complex technical and scientific information more accessible to intermediaries (agricultural extension workers, teachers, etc.). But there was no corresponding focus on radio. Instead of radio scripts the information was formatted as information sheets, to be printed and distributed directly to extension workers and farmers who were part of the network, rather than to be used in radio programs. Network members were also encouraged to access the information directly on the project website.

Although the project was providing much-needed support for agriculture extension services (which often consisted of isolated field workers left behind by other international projects), and for those farmers already in the network and with the means to directly access the Internet, it was not realising its full potential to serve rural communities. Farmers who were not served by “traditional” extension services, and farmers who could not directly access the Internet were still without the information and communication channels they needed. In Russia, as in other countries where DCFRN is active, these are the poorest, the least educated, and the most isolated and marginalised people in rural areas.

In the third year of the project, steps were taken to increase the participation of radio broadcasters. With the cooperation of one participating member radio station, programs were recorded and distributed on CD-ROMs for re-broadcast. A few radio broadcasters participated in training, which was essentially an orientation to the Internet, so that they could download audio files from the project website, join a discussion group that was set up especially for them, and even upload their own recordings. Now, in the fourth and final year of the project, these actions are showing results. Participation of radio broadcasters is increasing; member stations are contributing audio files to the project's archives; and traffic to the radio-focused web pages is on the rise. Radio stations are now taking on a role as intermediaries, using project resources to produce appropriate radio programs for a wider audience.

Keeping radio in the picture

The experience of the Rural Information Network project has been useful to the project partners and beneficial to the participants. The network continues to be an important vehicle for exchange of information among stakeholders in rural development and is a trusted

resource for farmers needing accessible, appropriate information about food production, agriculture marketing, and the legal context affecting rural people.

Despite its success, however, we do not plan to replicate this project model elsewhere. We believe that the project did not reach its potential because it did not effectively use the most accessible and appropriate medium available in rural areas: radio. Especially in Russia, where the Soviet regime put a radio receiver in every home and developed a tradition of getting information from radio, this medium must be a key component of any rural communication strategy.

We believe that we can improve on results in future projects by modifying the project design to pay more attention to radio and, in particular, to the convergence of radio and Internet. Because we wanted our partner to chart appropriate in-country strategies, we did not explicitly state the media to be emphasised. As a result, the project followed a “multimedia” strategy, with a focus on Internet and face-to-face extension. While this allowed flexibility and local determination, it did not put an emphasis on more innovative possibilities. The Internet is an attractive option: it is relatively easy and inexpensive to make information available, and results are easy to define in terms of website traffic. But it has very limited reach in rural areas. Extension is also a satisfying communication option: use of the project information is easy to measure, and feedback from farmers is easy to obtain. But traditional extension can cost 3000 times more, per contact hour, than radio.

Radio challenges project managers: writing for radio is a particular skill, and results of information use and impact are more difficult to measure. But the reach of radio, and its ability to generate discussion and participation at the grassroots level – especially important in a country struggling with the legacy of centralised planning – is undeniable.

For future projects, we will invest more in the radio broadcasters themselves. The Rural Information Network provided free and reliable information that could be used in their programming, but the information was not distributed as radio scripts, but as information sheets. Poorly funded and inadequately staffed radio stations had to invest significant resources to “translate” the information back into radio language. Thus, participation in the project required significant investment by the radio stations. In future projects, we will invest in them.

Training, peer-to-peer networking, exchanges among broadcasters and between broadcasters and other stakeholders will occupy as much space in our planning, our budget and our evaluation as the information product for which we are known. Farm radio programs are extremely challenging to produce. Complex information, often requiring understanding of scientific, technical and legal issues must be conveyed in clear, concise language in a limited amount of time. Radio broadcasters are also under pressure to produce entertaining programs to attract listeners. Farm radio broadcasters need training, and they need the support of their station management to be able to attend training sessions. Future DCFRN projects will ensure that investment is made in broadcasters, to help them produce programs and access local resources and experts.

Future projects will also leverage the resources of our international network. This project was designed to respond to Russian needs and the Russian context. It was an opportunity to provide locally specific information and resources. But our concentration on Russia, combined with our “hands-off” approach in an effort to let our partner take the lead, resulted in a project that was isolated from the experience of our partners in Africa, South America and elsewhere. Future projects will ensure that there is an international exchange of information and experience.

Prospects and plans

At the time of writing, the Rural Information Network project is coming to a close. We hope to secure funding for a second phase that will build on the network already established and implement lessons learned over the past four years. The second phase of the Rural Information Network will focus clearly on radio broadcasters as priority members. Priority activities will include:

- providing reliable information for food security, sustainable agriculture and rural livelihoods;
- networking rural radio broadcasters to enhance their understanding of the role of farm radio broadcasts in developing and sustaining healthy communities;
- promoting the exchange of audio materials and leverage of local resources;
- providing specialised training for rural radio in areas such as audience research, content development, participatory approaches, station management and media ethics;
- facilitating international exchanges to promote further learning and best practices.

The Canadian International Development Agency, which has provided more than financial support throughout this project, has expressed interest in a second phase of the project. Other agencies are also supporting radio and Internet initiatives in Russia.

This donor interest coincides with a growing radio movement. Across Central and Eastern Europe, radio stations have multiplied in recent years. In Russia, there are now hundreds of radio stations, opening the way to radio that meets the needs of rural communities by bridging the gap between grassroots needs and views on the one hand, and local and national policymakers on the other. With appropriate support, this new generation of radio can bridge the digital divide.

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Section III

Networks

Radio networks for exchanging information and programming have been around almost as long as broadcast radio itself. Networks not only offer an economic advantage, since spreading the cost of programme production across several radio stations reduces the cost to each station, but they also permit a better and more complete service for listeners, incorporating, for example, national and international news and providing a distribution channel for third party programs. Until very recently the only infrastructure within the grasp of independent radio stations in less-industrialised countries was the slow and notoriously unreliable postal system. The arrival of the Internet has brought new possibilities with it.



The chapters in this section are case studies of three Internet-enabled radio networking projects: one national, one regional, and one global.

Awakening from the Big Sleep, by Martin Hala and Santoso, tells the story of Radio 68H, a news network that links radio stations in Indonesia, a country that present a variety of challenges to any communication projects, not least because it is an archipelago made up of 17,000 islands that are home to 200 million people.

Based in Quito, Ecuador, the *Agencia Informativa Púlsar* was the first major initiative to link independent radio stations via the Internet. At its peak, this Latin American service reached 800 radio stations. Bruce Girard's chapter explains how and why the agency was set up.

Moving to the global level, Francesca Silvani's chapter, *InterWorld Radio: The kind of thing that connects you to the world*, describes a is a free, English language, daily news and audio feature service for radio stations provided by the Panos Institute and OneWorld International.

Chapter 10

Awaking from the Big Sleep: Kantor Berita 68H

Martin Hala and Santoso



Indonesia found itself in a unique situation under Suharto's *New Order* regime: there was strict state control of news broadcasts, but, at the same time, a relatively liberal environment for licensing small local radio stations. This spawned a rather unusual scene, with hundreds of small stations all over the huge country, independent in terms of ownership, but in terms of content restricted to rebroadcasting the rigidly censored news bulletins of the government's RRI (Radio Republik Indonesia) several times a day. Independent news programs were prohibited. Apart from the official news, these privately owned local stations generally only played music and ran commercials. Even during the May 1998 riots in Jakarta, many local stations kept blasting heavy metal music at their frightened audiences, apparently oblivious to the social, political and human drama unfolding outside their windows, in front of their very eyes.

Radio's journalistic indifference sharply contrasted with the print media, which were fighting – especially in urban centres – an uphill battle with the regime for more editorial independence. There was frequent banning of publications venturing too far into investigative journalism,¹ and a whole *samizdat* underground emerged made up of writers either sacked from official journals, or even devoting their careers from the outset to the underground press. These journalists started organising themselves in institutions like the Alliance of Independent Journalists (AJI) and the Institute for the Study of Free Flow of Information (ISAI), operating on the fringes of the law, or outside of it. In short, unlike radio, there was a lot happening with print media, which was much livelier and daring, and far less complacent, than those in neighbouring Singapore or Malaysia.

The problem, of course, was that print media had, and still have, very limited reach in a country so huge, and impoverished, as Indonesia.² Critical journals like *Tempo* or *Detik*, even in the good times when they were not banned, had a relatively low circulation, and mostly only reached the urban middle class. The penetration of *samizdat* publications like *X-pos*, was naturally lower still. Even the very best of the print media could in no way compete with the broadcast media, especially radio. While the cumulative circulation of all papers published in Indonesia has been hovering around five million, there are now an estimated forty million FM/AM radio receivers in the country. A newspaper is usually read by several people, but radio sets serve whole families, especially in the countryside. By any count, newspaper readership is just a fraction of the vast masses tuning into radio. But what did these masses find on the air during the Suharto years?

Similar to Eastern Europe, there were some foreign broadcasts aimed at Indonesia. The BBC, VOA, Radio Netherlands and Radio Australia all had Indonesian language programs reaching the archipelago. These were, however, beamed to Indonesia on the SW band from afar. The sound quality was poor, even without the occasional jamming, and so

¹ *Detik*, *Tempo*, and *Editor* were all banned in 1994, for example.

² With a population of 200 million, Indonesia is the 4th most highly populated country in the world. Its communication problems are exacerbated by its geography – it is an archipelago made up of 17,000 islands, 6,000 of which are inhabited.

was the relevance of most programs. For most people, the RRI news bulletin was all there was for information, but this was mostly pro-government propaganda with little or no information value, so people didn't expect much from radio in terms of news. They tuned in to radio for the music and rarely thought of the potential of the medium for news and information programming. The huge potential of this powerful medium lay dormant for decades. There were always some people in the underground press who realised the potential power of radio, but there was little they could do, given the Suharto-imposed controls.

These controls ended with Suharto's demise in 1998. The fall of the New Order regime led to a sudden liberalisation of media, easing of state controls and the fading away of old taboos. Radio stations were now allowed to broadcast whatever they wanted. The problem was, however, nobody had ever done independent radio news in Indonesia before. There was no basic radio journalism equipment, no experienced radio journalists, and often not even a desire to start producing independent radio news. Many stations argued that their listeners were not interested in news; they demanded music. That was of course true – since there had never been any relevant and reliable news broadcast on the radio, listeners did not even imagine it, let alone ask for it. In all of Makassar (Ujung Pandang), for instance, a major city of more than 800,000 inhabitants and the administrative centre for East Indonesia, there was only one radio reporter during the Suharto years, and he still remembers how hard it was to explain to people what he did for a living. As time was to tell, however, as soon as there was real news on air, listeners came running, and demanded ever more.

In addition to news-challenged broadcast culture, there were a number of practical problems. Independent radios in Indonesia were mostly cash-strapped, shoestring operations with minimal technical facilities, minimal technical and administrative staff, and a couple of on-air DJ playing pirated tapes or CDs. There was no budget for computers, reporters, or the Internet. Obviously, fresh new ideas were needed to break out of this situation, and jump-start the very concept of news radio in Indonesia.

Meanwhile, in far-away Prague on the other side of the globe, the newly established Center for Advanced Media (C@MP) was experimenting with digital audio compression, then a relatively new technology. C@MP and its Indonesian partner, the Institute for the Study of Free Flow of Information (ISAI), were already working together to support the print media, and they realised that digital audio compression could help circumvent existing constraints on radio news in Indonesia.

The idea was simple. Since independent radio stations did not have the means to produce their own news in any significant quality or quantity, a solution was to rebroadcast national newsfeeds coming from a central production centre, and to share local news reports with other small stations. The state-owned network of relay stations that had been used to distribute the official newscasts in the Suharto era was not available for independent news, so the Internet would be used to distribute compressed digital audio.

Technology was the easy part

At that time, most people thought of Internet radio in terms of streaming or webcasting, technologies that were impractical given Indonesia's underdeveloped telecommunications infrastructure. A more feasible option was to distribute programs via the Internet not in real time as streams, but in "near-real" time as compressed files sent to stations by email or downloaded via FTP. The local stations could then broadcast the programs, reaching out to their regular audiences. Only in this way, by combining "new" and "traditional" media, could independent national programming reach significant numbers of listeners.

The "new medium" of Internet provided a convenient substitute for the missing "old media" infrastructure, enabling the creation of a nation-wide virtual broadcast network

offering much of the functionality of the brick-and-mortar relay system owned by the state, but at a fraction of the cost. On top of that, the Internet-based distribution offered a more flexible system allowing for easy feedback from participants, and two-way sharing of programs. A news item produced in Aceh could almost instantly be heard in any part of the country with a participating station, and stations in Aceh could broadcast programs produced by any of the other participants.

In technical terms, we opted for MP3³ format instead of the then-prevailing Real Audio, because it was easier to handle as files, as opposed to streams, and for a number of other practical considerations, like the better size-to-quality ratio at bit-rates needed for broadcast-quality audio. Another advantage of MP3 over Real Audio was the possibility to decompress files back to wave format for re-editing. Given the diversity of participating stations, this was potentially useful for members particular about maintaining the integrity of their broadcasting profile. Stations could edit the material, changing its form and emphasis to more reflect local sensibilities or interests, although in practice this was rarely done.

The technology was the easy part. The organisation of the network was much more complex. Apart from the few promoters of the project, there was not much enthusiasm at first. Many of the potential member stations did not see the advantages, and there was generally a lot of scepticism concerning the appeal of news programs for radio listeners. Another challenge was to form a group of dedicated radio journalists to service the production hub in Jakarta. As we have already observed, there were no radio journalists in the country and thus the entire team had to be built up and trained from scratch.

The network

The organisers used the clout of their parent institution, ISAI, a renowned and well-connected media organisation, to attract young journalistic talent for the production hub, and to reach out to small independent stations all over the country with an offer to join the network-to-be. Sometimes a little reluctant at first, local stations soon found it increasingly difficult to resist such offers. Once the concept took off, and quality, independent news began to be heard on air, it quickly proved to be a major audience-catcher. Listeners' expectations changed fast, and it became imperative for stations to carry news programs, if for no other reason than the need to compete with stations that did.

A production studio was set up at ISAI's office in Jakarta, equipped with a digital mixer and a computer. Next to the studio, a newsroom was built with more computers for journalists. C@MP provided the initial training for local trainers who would later spread the skills further around. The topics covered digitising of audio input into wave files, editing them on a computer, file compression, and various methods of distributing the compressed files to remote stations via the Internet, including maintenance of list- and mail-servers. After about a week of training, the whole operation was localised. Trainers and organisers from ISAI took over and from that moment on, they ran the show independently, relying on local initiative and innovation to drive the project.

The network's growth began modestly. Radio 68H began with fourteen stations in locations selected to be more or less representative of the central islands of the archipelago. Stations representatives were invited to Jakarta in March 1999, where they were trained in both technical and journalistic skills, given a computer with preinstalled software, and instructed in the mechanisms of the planned network's functioning.

³ MP3 (MPEG-1 Audio Layer-3) is a technology and format for software compression of audio while preserving the level of sound quality when it is played back.

The actual broadcast via these first fourteen stations started in April 1999. The amount of production was limited at first – just several one-minute programs a day. This small amount of news nevertheless had a snow-balling effect, changing broadcasters' behaviour all over the huge country. There were 60 stations in the 68H network by August 1999 and 100 a year later.

Radio 68H's members not only receive news for rebroadcast, they also produce their own news and send it to Jakarta for redistribution to the other network members. Most of the new members had never produced news and thus had to be trained by 68H staff. ISAI and 68H now organise eight regional training courses a year, covering editorial and technical issues. Some 300 journalists have been trained and many of these have become active correspondents for the network. Currently, there are about fifty regular correspondents, each contributing one to two local news items a day.

The birth of the network coincided with rather hectic political developments, culminating, in mid-1999, with the first free elections in Indonesia in forty years. The situation was changing rapidly with new parties springing up and political alliances being formed and betrayed. All this was reported to listeners. Radio news was quickly established on the airwaves and, in some respects, became the main field for competition among local stations. As more and more stations carried news, it was difficult for their competitors to ignore it.

As the number of member stations grew, so did the amount of production. A thirty minute news program, the Evening Bulletin (Buletin Sore), was introduced in August 1999. It became very popular, but it also increased pressure on the already inadequate infrastructure. For some of the stations, especially those in rural areas already struggling to download the one- or two-minute pieces, the bulletin proved too much, requiring several hours of a modem connection to download the thirty minute program. It was a formidable disincentive both for existing and prospective 68H member stations. The Internet, which had made it possible for the network to emerge, had become a bottleneck. It was clear that without a solution to the problem of insufficient bandwidth, the network would not be able to expand and might possibly collapse.

Look to the sky

The obvious solution to network congestion was satellite. Given the size and fractured landscape of the archipelago, satellite had long been used there for communication and broadcasting, and Indonesia had even launched a couple of its own satellites. After some shopping around, however, it became clear that "off-the-shelf" satellite solutions would be far too expensive for a project of this kind to employ. Once again, an innovative idea was needed.

Such an idea materialised, just when most needed, in the form of an offer from PSN, a local Indonesian satellite company. Instead of using the standard, but very expensive digital audio system, or even the cheaper but still unaffordable Single Channel per Carrier technology (SCPC), PSN proposed to take advantage of its digital video broadcast (DVB) system. Originally devised for satellite TV broadcasting, the DVB package came with four 64 kbps audio channels. PSN offered one of these to 68H on an affordable basis.

DVB is a common technology in Indonesia and elsewhere, and there was no need for expensive specialised equipment on the receiving end – standard, mass-produced satellite TV dishes and decoders were all it took for the member stations to receive the satellite feed. The downside is that the system only works one-way – local stations can receive programmes, but cannot send them via the satellite. For this, they would need an uplink, an expensive piece of equipment with regulatory implications. Once again, the creative integration of technologies provided the solution, and the Internet network that had been put in place earlier was used for

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the return channel. Local stations use the satellite link to receive newsfeeds sent from Jakarta and Internet for uploading their own programs. Since there is far more programming sent from the hub than uploaded by individual stations, this asymmetric system works fine.

Introduction of the new satellite-based distribution system was a major breakthrough that spawned further growth in both membership and programming. By the end of 2000, Radio 68H had 200 member stations. The aim is now to have a participating station in each of the country's 320 municipalities.

A sustainable business model

The volume of programming, now uninhibited by the bottleneck of the terrestrial network, grew to 15 hourly editions a day between 06:00 and 21:06 West Indonesian Time. Three of these editions are longer, thirty minute programs, the rest news bulletins of six minutes each. The total amount of programming rose from the initial several minutes to the current level of almost three hours a day.

This phenomenal growth of course raises the question of the project's long-term sustainability. The endeavour was originally funded with a start-up grant from the Media Development Loan Fund⁴ and the Asia Foundation, and later with a grant from the Dutch Foreign Ministry's development program. From the beginning, the understanding was that this would eventually become a self-supporting project, financed primarily with income from advertising. To this end, the project was registered in January 2000 as a business entity under the name PT Media Lintas Inti Nusantara, with 60 percent of shares going to the management and employees, and 40 percent to ISAI as the parent organisation.

With its unique profile and nation-wide reach, Radio 68H enjoys a high potential for advertising revenue. This potential has so far not been fully realised. One of the reasons seems to be the very novelty of its concept – potential advertisers have yet to fully appreciate it. The network's management has been trying to develop this potential by strengthening the marketing department and organising promotional campaigns. Advertising revenue is now slowly becoming a major source of income, gradually reducing dependency on outside funding.

Developing a sustainable business model also means finding a suitable mechanism for sharing the advertising revenue among the network's members and the production hub in Jakarta. There are six minutes reserved for advertising in every half-hour of programming. At this point, about 30 percent of these slots are being used, generating income to cover some two thirds of operational costs. The network could become fully sustainable from advertising with a utilisation rate of roughly 50 percent. The income is shared between Jakarta and the member stations according to elaborate rules reflecting the stations' profiles, amount of Radio 68H programming used, and other factors. For many of the participating stations, especially the smaller and more remote ones, their share of the advertising pie represents a substantial boost for their bottom line, helping them in their own sustainability struggle.

Apart from commercial advertisements, the network also carries a lot of public service announcements, another important source of income. Local and international non-profit organisations take advantage of the network's reach and popularity to distribute their messages to the most remote parts of the country. The Indonesian National Commission for Human Rights ran its non-violence campaign on the network, for example, since it was the only way to reach many conflict zones like Aceh, the Moluccas, and West Papua (Irian Jaya). Similarly, the Aceh youth wing of the second largest national Muslim organisation, Muhammadiyah, ran a campaign for religious tolerance on the radio, and the UN High

⁴ Media Development Loan Fund (MDLF) is the parent organisation of C@MP.

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Commissioner for Refugees ran an information campaign for East Timorese refugees in West Timor. These announcements combine the best of both worlds for both 68H and the sponsoring institutions – they spread important messages, and at the same time support the network financially.

The 68H network now reaches about 20 million listeners all over Indonesia. According to an August 2001 survey conducted by the Association of Radio Stations in East Java (PRSSNI Jawa Timur) in fourteen major cities throughout the region, 68H is by far the most preferred source for radio news. Even some local stations of the state-run RRI have joined the network and rebroadcast 68H programming.

The 68H network has undergone a period of tremendous growth in the past two years. But there is still potential for further development, in both technical and programming terms. After decades of forced hibernation, radio is coming alive in Indonesia, bringing reliable independent news, and a calming voice of moderation into the post-Suharto turmoil.

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Chapter 11

The Agencia Informativa Púlsar

Bruce Girard

The first major initiative to link independent radio stations via the Internet was the *Agencia Informativa Púlsar*, a Spanish-language Internet-based news and information agency specialised in providing services for local, independent and community radio stations in Latin America.



Púlsar had a humble beginning in 1996, sending a daily news summary of 10-12 stories via email to forty-eight subscribers in Latin America. The main sources of information at the time were the websites of the few Latin American newspapers on the Internet and daily dispatches from Inter Press Service (IPS). A selection of news from these sources was rewritten in radio style and from the perspective of Latin American civil society and then emailed as a “rip and read” service. News staff at the stations were free to select the stories they wanted to use and even to edit them for language or local context.

Five years later, just before it suspended its service, *Púlsar's* expanded services were being emailed to more than 2,500 subscribers, including some 800 radio stations and broadcast organisations, in over fifty countries and were freely available for download from the web. The agency had diversified its news sources, adding, among others, a network of more than twenty correspondents and commentators. It had also added a variety of new services, including special thematic services, a indigenous Quechua-language service, digital audio clips, a complete audio newscast and a web portal. For the first time, millions of listeners of Latin American local and community-based radio stations had access to a non-commercial independent news and commentary service that was rooted in the social, political and geographic reality of the region.

Regional news and radio networking in Latin America

Radio has long been the most prevalent and the most dynamic mass medium in Latin America. For most people, especially those in marginalised urban areas and rural communities, it is often the only mass medium available and usually the most important source of news and information. While African and Asian broadcast systems were heavily influenced by the centralised State-dominated traditions of their European colonisers, Latin American countries tended to adopt more liberal ownership structures and, with a few notable exceptions, the region has a diverse radio landscape. Most countries have one or more large commercial networks alongside hundreds of small independent commercial stations and non-commercial stations owned by churches, trade unions, municipalities, indigenous people's organisations and a wide variety of NGOs. State radio broadcasters are generally either cultural or official and in either case relatively minor players.

Despite the recent growth of national commercial networks, which usually consist of a number of transmitters broadcasting centrally-produced programming to the provinces, radio continues to be the most local mass medium. Even in small towns it is common to find independent stations that produce all or most of their own programmes. Radio speaks in the language and with the accent of its community. Its programming is about its community, involves community members, reflects local interests and contributes to both the heritage and the development of the cultures, economies and communities that surround it. This contrasts

sharply with television – only 30 percent of Latin American television programming comes from the region; with 62 percent produced in the United States.¹

However, while independent radio has a long history of informing about local events and stimulating local democracy, coverage of regional and international debates and events, increasingly important in the light of globalisation and efforts at regional integration, is generally abysmal. Few radio journalists are trained at analysing international news and even if they were, there are few sources of international news available to them.

This lack of appropriate international news sources for radio has long been recognised in Latin America. As long ago as 1962 radio news directors and managers at a meeting organised by CIESPAL² called for the establishment of a radio news agency and a few international radio news exchange initiatives have been established over the years. One of them was Informativo Tercer Mundo (ITM). Based largely on news bulletins from Inter Press Service (IPS) a leading independent global news agency, ITM's weekly programme was distributed on cassette to some one hundred radio stations. Its production values and its analysis were good, but delivery was by the post. By the time ITM programmes aired on local stations the news was at least two weeks old; often as much as six.³ The Internet, still new in Latin America, was about to open up a new range of possibilities.

In 1995 a study was conducted with the support of the Canadian Bureau for International Education (CBIE) and the cooperation of the Ecuadorian NGO, CEDEP (Centro de Educación Popular) and the Latin American office of the World Association of Community Radio Broadcasters (AMARC) to identify ways the Internet could be used to support independent and community-based radio in Latin America. The study focused on three areas: (i) international news sources and practices among Latin America's independent and community radio stations; (ii) a trend towards greater concentration of ownership and control of radio broadcasting at the national level; and (iii) how the Internet could be harnessed to improve international news coverage and support efforts to promote diversity and pluralism of the region's radio stations.

International news

The research showed that for small independent radio stations, newspapers were the most important source of international news. For rural stations, these were often yesterday's newspapers from the capital. Other sources included foreign short-wave radio and, in urban areas, foreign cable and satellite television stations. While the major North American and European news agencies were only used by larger urban stations, they were influential since they are a primary source for the newspapers.

The predictable result of this was that international news, including news from neighbouring Latin American countries, usually reflected North American and European priorities rather than Latin American ones. For a Latin American outside Colombia, for example, news about that country rarely dealt with its internal tensions, its relations with its South American neighbours, or even its economy. News was more likely to be concerned with the relation between Colombia and the USA's domestic drug problem.

¹ *UNDP Human Development Report*, 1999, p. 34. Of the 30 percent of television programming that is from the region, very little is local. Much of it comes from regional production centres in Mexico, Argentina and Brazil.

² The Centro Internacional de Estudios Superiores de Comunicación para América Latina – CIESPAL – is a research, training and production centre specialising in media and communication in Latin America.

³ Initiated by Chasqui-Huasi in Chile, ITM production later moved to ALER in Ecuador. Its name was later changed to La Ronda Informativa and it is now distributed by ALER's ALRED satellite service.

Station representatives surveyed were generally aware of the poor quality of their international news in general and their news from Latin America in particular. Most were interested in improving this, but there was no obvious appropriate and affordable news source available to them.

Liberalisation and technology: The precarious position of local radio

The study also looked at some of the major changes that were taking place in Latin American radio as a result of liberalisation of broadcasting and of the deployment of relatively inexpensive satellite technologies to form national networks.

Liberalisation and deregulation of the sector had been successful in bringing about a dramatic increase in the number of radio stations in many countries, but this was not accompanied by a comparable increase in revenue for the sector. The result was fatal for many radio news departments. In Quito, Ecuador, for example, the number of radio stations increased by 300 percent between 1991 and 1996, but the amount spent on radio advertising increased by less than twenty percent in the same period – forty radio stations were operating with only marginally more advertising revenue than was formerly shared by ten stations. Competition was fierce and in order to survive new stations invested as little as possible in programming, using inexpensive automated formats and becoming little more than on-air jukeboxes. Established stations with a commitment to local news and information were under pressure to cut costs. News is expensive and in hard times it is often the first department to suffer budget cuts. Even after cuts, most radio stations remained in precarious financial positions.

At the same time, new and relatively inexpensive digital satellite technologies were becoming available and were beginning to have a dramatic effect on the nature of radio in the region. National multimedia groups, with holdings in print, television, Internet and radio were setting up networks consisting of a single production centre and many repeater stations throughout the country. These networks were expanding rapidly, with the national groups purchasing or leasing stations in smaller cities and towns, shutting down their production facilities, and converting them into repeater stations with little more than a satellite receiving dish, a transmitter, and sometimes an office to sell local advertising.

While the network stations had no local content, they enjoyed economies of scale and could invest large sums of money in production. They offered the latest music, popular talk shows, gossip, and political commentary that proved popular, especially with the young urban dwellers that most interested advertisers. The remaining independent stations were left struggling to compete or going out of business entirely. In many secondary cities and towns people knew the news, commentary, weather, traffic reports, music, and gossip from the capital, but had less information from their own communities and fewer opportunities to have their own voices heard.

Radio was undergoing a rapid transformation. No longer an exclusively local medium, it was on the road to becoming a predominantly distant one. In Peru in 1995 three Lima-based networks had more listeners in the provinces than the fifty largest provincial stations combined.

Local stations were in a precarious position. They were in a unique position to serve their communities and to contribute to media diversity, but in order to do so they needed to produce expensive local programming and to significantly improve their global and Latin American news and information. And they had to do this with fewer resources.

Enter the Internet

In 1995 the Internet was just beginning the leap from a primarily academic network to a predominantly commercial one. It was the year AOL began offering Internet access, the number of web servers in the world increased tenfold from 10,000 to 100,000, Netscape went public with the largest NASDAQ initial public offering in history, Internet Explorer was not yet available, and Real Audio made its debut.

In Latin America the 1995 Internet frenzy went largely unnoticed. At the beginning of the year, seven of the eighteen Spanish-speaking countries still did not have direct access to the Internet.⁴ In the countries that were connected, service providers were located in major urban centres and long distance telephone lines were not of good enough quality to sustain a connection to the Internet.

A second barrier to Internet use was that there was very little Latin American content on the Internet – perhaps a dozen mainstream newspapers and a few alternative sources dealing with particular countries or themes. Few people were convinced of the value of being connected to an Internet that had so little information in their language and about their reality.

Not surprisingly, the survey and interviews of local independent broadcasters showed that only a small minority of them had access to the Internet and, of those that did, most of them used it for email only.

Despite the difficulties, the Internet did seem to offer some promise for linking the region's radio stations. While its use was expensive compared with North America, it was still far less expensive than satellites and faster than the postal system. Connectivity, while still a problem, was a declining one. Many countries had recently privatised telecommunications and facilities were rapidly being extended and improved. The biggest drawback was the lack of content – there was little in Spanish, not much from Latin America and nothing that could be used on the radio without significant processing.

Bringing it all together: The *Agencia Informativa Púlsar*

Based on the interviews and surveys, the study concluded that local, independent and community radio stations both wanted and needed to improve the quality of their news and information, that there was need for more diversity of sources of news from the region, and that the Internet offered possibilities for accessing news about the region, for setting up and maintaining a network of correspondents, and for distributing news and information to radio stations. Building on these conclusions, AMARC and CEDEP decided to support the establishment of the *Agencia Informativa Púlsar*, an independent radio news agency making use of the Internet as a distribution mechanism, as a source of news, and as a two-way channel for communicating with correspondents.

The agency's main activities were:

- Identifying appropriate sources of accurate and high quality news and information on the Internet. These included both “mainstream” sources, such as online newspapers, and “alternative” sources, such as specialised news services directed at human rights or environmental networks.
- On a daily basis, searching out international news and editing it in radio style for distribution to radio stations via the Internet, prioritising news from Latin America and the Caribbean.

⁴ Bolivia, Dominican Republic, El Salvador and Guatemala got their first host computers in 1995. Cuba, Honduras and Paraguay followed in 1996.

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- Establishing a regional network of correspondents who feed news into a news pool available to all community radio broadcasters.
- Providing training and support to community radio broadcasters wishing to receive the service and/or to make full use of the Internet in their programming.

Púlsar began in March 1996, sending a daily news summary via email to forty-eight subscribers in Latin America. The main sources of information at the time were websites of the few Latin American newspapers on the Internet and daily dispatches from Inter Press Service (IPS). Two part-time researcher/editors daily sifted through the news on the Internet, coming up with a selection that included both the main news items of the day as well as news items that were not on the international agendas. The key criteria were that the news be from Latin America and that it be selected and presented in a way that emphasised regional perspectives and the concerns of civil society. News staff at subscribing stations were free to select the stories they wanted to use and to edit them.

The agency quickly expanded. The number of subscribers to the basic service increased from forty-eight in 1996 to nearly 2,000 in 1999. By the time the service was suspended in 2001 radio stations and independent radio production groups were the largest subscriber category, accounting for about one third of the 2,500 subscribers. Non-governmental organisations and universities also subscribed to *Púlsar*'s free services, as did a few hundred individuals. Significantly, more than one third of subscribers were from outside Latin America. Many of these were community radio stations in North America and Europe with programming for local Latin American immigrant communities.

The agency also added a number of new services. By the end of 1996 the monthly *Comunicado*, a newsletter for *Púlsar* subscribers with tips on how to make better use of the Internet in their programming, was added. The daily digest of news stories was renamed *Compendio* and a new service, *En Línea*, made news stories available throughout the day as they became available. *En Línea* was added to better serve stations with more frequent email access. *Compendio* and *En Línea* subscribers could also choose an optional audio service which offered short clips sent in by correspondents – the voice of a woman in the market commenting on new economic measures, for example. The clips were sent by email as compressed (mp3 format) files. *Ciberbrujas*, produced in collaboration with RedADA, a Bolivian NGO, was a weekly service featuring news and information about Latin American women. *Ñuqanchik*, was a daily news service in Quechua, the main indigenous language in the region, spoken by some eight million people (see Box 1).

As connectivity improved in Latin American cities, *Púlsar* added more high-bandwidth services, such as a website updated several times each day and downloadable news bulletins. However, the basic emailed text service, accessible to any station with an email account, was maintained. The goal was to provide service at a number of levels: from emailed text, through audio clips and up to web-based full audio. The additional cost of producing and distributing extra levels of service was minimal. By offering these different levels of service *Púlsar* could ensure that subscribers with limited access would not be left behind. New subscribers could adopt the service at their current capability, and then request new services as their own access and expertise permitted.

Púlsar also expanded its themes and sources. While in the beginning most of the news came from websites of mainstream newspapers, alternative sources were cultivated, including specialised press agencies, and a network of correspondents in Latin America and Europe.

Finally, *Púlsar* expanded its network and improved its services by focusing on training, including training of its in-house editors, its correspondents and its users.

The agency's first training activity was a *Viaje Virtual* (Virtual Voyage). It was a website on a diskette that was distributed to hundreds of stations just before the agency's launch. The diskette contained a manual about Internet use, instructions for how to get connected to the network, and information about *Púlsar* and how to receive the service, all in the web's HTML format. Mixing old and new technologies from the start, *Púlsar* distributed the diskette by mail to hundreds of stations in the region with simple instructions for how to use it. Even a compact offline browser was included on the diskette, since in early 1996 most computers in Latin America did not have browsers installed.

Box 1 – Ñuqanchik, ourselves

Probably the most important indigenous language in Latin America, Quechua was the language of the Incan empire and is today spoken by seven to ten million people in the region, the majority of them in Peru. Radio is by far the most important medium for the Quechua-speaking community, not least because it is primarily an oral language.* According to a 1996 estimate, some 180 Peruvian radio stations regularly offer programs in Quechua. Most of these stations are isolated from one another and their communities have few opportunities to develop common perspectives on national and regional issues.

Between August 1997 and April 1998, *Púlsar*, the Centro Peruano de Estudios Sociales (CEPES) and the Red Científica Peruana (RCP) collaborated in a joint experiment to produce and deliver daily Quechua-language micro-programmes to a network of mostly Peruvian stations. The service was called Ñuqanchik, a Quechua word meaning both we and ourselves, and received financial support from UNESCO.

The project faced two hurdles from the beginning:

1) Quechua radio stations are among the least likely to have access to the Internet. Indigenous people are among the poorest in Peru and their communities are often without electricity and running water, let alone telephone service.

2) A Quechua-language service would have to be an audio service and the larger file size necessitated a better Internet connection than a text-based service did.

While the stations did not have the necessary equipment to receive audio via the Internet, *cabinas públicas* (community Internet access points) and cyber cafés were beginning to appear in many market towns and it was hoped that stations could get to them at least once per week with a cassette tape to record the programs for later broadcast. It was even technically possible for the stations to send their own news, commentaries, and programmes via the same channel, turning an informational service into a low-cost participatory network in which everyone could be both correspondent and recipient.

At the end of the experimental period the service was suspended. The main reason for its failure was the inadequate telecom infrastructure in rural Peru. Since then Peru has made substantial investment in basic rural telecom services, with the goal of having telephone and basic Internet service in every community.

Ñuqanchik was ahead of its time, but valuable lessons were learned for how to produce and distribute Quechua-language programming at low-cost. The infrastructure might soon catch up with the ideas.

It is common to say that new communication technologies are going to lead us to a world in which we all share the same culture of "cyberspace" and speak the same language. The Ñuqanchik experience showed us that this homogenised world does not have to be the only option. Applied imaginatively, new technologies can also offer possibilities for pluralism and cultural diversity.

* Following the conquest, missionaries introduced a written form of the language based on the Roman alphabet. However, Peru's formal education system shunned the language and even educated Quechua-speakers were unlikely to be able to read and write in the language, since their education was in Spanish only.

More traditional training sessions were conducted for users throughout the region, usually in partnership with local broadcast networks. Since the Internet and email were new to the region, the training sessions focused on demystifying the new technologies in terms of access and cost and training in basic email skills. Training sessions were always used to evaluate *Púlsar's* service.

For correspondents, guides were produced to supplement annual training sessions and as aids for distance training and evaluation. The *Cartilla para Corresponsales*, for example, provided detailed style guidelines for themes, formats and language. Another correspondents' guide focused on the inclusion of audio in correspondent reports, covering both technical and format questions.

Challenges

In June 2001, after five years of operation, *Púlsar's* services were suspended. The reasons for shutting it down stemmed from financial and political problems in the Latin American office of AMARC, the organisation that managed the agency during the previous three years, and were unrelated to *Púlsar*. AMARC has since announced its intention to start the service again, and as of October 2002 a weekly bulletin is being distributed.

The challenges *Púlsar* took on during its first five years were *journalistic*, providing radio stations with a Latin American source of regional news; *political*, supporting independent and community radio; and *experimental*, examining and testing the opportunities presented by the combination of broadcast radio and the Internet.

As a journalistic project *Púlsar* demonstrated that it was possible to use the Internet to provide a low-cost news service tailored to the needs of independent and local radio stations. While there was much room for improvement, the steady increase in subscribers and an analysis of feedback received indicates that the journalistic quality and editorial line of the agency were appreciated.

As a political project the agency sought to contribute to the diversity of voices on the airwaves and to amplify independent and critical voices from Latin America. *Púlsar* made an important contribution to the diversity of perspectives on radio in Latin America, although this was counter-balanced by the increasing centralisation of ownership in the sector that we have already discussed.

As an experimental project *Púlsar* enjoyed its greatest success. As the first major initiative to link radio and the Internet it demonstrated a range of possibilities for combining the two media to support pluralistic and independent media, an essential prerequisite for democratic development. In so doing it also became a model for many other initiatives in Latin America and elsewhere.

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Chapter 12

InterWorld Radio: “The kind of thing that connects you to the world”¹

Francesca Silvani
with additional research by Sameer Padania



It's one o'clock on a Saturday afternoon. We're sitting in the makeshift studio of Radio Rhino, a small independent FM radio station in the northern Ugandan town of Lira. The studio, which is the entire radio station, is soundproofed with egg boxes. But three of us are keeping still and quiet, as the technician switches on the expensive-looking WorldSpace digital receiver and holds a microphone up to the speaker. The crystal clear voice of the BBC World Service newsreader fills the room, and Radio Rhino begins broadcasting its news, live, to a potential listenership of six million, in and around the town of Lira. It's obvious from the nonchalance and expertise that accompanies Radio Rhino's news broadcast, that this is something that happens every day.

This brief description raises all sorts of questions. How do radio stations get international news? How do they use new technologies? What does it mean that local stations are able to so easily broadcast BBC news? Will new technologies make it easier for established international broadcasters such as the BBC to dominate the airwaves? Will it also be easy for foreign commercial broadcasters to dominate the global airwaves? How can a small, struggling, independent station such as Radio Rhino find an alternative source of news and information? Does it want to?

These and similar questions were central to the foundation of InterWorld Radio, an Internet-based radio news and features service run by the Panos Institute in partnership with OneWorld International. Equally important was an understanding of new challenges and opportunities confronting pro-development communication initiatives, and of the key role that radio continues to play.

Radio is increasingly acknowledged as one of the most important media for involving the public in development processes – not only for rural areas where TV and newspapers do not reach – but even for urban centres. Radio is in a growth period, especially in developing countries where liberalisation policies and low-cost FM broadcast technologies have enabled the emergence of thousands of new stations, both commercial and community-owned. There are now 38 FM radio stations in Uganda and 50 in Ghana. These are commercial, not community media since they are not owned or governed by a community, but they provide critical opportunities for public debate and, with imaginative programming, real opportunities for perspectives from different communities to be heard. While these stations tend to serve only small geographic areas, are urban focused and often driven by advertising and consumer values, they are also hugely popular, very significant in shaping public opinion and offer new and important opportunities for public interest programming and debate.

¹ John Musuku, Zimbabwe Broadcasting Corporation.

The One to Watch – Radio, New ICTs and Interact

It is also clear that many from this new generation of popular urban FM stations do not have the resources, networks, skills or experience to gather international news or to offer their listeners interesting, high-quality news and features from other countries. Yet given the crucial role they play in development and democracy – it is vital that these stations gain access to such programming. InterWorld Radio was designed to fill the gap.

What is InterWorld Radio?

InterWorld Radio is a free, English language, daily news and audio feature service for radio stations. It is funded by the Ford Foundation, the UK Community Fund, and the UK Department for International Development. By commissioning and distributing short audio features from a pool of local journalists around the world, InterWorld Radio provides a regular service of topical features designed for broadcast within magazine programmes or as discussion pieces for phone-ins or studio debates. InterWorld Radio also publishes a daily international news bulletin of up to eight items and distributes it to radio stations by email, and from the website – the main interface for the service. InterWorld Radio sees the Internet as one way of offering radio stations content in different formats depending on the needs and limitations of the users. This can range from low-tech text-based email bulletins and newsletters, through to scripts stored as file attachments on the web site, low-quality audio files that can be streamed-on-demand or downloaded for broadcast, and all the way to FM broadcast-quality audio files.

Panos and Radio

Founded in 1986 the Panos Institute exists to stimulate debate on global environment and development issues and to promote the plurality and diversity of media. Panos has long recognised the role of radio in development. Panos' global radio strategy is still evolving, as is the broadcasting sector itself, but at its heart lies a commitment to radio as a key player in many of the processes that involve communities in public debates and lead to change. Panos London's regional centers in Kampala (Uganda), Lusaka (Zambia), and Kathmandu (Nepal) run regional or local radio projects using a range of innovative methodologies. The independent Panos Institute of West Africa's (PIWA) Banque de Programmes Online did on a regional level many of the things that InterWorld Radio does more globally.² While PIWA maintains its programme production and distribution systems (and is also exploring satellite distribution), it now focuses mainly on working directly with radio stations, providing technical assistance, and increasingly training in management and networking. Panos Paris, as well as looking at satellite distribution, is also providing analysis of and support to the Central African broadcast environment. As part of this stable of radio projects, InterWorld Radio, currently based in London, complements the regional projects.

Unlike some other Internet-based radio news and features services, InterWorld Radio is available free-of-charge to all radio stations that want it. Worldwide, the community radio movement is succeeding to some extent in demonstrating why it is important that communities should own and run their own local radio stations. InterWorld Radio, on the other hand, is part of a complementary movement in which the ownership of the airwaves is less important than the public service role that radio stations play, a role that can be fulfilled by stations regardless of their ownership model. InterWorld Radio, therefore, is equally available to radio stations that are state-owned, public, community-owned or private and commercial.

InterWorld Radio is the only radio project within Panos designed to have a global reach and to work primarily in the English language. As such, the 'typical' radio station that

² See chapter 4 by Attias and Deflander for more about Panos Institute of West Africa's projects.

InterWorld Radio targets to work with is an urban-based radio station that broadcasts some or all of its talk schedule in English. It could be either private, community or state-owned, broadcasting locally in FM or nationally on AM and will probably be taking advantage of the interactivity and participatory nature of radio by hosting studio debates and phone-ins. In short, a radio station much like Radio Rhino mentioned at the beginning of this chapter. Radio Rhino's owner and former director, Andrew Ocerro, prides himself on the editorial independence of the radio station and speaks with obvious pleasure about the shows where his broadcasters are able to challenge local politicians and public authorities by getting them in to the studio and grilling them, live.

There are many other examples of radio stations playing this role in their own community – from Radio Sagarmatha in Nepal, to Joy and Choice FM in Ghana, to Monitor FM, based in Kampala, Uganda. Angelo Izama, who has joined InterWorld Radio on behalf of Monitor FM, produces and presents the morning show, one of the most popular shows on the station. He describes Monitor FM as “an independent station that tries as impartially as possible to present news and issues to the Ugandan public”, and to act as a “government watchdog”. It promotes free speech, he says, and “isn't afraid to tell the other side of the story”. Evidence of this, says Izama, is that their journalists are sometimes arrested as a result of their stories. When asked how the features carried by InterWorld Radio were of use to his programme, Izama said “there's no school here teaching people how to do this kind of radio, so I listened to IWR to get an idea of how to make features.”

But the big challenge for Panos and InterWorld Radio was – and still is – to find out whether radio stations like these want or are able to use international English-language content in their programming schedule and whether they are able to use the Internet to get it.

Why put audio on the Internet?

As early as 1986 Panos Radio, in London, was producing radio documentaries and distributing them to radio stations in developing countries by cassette – a laborious and expensive way of distributing audio programmes. The main selling point of Panos Radio programmes was that the items were commissioned from local journalists and reflected unique perspectives on development issues. In their reports, journalists had to get out of the studio and into their own communities so that audiences all over the world could listen to the voices and views of ordinary people – so often ignored in the international media. Throughout the 90s, the cocktail of radio stations ordering Panos Radio programmes began to change from being predominantly state-owned or public broadcasting corporations, to include local radio, independent radio, FM radio and community radio.

But monitoring and evaluation to judge the impact of each series revealed that although the programmes were broadcast, they were often simply inserted in to a station's schedule without being adapted for local audiences, and thus did not realise their full potential for contributing to development initiatives. Panos decided to look for a way of producing a more rapid and regular service, one that would involve local broadcasters in the process of producing and adapting content. This began to seem even more vital given the changes that were taking place in the broadcasting sector as new stations went on air with new ideas about how to make radio. While the inclusion of hard information seemed to be prioritised less on the newer radio stations than on older public or state-owned stations, the early fears that FM radio would turn into a miasma of lowest common denominator music programming have often proved unfounded. Some of the most popular and compelling programming on the new stations has turned out to be talk-based radio, with phone-ins and studio discussion programmes often stretching formerly rigid boundaries of political expression. It became clear that for any international audio content to be relevant it would have to match the increasing vibrancy of the sector.

Meanwhile, there was a growing interest in the implications of new information and communication technologies (ICT) for radio. The international development community already recognised that there was some potential for new ICTs to play a part in tackling poverty – but several important initiatives began to stress the importance of linking “traditional” and new technologies in order to reach wider audiences. For example, the Global Knowledge Action Plan, a statement from the Global Knowledge Action Summit that brought together major multilateral and bilateral organisations (including the World Bank and several UN organisations) in Kuala Lumpur in 2000, placed priority on “integrating existing with new technologies for access to content” and on the importance of “distributing broadcast quality audio over the Internet, thereby making use of existing and new convergent technologies”.³

The idea for InterWorld Radio was born out of a spirit of convergence, not simply between old and new technology, but between the ideas of Panos and OneWorld Online – two respected organisations working with information and communications in developing countries. Panos wanted to find a way to modernise its editorial service for radio stations, and at the same time, OneWorld Online was experimenting with ways to encourage radio stations to join in the information revolution that was already successfully transforming other parts of civil society. OneWorld Online had already run a pilot project called OneWorld Radio News Service, which was conceived as a database for radio stations to exchange locally-produced content. Although this service failed to reach a wide audience some of the lessons learnt from this early pilot project, such as the importance of file size and the need for quality editorial content, were instructive for InterWorld Radio.

Connectivity

In theory, InterWorld Radio was putting quality editorial content on the web at the same time as many different organisations – including Panos and OneWorld Online – were planning to work in the realm of connecting radio stations to the Internet at the other end.

Except of course in practice it has not yet happened. Internet access for radio stations in developing countries remains a challenge, especially in Africa. Kumah Dra at Radio Ghana says that he joined InterWorld and “tried to download once, but it took 30 minutes and broke off. It’s a very old computer. I do have a laptop that I could connect at an Internet café, but it’s expensive.” Projects that have tried to put audio content on the Internet in Africa have largely failed so far. The last few years have witnessed a major puncturing of the inflated expectations invested in the Internet. The dot-com crash in the North coincided with a more realistic assessment by development organisations of the potential of the Internet. It is not likely to become a mass medium in Africa where even now less than one percent of the population has access.

Yet Panos is more committed than ever to the InterWorld Radio *brand* that it has established, and believes that the level of interest in the content and format of the news and features that InterWorld produces, justifies attempts to take forward the technology side of the project, within a much wider strategy. Radio stations still need access to email and the World Wide Web, still need to be able to broadcast high quality international content and journalists still need to be able to report on their local stories with local voices for an international audience.

What has InterWorld Radio achieved?

Since the launch of InterWorld Radio in August 2000, 125 radio stations in 59 different countries have joined the network – over half of them in developing countries. Figure 1 shows the geographical spread of current members.

³ Global Knowledge Action Plan, Page 10, Item Access (4), Global Knowledge Partnership, 2000.

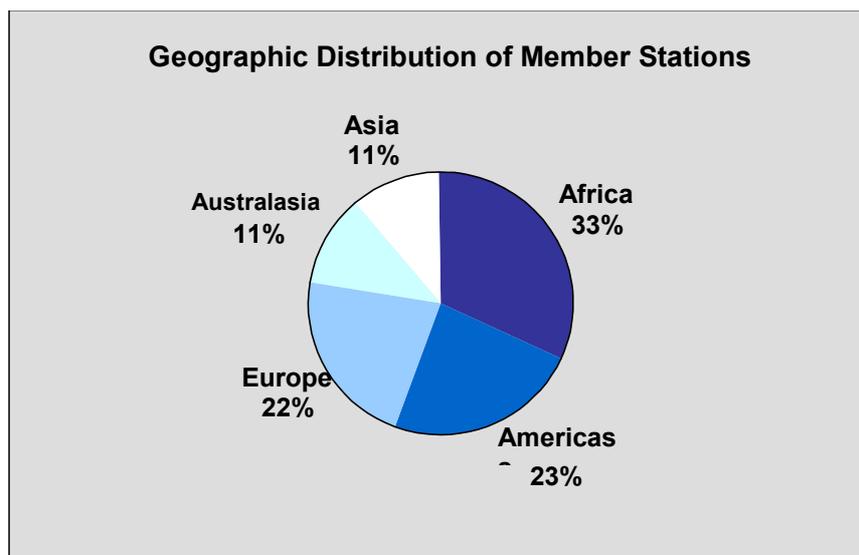


Figure 1

There are clear geographical differences between the type of radio stations that join: in Africa and Asia most members classify themselves as either independent or commercial, whereas in Europe and the Americas most of the stations are community-owned. While there are quite active relationships with some African community radio stations, they are not are “target” members, since many of them broadcast primarily in local languages.

News Bulletin

Sometimes the bulletin is read out in its entirety, but more often than not, it is incorporated in to other pieces. It gives perspectives not covered by other media, including the BBC. We use up to three of the bulletin pieces throughout the day, in English and translated into other languages.

– Peter Gomez, Gambia Radio and Television Services

The InterWorld News Bulletin is uploaded to the web site at 13:00 GMT every weekday, and emailed directly to the 93 radio stations that requested this when they joined. Next to the home page, the news is the most popular page on the web site, with the news bulletin being downloaded on average by 100 visitors a day. The bulletin is produced in the London office through a process of scouring many sources of news and information, primarily on the Internet, and packaging a selection in a radio script format, ready to read out on air. The editorial strategy aims at covering mainstream news as well as unreported or difficult-to-report items about global issues that affect development. There is no reason for the news writer to be based in London, so the aim is to move the news production to one of Panos’ southern offices.

By collecting feedback from members, it is clear that the news bulletin is used in a variety of ways – with some stations using only one or two items and others reading the entire bulletin.

Features

Although our [local, African] journalists are fine with news, when it comes to doing features, it’s a different ballgame. What you’re doing is a whole new approach, the transfer of knowledge, the move away from current affairs into going deeper, it’s very good.

– Ludger Schadomsky, producer of African Kaleidoscope on DW

In the 18 months it has been operating, InterWorld Radio has commissioned and produced 80 features from 37 countries – the vast majority from local journalists working in their own country. Nearly three-quarters of the features so far have come from developing countries, and as efforts to identify and recruit journalists bear fruit, this proportion is set to rise.

Only members with a password can download a broadcast-quality file and this makes it easy to monitor the download history of each feature, and of each member.⁴ Two of the most popular features have been from Brazil, about residents of a favela learning to use the computer, and from East Africa, where pastoralists from different tribes talk about their experience of leaving home to settle in a big city. Although stations in Africa that can download choose predominantly features from Africa, they also download features from outside the continent. For example, Joy FM in Ghana downloaded a feature from Porto Alegre in Brazil about an innovative participatory budget. The international broadcasters, such as Deutsche Welle⁵, and many of the stations in the North, download almost everything. Many of the members that regularly download broadcast the features as part of a magazine programme or as an introductory piece to spark a discussion.

Lessons Learned

Technology

Radio ZNBC had its phone lines cut off for non-payment of bills. It paid half but still got cut off, so we've been using friends' accounts to check emails. We need technical advice. I'm not sure what kind of computer we've got, whether it's got a sound card. I think we'd be willing to pay a small fee to be able to use a reliable access centre.

– Reuben Kajokoto, Zambian National Broadcasting Corporation (state-owned)

Since launching the service, Panos has carried out feedback surveys with members who join but are unable to download programmes. The panoply of reasons only serves to confirm what is already well documented – that access is not simply about connectivity, but also about basic PC equipment not being audio compatible, about skills and training, about who has access to the PC with the Internet connection, which is often in the manager's office, and about cost.

InterWorld Radio needs to be part of a much wider strategy for enabling radio stations and programme makers to access the Internet and it is in the early stages of a long term collaboration with other partners interested in working with access for radio stations, particularly in Africa. In the meantime, the range of options InterWorld Radio offers, including text based services, and lower quality audio features, needs to be promoted more clearly on literature and in our correspondence with radio stations. In particular InterWorld Radio's website, which is currently being totally restructured, needs to show much more clearly the range of options available, and signing up for IWR's services should also be possible via e-mail, rather than just through the site.

⁴ Any visitor can download lower quality files from the site. Evidence indicates that some stations that are unable to download the large broadcast quality files, do download and use the smaller lower quality audio. However, IWR is not able to monitor this use.

⁵ Germany's official international radio service.

Furthermore, IWR needs to look beyond the Internet as the only solution for delivering a rapid, regular audio feature service to radio stations. It is possible that in countries where connectivity will remain a problem for many years to come, delivery by satellite feeds should be explored (as Panos West and Central Africa are doing).

At the time of writing, InterWorld Radio is in the process of re-designing its website. The new site will incorporate a large amount of information about how to organise and structure news and audio features for distribution over the Internet. It will also offer new functions – such as a facility for adding text-based scripts for each feature, *sound bites* that producers can download to remix, features in languages other than English, and the ability for users, including broadcasters, to send an email to contributing journalists.

Downloading Audio

Downloading can take as long as 10 minutes, with interruptions. I've used features in my 1-hour variety programme – Kingdom Today – though never a feature in its entirety. I've always supplemented it with studio discussions and interviews.

– Mohammed Saqqa, Radio Riyadh, Saudi Arabia

Using the Internet is expensive and access is limited – we'd prefer emailed communications. Radio Phoenix still uses the InterWorld Bulletin but not the audio features.

– Dave Kumwenda, Radio Phoenix, Zambia

Although InterWorld Radio set out to produce finished features that could be slotted in to existing programmes, the features are being used much more creatively than this. Programme makers want to be able to use parts of interviews, *vox pops*, and actuality to mix in to their own programmes, or to translate into local languages. We are therefore restructuring how we upload audio to the web site, so that members can download unmixed pieces of the feature, rather than the whole feature.

The North

InterWorld: Simply information that no one else covers.

– Cory Joseph, C101.5 Mohawk College Radio, Canada

Without any strategic marketing drive so far, InterWorld Radio has succeeded in reaching radio stations in the north, most of whom have no problems downloading the large broadcast-quality files. Some of these members download and broadcast most of the features we upload and northern audiences should become more of a strategic priority for InterWorld Radio, with the aim of enabling voices and perspectives from the south to reach audiences in the north.

Networking

InterWorld Radio has so far failed to take advantage of the potential offered by existing networks that distribute content to radio stations. Originally the project was designed to work with – or even create – “download centres” or hubs that would copy audio on to cassettes for local or regional distribution. In practice it is apparent that it may often be better to reinforce the work of existing networks set up to distribute content. An example of this is Democracy Radio, based in Cape Town, South Africa. Run by the Institute of Democracy, this project produces a weekly programme dealing with issues around democracy, such as

how Parliament works, or a new policy on education. Every two weeks the programmes are put on a CD and mailed to a network of 30 stations that have no other way of receiving them. Brett Davidson, a journalist there, says he hopes to be able to use their CD distribution to provide some InterWorld Radio packages to the South African stations in the Democracy Radio network.

In a similar way, InterWorld Radio's news bulletin is often redistributed by existing networks, including the MISANET news exchange, run from Namibia by the Media Institute of Southern Africa.

I think it's great to be able to give isolated South Africans a better connection with some issues in other parts of the world.

– Brett Davidson, journalist at Democracy Radio.

Local content needs closer collaboration with radio stations and broadcasters

To date commissioning and production for the InterWorld Radio news and feature service is centred in London. Yet InterWorld has quickly learnt that it needs to have closer ties with radio stations, and in particular, with programme makers or broadcasters working on popular programmes. It cannot do this with its team based in London, and, technically, there is no reason why the heart of the editorial team needs to be based there. As a result, InterWorld Radio has kick-started a strategy for establishing radio units in two of Panos' regional offices in Africa. The radio units will be equipped with digital editing facilities and a producer to commission and upload features every week.

These radio units will also play a vital role in identifying the key most popular and influential radio programmes broadcast in urban centres throughout the region. In this way, InterWorld Radio can, through its regional offices, support local programme production that incorporates the news and features from InterWorld and other sources in to a magazine-style format for national and regional distribution. Communication Corner in Nepal, for example, uses InterWorld Radio features in the two magazine programmes it produces for airing on a network of FM radio stations in the Kathmandu valley. It is this level of programme production support that will enable InterWorld Radio to become sustainable in one sense of the word: once local programme-makers are generating locally relevant content using international news and features, they won't need to depend on a service such as InterWorld Radio.

Conclusion

InterWorld Radio is a content-focused project, having invested a large proportion of its budget in the first two years in establishing a strong independent editorial service and commissioning high quality reports that broadcasters can use in existing radio segments. It remains a unique service for radio stations in developing countries. In the context of the rapidly changing radio environment, InterWorld Radio aims to work with the expanding urban FM independent sector, and has managed to carry out its aim of helping radio stations fulfil a public service role. The process of liberalisation continues, the entry costs of establishing radio stations are decreasing and the regulatory environment in most countries is becoming more flexible. Consequently, the explosion in radio stations that has occurred over the last half decade continues and the number of radio stations that want or are likely to want to use InterWorld Radio is rising rapidly.

That said, however, InterWorld Radio is also a technology project that relies heavily for its success in finding a way to ensure that radio stations in developing countries can gather

Francesca Silvani – Interworld Radio

international content from the Internet. As such, a core part of InterWorld Radio's activities in the next stage of the project will be to become part of a wider strategy to improve radio stations access to new technologies and to support their use of those technologies to produce high quality content.

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Section IV

Communication with migrants

While the gateway and networking initiatives described in this book build on expanding the reach of the Internet through traditional and geographically defined communities, the configuration and location of communities is also changing, creating new needs and opportunities. Radio and the Internet are playing a role here, as well. With an estimated 75 million short and medium term international migrant workers and their dependants in the world today, international migration is both a consequence and a driving force of globalisation. Most of these workers retain, or would like to retain close ties with families and communities in their countries of origin. These ties, enhanced and supported by the use of ICTs, make a significant contribution to development in a number of important ways. The two chapters in this section show how the radio/Internet combination is enabling migrants to connect with their home communities to the benefit of both.



In rural areas, where there are no telephones, broadcast radio is often used to deliver personal messages between community members. People listen to the radio not only to hear news and music, but also because it is a community bulletin board and an electronic post office, where they can pick up what José Ramos and Ángel Díez call “airwave mail”. *Blending Old and New Technologies: Mexico’s indigenous radio service messages*, looks at how this service is being enhanced and extended by the Internet, allowing people to receive broadcast messages from friends and families thousands of kilometres away.

Callos and Guatitas: *Radio and Migration in Ecuador and Spain*, by Luís Dávila and José Manuel López, describes a situation in which radio and ICTs are being used to connect Ecuadorian migrants in Spain with their home communities. The chapter demonstrates that the connection means much more than keeping families in touch, since in the year 2000 Ecuadorians living abroad sent almost \$1.5 billion to their friends and relatives back home – making them the country’s second-largest source of foreign income.

Chapter 13

Blending Old and New Technologies: Mexico's indigenous radio service messages

José Manuel Ramos and Ángel Díez



From Chicago, USA, Luis Ramírez sends this message for his brother Arnulfo, in San Juan Puerto Montaña. Luis has the money for the musicians and wants Arnulfo to go to the phone booth in Metlatonoc in the morning of Friday, the eleventh. Luis will call then to get the number of the bank account where the money should be deposited.

Messages like this are common on the radios of the Sistema de Radiodifusoras Culturales Indigenistas (Indigenous Cultural Radio Network). They are an illustration of the communication services these radios have provided for the indigenous population in their broadcast areas since their inception more than twenty years ago. Even now this “airwave mail” is extensively used in many rural areas of the world because it is the only available form of telecommunication. Despite its simplicity, the service is very important to the community and it is offered by community, cultural, and commercial radios alike.

These messages reveal how indigenous peoples have imaginatively adapted the “old technologies” of radio and the telephone to meet their everyday communication needs and contribute in very practical and concrete way to local economic development, health, good governance, and, as with the message above, cultural heritage and the maintenance of a system in which community members help pay for the community’s traditional and religious festivities, even when they are not able to be present. The messages are often broadcast into local languages, which means that they are important in terms not only of their usefulness to the population, but also of their contribution to strengthening the language and culture of the communities.

If we consider the spatial dimension of this communication, we can see that this technological *convergence* of radio and the telephone, has made it possible for the message service to play both an *intraregional* role, by establishing communication among the villages of the broadcasting area, and an *extraregional* role, by linking migrants with their native communities.

It is also interesting to note that this convergence happened years ago in a practically “spontaneous” way, as soon as the telephone became available. It was not a donor driven project but rather a response to a technological possibility that presented itself and that fulfilled concrete needs and demands of the population. Now the Internet is appearing in some indigenous stations in the same way the telephone did less than fifteen years ago, and it is being embraced in the same spontaneous way. The Internet, telephone and radio are being combined to extend communication possibilities and enable communities to keep in touch, despite migration and other factors that threaten the social fabric and economic possibilities of the communities.

Almost all of the twenty radio stations belonging to the network are connected to the Internet, although in some cases it is slow and expensive, requiring long-distance calls over bad quality telephone lines. However, Mexico’s current public policies include an ambitious

project to extend Internet connections to poor and isolated communities throughout the country by installing centres equipped with computer equipment and other technology, such as satellite TV, in the country's poorest communities and regions. These centres, called "plazas comunitarias" (community squares), are intended to broaden access to education, fight backwardness, and help to reduce the so-called digital divide. Current plans involve establishing 500 such centres in 2002 and to have 20,000 of them in place by 2007.

This chapter will examine the message service provided by indigenous radio stations and the convergence of conventional technologies that it involves. We will then go on to look at some emerging opportunities and challenges presented by the increasing availability of the Internet in indigenous communities. The first part of the chapter presents a brief overview of the indigenous peoples of Mexico and of the characteristics of the indigenous radio network. That is followed by a description of the radio message service and some research findings on this subject. The document ends with some thoughts on the adoption of new communications technologies and the opportunities that they can offer for intercommunication among indigenous peoples.

Indigenous Peoples in Mexico

Mexico's multicultural make-up, a reality that is recognised in the country's constitution, is primarily a result of the presence of its indigenous peoples. Estimates vary considerably but even the most conservative estimates are that ten percent of the country's population is indigenous – twelve million indigenous people belonging to nearly sixty ethnic groups with diverse languages and cultures.¹

Historically, Mexico's indigenous peoples have lived in extreme poverty and marginalisation and have suffered from the country's highest levels of infant mortality, malnutrition, illiteracy, etc. Many indigenous communities are located in extremely remote areas and almost 90 percent of municipalities with primarily indigenous populations are classified as poor or extremely poor. In summary, the current situation of Mexico's indigenous peoples reveals inequity in the distribution of wealth and public services as well as the ethnic and linguistic discrimination that they have endured for centuries.

Emigration is a major factor in the social framework of indigenous regions, with large numbers of indigenous people swelling the poverty belts in cities, moving temporarily to farming areas in other regions of the country, or illegally crossing the border into the USA. Although it is impossible to obtain precise data on how many indigenous people emigrate temporarily or permanently, this growing trend obviously entails significant cultural disintegration.

With the appearance of the EZLN² almost eight years ago, the indigenous movement has become stronger, and its organisations have broadened and developed. Although recent constitutional amendments have not fully satisfied the demands of indigenous peoples, they have presented some interesting opportunities for greater participation of their communities and organisations in the design of development policies. Building a positive ethnicity as a means for struggle and survival is seen as a fundamental strategy by the contemporary indigenous movement.

¹ The 10 percent estimate is based on a strict linguistic criteria – 12 million people speak an indigenous language. When less strict criteria are applied, estimates of the number indigenous people rises to as much as 30 percent of the total population.

² Ejército Zapatista de Liberación Nacional – Zapatista National Liberation Army.

The Radio Stations of the Instituto Nacional Indigenista

The Instituto Nacional Indigenista (INI) is a Mexican governmental organisation that works specifically with the country's indigenous groups. It operates the Indigenous Cultural Radio Network, made up of twenty AM stations with broadcast ranges between 50 and 120 kilometres. The programming of this network targets five million people belonging to 30 distinct ethnic groups. The network also includes four low-power FM stations run by indigenous schoolchildren in the Maya Peninsula. INI's radio network is unique in the world because of its governmental nature, the number of stations that it includes, and the cultural and linguistic diversity of its audiences. Since the end of the 1970s, when its first station was set up, the network has grown continually and become one of the focal points for the state's actions on the indigenous front.

Radio generally has strong roots among indigenous communities, who appreciate and use the stations. While at times they are questioned because of their ties with the government, the radio stations in the network have shown that their regional presence is an essential part of the "cultural scene," and they are a highly-valued information and communication tool.

Although the objectives and strategies of this radio broadcasting system have changed over the years, reflecting in part changing State policies concerning indigenous peoples, and although each new experience has been accompanied by its own concrete changes,³ strengthening indigenous cultures has been a constant concern of INI's radio stations, illustrated by the use of Native languages on a footing at least equal to that of Spanish, broadcasting time devoted to indigenous cultural expressions, and the free-of-charge broadcasting of messages.

The Message Service

INI's radio stations have set aside daily programming time to broadcast, free-of-charge, *avisos* or messages submitted by individuals, organisations, and institutions. These messages deal with a broad spectrum of subjects and originate from and are intended for very diverse audiences. What they have in common, however, is that they respond to explicit needs for information and communication as formulated by the service's users. Research has shown that the users consider the service to be very useful. For example, in a study conducted in the Mixteco area of Oaxaca, 20 percent of respondents said that the messages were their favourite part of the radio station's programming. Only music, preferred by 29 percent of respondents, was more popular.⁴

The radio-announcement programs are usually presented two or three times a day, and their duration varies according to the number of announcements. For stations located in mountainous areas, where roads and telephone lines are seriously lacking, the messages may be the only available means of communication for people living in scattered and isolated communities. Where geography and climate have made it easier to establish communication lines and where all villages are accessible, the situation is very different. A study conducted in 1995 describes how in radio stations such as XEPUR, in Cherán, Michoacán, or XEPET, in Peto, Yucatán, both located in regions with fairly good road systems, the message service is

³ Significant changes have been witnessed over periods of several years. Some of these are related to the positions of the "ethnicians," who promote an ideal view of cultural redemption and conservation. Other more avant-garde positions are aimed at having a positive impact on the reinforcement and development of ethnicity so as to contribute to the emancipation of indigenous peoples and to shape a project for indigenous autonomy within the framework of the nation-state.

⁴ Cornejo, I (1990). *La Voz de la Mixteca y la comunidad receptora de la Mixteca Oaxaqueña*. Universidad Iberoamericana. Master's thesis.

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minimal. In areas such as Montaña de Guerrero or Sierra Tarahumara, however, the demand is much greater.⁵

Whatever the level of demand, in addition to being of immediate use for practical matters, the messages seem to have strengthened social cohesion within communities and regions. People make use of the station as a means of communicating within social networks and even a way of maintaining the networks themselves. Messages also keep community members informed of events and activities involving other people in the community when, for example, messages intended for a neighbour or relative are overheard by others.

Three years after the first station in the network was inaugurated in 1979, Besauri and Valenzuela found that the announcement service had:

*... indirectly and perhaps unintentionally led to a strengthening of regional social cohesion through new forms [of communication]. In other words, the opportunity for the residents of La Montaña to maintain interregional communication ... has enabled them to continue circulating information on events and situations that are part of people's daily lives.*⁶

By placing regional daily affairs on the public airwaves, the messages constantly remind listeners that their environment extends beyond the boundaries of their local community and neighbouring villages. The messages serve not only as a means of communication between two people but are also used frequently to send messages to specific groups or entire communities. Messages originate from groups of people as well. If we look at the messages that announce meetings for example, it is interesting to see that many are from municipal councils in coordination with local schools – invitations to community celebrations where traditional music is played and cultural identity is recreated and reaffirmed. These invitations are one way that radio is capable of supporting traditional forms of community organisation based on a feelings of identity and of belonging.

This service began as an *intraregional* communications alternative, but it has gradually become an *extraregional* means of communication as well, with a large number of messages requested from other regions of Mexico and from the USA. Messages are delivered to the radio stations by mail, telephone, third parties, and now the Internet. They include simple greetings, information about money transfers, and emergency alerts. The messages inform people who remain in the region about relatives who have left, and, for temporary or permanent emigrants, they are a means to keep in touch with their place of origin. In other words, given the significance of the migratory phenomenon, the messages have become an important tool for keeping culture alive outside its geographical boundaries.

Before the 1990s, when telephone lines were installed in remote small towns, people requested announcements only in writing or in person. Some would go directly to the radio station, and others would send someone else with their requests. Eventually letters began to arrive from other regions of Mexico and from the U.S. with requests for messages. However, since the appearance of mobile phones in rural areas, an increasing number of messages are phoned in to the stations.

Access to the telephone has had an impact not only on how messages are sent but also on their content. In research conducted recently in one region, it was found that the most frequent requests were for someone “to receive a telephone call” (22.9 percent); “to go somewhere” (12.7 percent); and “to make a telephone call” (8.2 percent).

⁵ Vargas, L. (1995). *Social Uses and Participatory Practices: The Use of Participatory Radio by Ethnic Minorities in Mexico*. Boulder, Colorado, USA: Westview Press.

⁶ Bezaury, J. and Valenzuela, V. (1982). *Presencia de la Voz de la Montaña en las comunidades*. INI. Unpublished research, page 40.

The study also highlighted the importance of the extraregional communication flow with 36.4 percent of personal messages originating in other Mexican states or in the USA.

Advent of the Internet

As mentioned at the beginning of this paper, there is a gradual increase in the number of message requests received via the Internet. While the message that began this chapter was received by telephone, similar messages are beginning to arrive via email. As the service develops, it will undoubtedly become common for stations to receive emails asking that messages referring to telephone calls be read over the radio. This convergence of three means of communication and information will facilitate and strengthen the existing intercommunication between the radio stations and between indigenous communities and individuals in various parts of Mexico, in the USA, and elsewhere, providing support both for local communities and migrant workers.

According to all indications, the trend will intensify over the coming years. On the one hand, the government’s *plazas comunitarias* will soon be appearing in a number of indigenous regions. On the other hand, in the framework of this project, some of these *plazas* have already been installed in the USA for use by Mexican immigrants. Furthermore, indigenous migrants settled in cities have begun to form independent organisations and some of these, aware of the potential that new technologies can offer, have begun to use them to their own advantage. One example of this is the Asociación de Mixtecos en el Distrito Federal (Association of Mixtecos in the federal district of Mexico City), which exchanges information and keeps in contact with the radio station that broadcasts in the Mixteco area.

There is, of course, some substance to the argument that indigenous migrants do not have easy access to the Internet, given their low education levels and poor living standards. However, it should also be recognised that migrants are not necessarily the least educated or most impoverished. On the contrary, migration has been most intense in those sectors of the population that have had the best opportunities. While there is truth to the claim that simply making technology more available will not serve to bridge the “digital divide”, it is also true that we should not underestimate the abilities of indigenous organisations or their growing demand for opportunities and access to means of communication.

The message services and email are obviously not the only ways to make use of an Internet connection. There are other means of making relevant use of the Internet in combination with radio stations. Consider, for example, the development of portals for marketing products, distance learning and education, the exchange of information and programs among radio stations, or on-line consultation regarding health or agricultural techniques for sustainable development. However, meeting basic information and communication needs with this kind of messages continues to be a major imperative for supporting indigenous people’s free and autonomous development. We therefore believe that it is essential to pay attention to the need for greater access to technology and to provide some direction and intentionality in the way that it is used. This means that the INI radio stations should be ready for the arrival and expansion of the Internet so that they can include it in their strategies and work plans, thereby increasing and improving the services they offer.

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Chapter 14

***Callos and Guatitas:*¹ Radio and migration in Ecuador and Spain**

Luis Dávila and José Manuel López



Announcer (Quito): *Emilio, with us we have a woman who has come back from Spain to authenticate her documents, and she'd like to ask you a question.*

Immigration advisor (Spain): *Go ahead.*

Woman in Quito: *Yes, I came back from Spain one month ago to see how the authentication of my documents was going. At the Spanish embassy here in Quito they told me that the embassy has nothing to do with that process and that coming back here was useless. What can I do now?*

Immigration advisor (Spain): *Before going back to Ecuador, you should have visited the Labour Ministry here in Madrid.*

Woman in Quito: *But I didn't know that, and here I am. So what can I do now?*

Immigration advisor (Spain): *Through Cáritas here in Spain we can try to find out what the situation is with your documents and provide you with advice. In our next program ...*

Every week radio creates a bridge joining Ecuadorian immigrants in Spain, their relatives in Ecuador, legal advisors, and radio announcers on both sides of the ocean. The scripts change but the main subject, migration, remains the same. Spain has become one of the most attractive countries for the huge numbers of people who left Ecuador in search of a better life following that country's 1996 socio-economic crisis.

Migration has always been a part of life for Ecuadorians, particularly for those from the country's southern region. Most Ecuadorians probably have at least one relative living in the United States, but in the last few years the number of people leaving the country has increased five-fold, causing the term *migration* to be replaced by that of *exodus*. So far there are no indications that the upward trend is going to level off.

There is more at the root of this situation than the worsening economic crisis; in reality, people have even lost hope in the future. A rapid succession of heads of state between

¹ Callos y Guatitas is the name of the radio program that is discussed in this chapter. The name comes from a dish made of tripe that is popular in both countries and referred to as *callos* in Spain and *guatitas* in Ecuador.

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1996 and 2000², a lack of confidence in its institutions (especially its Congress), the bankruptcy of the country's financial system, as well as the "everyday" difficulties inherent to a foreign-debt-ridden state unable on several occasions to pay the salaries of civil servants, have all not only aggravated the economic crisis but also created a crisis in terms of social expectations, turning the traditional migratory stream into a flood.

Paradoxically, the economic reality is such that the migration resulting from the crisis is also the main component of its solution. According to data from Ecuador's Central Bank, in the year 2000 Ecuadorians abroad sent a total of US\$1,316,000,000 to their friends and relatives back home, making these payments the second-largest source of foreign income, surpassed only by oil exports. Traditional export products such as bananas, shrimp, and cocoa remain far behind.

New Directions

Given the increasingly restrictive measures concerning entrance into the USA, migrants have diversified their destinations. In the last few years Spain has become one of the most significant destinations for Ecuadorian migrants. Data on foreign residents in Spain show that the presence of Ecuadorians in Spain was negligible between 1955 and 1980. In all of Spain there were approximately 125 listed in 1960; less than 500 in 1970; and just under 600 in 1980. But the number of Ecuadorian foreign residents began to grow significantly in 1996, with annual increases higher than 40 percent for both 1996 and 1997. Since then, Ecuadorian immigration has continued to rise at a dramatic rate: 70 percent for 1998, 84 percent in 1999, and 123 percent in 2000. In 1996 there were only 2,900 Ecuadorian residents in Spain, but by 2000 Spain's Ministry of the Interior reported 30,878 Ecuadorian residents. If we add to that figure the 22,954 Ecuadorians who applied for legalisation of their immigration status during 2000, the total, according to *official* statistics, rises above 50,000 people. Studies conducted by NGOs, however, have produced different data. Extra-official estimates are that as many as 200,000 Ecuadorians have entered Spain. Most of them in extremely precarious situations – with no legal status, and an accompanying series of problems such as misinformation, fear, and uncertain working conditions.

The arrival in Spain of large numbers of Ecuadorians was both rapid and silent. Most Spaniards became aware of the Ecuadorian situation only in February 2000, following the tragic events in the locality of Lorca, province of Murcia, where a small truck full of illegal Ecuadorian immigrants on their way to do farm labour was hit by a train. Several were killed, and Ecuadorians suddenly and tragically became visible in Spanish society.

A Program that Inspires Hope

Because of its size, this migratory wave has had significant social and economic repercussions, both for those who remain in the country and those who migrated. From the social perspective, thousands of Ecuadorian families have been torn apart, resulting in a situation that has produced new kinds of relationships and exchanges. Although this situation has caused many people to suffer, it has also generated some positive change in both societies. On the economic level, for example, many families now rely on the money that arrives from Spain. Furthermore, new houses are springing up in the home towns of emigrants who have already begun to use their savings to prepare for retirement.

The new situation can be interpreted in different ways, but for many organisations and individuals involved, the starting point was that migration is not a problem but rather a

² Sixto Durán, Abdalá Bucaram, Rosalía Arteaga, Fabián Alarcón, Jamil Mahuad, the military indigenous triumvirate, Gustavo Noboa each had a turn as head of state, with mandates lasting as little as a day.

process with both negative and positive components. It is a reality that is best treated as an opportunity. With this in mind, four Ecuadorian and three Spanish institutions have implemented a joint program named *Migration, Communication, and Development*.

The four Ecuadorian institutions that took part in the program's design are the Asociación Latinoamericana de Educación Radiofónica (ALER, Latin American Radio Education Association), the Fondo Ecuatoriano Populorum Progressio (FEPP, Ecuadorian Populorum Progressio Fund), the Comisión Ecuatoriana de Pastoral Social (CEPAS, Ecuadorian Social Pastoral Commission), and the Instituto Latinoamericano de Investigaciones Sociales (ILDIS, Latin American Social Research Institute). The three Spanish institutions are the Coordinadora de Radios Comunitarias (CRC, Community Radio Coordinating Council), Cáritas Española, and the Campaña Deuda Externa ¿Deuda Eterna? (Foreign Debt – Forever Debt? Campaign). The objective of the program is to turn Ecuadorian migration into a positive element for cultural exchange and the development of Ecuador and Spain. All seven organisations have arrived at a similar analysis of the migrational phenomenon. They consider it to be a continual coming-and-going process through which the situation of Ecuadorians in Spain and the resources that they obtain there produce significant results in their native country. They therefore approach this situation from the perspective of an engulfing globalisation in which migration is but one component.

The program is not designed to convince people that they should or should not emigrate or that they should return to Ecuador, but rather to provide conditions that will enable emigrants and potential emigrants to make their own choices about leaving, returning, bringing their families back together, investing in Ecuador, and so forth. The program will continue for five years, but this time frame will be reviewed in light of the results obtained and migratory trends.

This work is being conducted in six areas: communication, rights counselling and education, development projects, financial and ethical money transfers, debt for development, and research.

Communication

This area of the program is designed to establish contacts between immigrants in Spain and their relatives in Ecuador, to deal with migration-related legal matters, to address the migratory issue from other perspectives, and to make it more visible. In this framework, a weekly radio program linking Spain and Ecuador is produced on the airwaves. The next step will be to set up Internet teleconference rooms in various Spanish and Ecuadorian towns and provinces so that communication will be easier and more efficient. Further in this chapter, following the description of the other areas of the program, we will return for a more in-depth look at this area.

Rights Counselling and Education

One of the basic needs of migrants is information on their rights, particularly in terms of their legal status and social security benefits. Most of the activities in this area are designed to disseminate information, although issues such as psychological support for migrants' relatives remaining in Ecuador are also addressed. A manual has been published so that immigrants in Spain will know what their rights are, how and when to proceed with paperwork, and where to go for help and counselling. There is also coordination among various organisations in an effort to find solutions to particularly difficult cases.

Development Projects

Work in this area is being carried out primarily in Ecuador, where attempts are made to involve the families of emigrants. The intention is to promote and support the productive investment of the funds being received in Ecuador, which historically is often used for luxuries, such as the construction of mansions or the purchase of automobiles, instead of productive economic initiatives. If emigrants so wish, they can consider the possibility of returning to Ecuador with some guarantee for the future by, for example, investing in a young company. A total of US\$270,000 will be available annually over a four-year period to provide technical support for such initiatives in the south of Ecuador.

Financial and Ethical Money Transfers

Another major problem is related to how money is sent from Spain to Ecuador. Some of companies that offer this service have been known to charge commissions of up to 14 percent to wire money from Spain to Ecuador. This part of the project seeks to help emigrants send money more easily and at a lower cost. One of the activities involves working with several Spanish banks so that money may be sent to Ecuador via Codesarrollo, the financial agency run by FEPP³. The radio program also plays a role in this area by announcing the rates charged by the various money transfer companies, which currently range from 3.7 to 14 percent.

Debt for Development

Productive employment projects could be financed in part through *debt-for-development* initiatives in which part of Ecuador's debt to Spain is forgiven on the condition that the money be matched with investments from Ecuadorians living in Spain and invested in business and development activities in Ecuador. A technical proposal is being developed that would see a portion of Ecuador's US\$200 million debt put into this fund.

Research

Joint research is being conducted in Ecuador and Spain. So far we have an overall approximate idea of the situation of Ecuadorians in Spain. One important finding of the research was that there are now 200,000 Ecuadorian immigrants in Spain. This figure, much higher than previous estimates, is now used by both the Spanish and Ecuadorian governments in planning their programs and services. Another study looked at the reasons why so many Ecuadorians have left their country and a third at the remittance phenomenon. The latter study uncovered a great deal of information about the money transfer market and the abuse committed by the companies involved.

Callos y Guatitas

The package of activities described above was designed to address a wide spectrum of social, legal, ethical and financial questions. How could potential migrants get better information before they left Ecuador? What measures could be taken to give migrants the confidence required so they would invest in Ecuador? How could the issue of organised crime be addressed? It was obvious to the agencies involved that communication would be key if these issues were to be addressed. *Callos y Guatitas*, a live radio program broadcast simultaneously in Ecuador and Spain, was selected as the primary communication tool to bridge the realities of Ecuador and Spain, to connect families, and to provide information to help migrants fend for themselves throughout the entire migration process. The program's name comes from a

³ *Fondo Ecuatoriano Populorum Progressio*, one of the agencies participating in the Migration, Communication and Development program.

dish made of tripe that is popular in both countries and referred to as *callos* in Spain and *guatitas* in Ecuador.

To understand the importance of this program, we need to be familiar with the misinformation that circulates on both sides of the ocean, fomenting the development of organised crime and the abuse that many migrants and their families have experienced. On the one hand, many Ecuadorians believe that it is easy to find a job in Spain. Some have even been convinced that at Madrid's Barajas Airport there are windows where job contracts are signed. Nothing could be further from the truth for those who have just arrived in Spain. Such misinformation is promoted by *coyotes* and criminals, whose income comes from the huge sums of money that emigrants have to pay before they can embark on their adventures. On the other hand, the life of an Ecuadorian in Spain is not a valley of tears, nor is racism as significant a component of Spanish society as those opposed to migration would have us believe.

Thus the public image of an Ecuadorian immigrant's reality in Spain does not necessarily reflect the reality. Often the immigrants do not tell the true story of their situation in Spain, choosing instead to exaggerate their success. Some Ecuadorians who have been in Spain for two or three months without managing to achieve stability decide to stay in Spain as transients rather than to return to Ecuador and be perceived as "failures". In this context, a radio program such as *Callos y Guatitas* becomes an invaluable tool. Its concrete objectives are the following:

- To encourage public communication between Ecuadorians in Spain and in Ecuador, thus contributing to a more favourable context for communication on the personal level.
- To communicate the reality of immigrants in Spain so as to reduce their often-experienced feeling of loneliness.
- To provide information on the migratory process: legal information, paperwork, immigrants' rights, sending money to Ecuador, and so on. This is intended to combat *coyotes* and organised crime.
- To keep emigrants connected with their country with information on politics, culture, sports, and so on.
- To promote the formation and development of Ecuadorian immigrants' associations in Spain.
- To offer an overview of the situation and to disseminate information on the different opportunities available to migrants via the Migration, Communication, and Development Program.

Callos y Guatitas has been on the air every Sunday since April 22, 2001. It is produced by the Asociación Latinoamericana de Educación Radiofónica (ALER) and the Coordinadora de Radios Comunitarias de España. At present it is broadcast simultaneously via the ALER satellite service on 19 stations in Ecuador as well as on four in Madrid. There is currently an effort under way in Spain to increase the number of stations included in this broadcast.

The program is produced simultaneously in Ecuador and Spain. Its two hosts, one in Madrid and the other in Quito, direct the program and present the various sections coming from each country. The first problem was to decide on a broadcasting time. Depending on the time of year, the time difference between the two countries is six or seven hours. In an attempt to reach targeted listeners in both countries, we finally settled on Sunday at 10:00 in Quito, when it is 17:00 in Madrid. At 10:00, many rural Ecuadorians are at the marketplace, where they can walk around and still follow the program on one radio receiver after another. It is also a good time for Ecuador's city dwellers. At 17:00 in Spain, immigrants may be at home or may have gone to a common meeting place where the radio is often turned on. The

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time difference means that “good morning” is answered with “good afternoon,” and vice-versa, and that there are always two versions whenever the time is announced.

The program is divided into segments. *So that's the way it works* provides information on the immigrant situation in Spain, especially on political or administrative changes and on new social resources. *What's happening at home?* is a summary of Ecuador's weekly news for the benefit of Ecuadorians in Spain. *The Cause of the Cause* offers special reports on specific issues related to migration. *We're organising over here, too* turns the program's airwaves over to immigrant organisations. *Just ask* allows migrants and their relatives to ask questions on legal matters. Sometimes these questions are received by telephone, but usually by e-mail. *Hello, who's speaking?* is a section that enables immigrants in Spain to speak directly with their relatives in Ecuador. The family members are usually present in the studios of the radio stations, and this allows for more fluid communication in which the radio hosts can also take part.

In addition to the segments described above, the program also includes more general subjects that may vary in accordance with current events. An example of this was a Mother's Day extension of the *Hello, who's speaking?* section in which many sons and daughters were able to send live Mother's Day greetings and even sing songs.

One of the challenges faced by the program's organisers has been to design it to be useful to stations with limited financial resources that do not have access to expensive technology. Various broadcast methods are now being used. In Ecuador, ALER's satellite network (ALRED) sends a signal from its Quito station to the satellite, and the other stations receive it by means of their dish antennas. The Spanish stations use the ConVoz⁴ information network, which produces a daily information program for many Spanish community and municipal stations and is located in the same building as the studio where the program is produced in Madrid. The stations have a telephone connection to a server through an ISDN line. The WinMedia program compresses the signal at the server end and then decompresses it in the computer of each radio station. This system provides very high quality audio and the only drawback being a seven-second delay. Given that it requires only a small investment and that the software free, this system is very efficient.

Callos y Guatitas can also be listened to live on the Internet on the Web pages of two Spanish stations: Radio Vallekas⁵ and Radio Enlace⁶. This means of listening to the program is available to some immigrants in Spain who live outside Madrid and who cannot tune in to it on the radio.

The *Callos y Guatitas* program has just ended what might be termed its “implementation phase”. Some initial technical and production difficulties have been overcome; the broadcast network has been established in Ecuador and is becoming established in Spain; and new areas have opened up. An example of the latter is the use of the Internet. Although it was not originally foreseen, it may become an important factor in disseminating the program, particularly to immigrants in Spain.

The Communication, Migration, and Development Program is, above all, a means to address situations that the new world reality has placed in our path. The program's contribution should be seen much more in terms of quality, not quantity, given the limited financial resources of the organisations that are promoting it. The objective of the program, first and foremost, is to offer a general overview of migration by providing immigrants and society with positive ideas for making the most of the immigration process and by encouraging development in both Ecuador and Spain. The program is therefore actively

⁴ <www.redconvoz.org>

⁵ <www.radiovallekas.org>

⁶ <www.radioenlace.org>

seeking partnerships with other organisations with a similar vision and activities in both countries. It is not, therefore, the sum of its activities but rather a means to coordinate these activities and the synergy produced by them.

From the above it is easy to understand why, at this time, the first task is simply to make the work and the potential known, to help people understand the reality of migration and the keys to addressing this issue, and to ensure that there is a connection between migrants and their families and between Ecuadorian and Spanish society.

Callos y Guatitas faces several challenges, the first of which is to achieve maximum exposure. The greater the number of stations carrying it in both countries, the easier it will be to disseminate new ideas. At the same time, increasing the opportunities for listening via the Internet in areas where it is not available by radio and even in other countries where similar immigration patterns are beginning to develop – increasing numbers of Ecuadorians are arriving in Italy, for instance – is a means of expansion that has not yet been fully exploited.

The second challenge is to include the other areas of the program in the communication strategy. One example of this that is being tried involves broadcasting information from the research on how money is sent from Spain to Ecuador. The research provided detailed information on the ways in which money is sent and on costs and commissions. Over the coming months *Callos y Guatitas* will disseminate this information, introducing more competition into the market, reducing prices and helping prevent the current forms of abuse.

Great Potential

José Tonello, director of the Fondo Ecuatoriano Populorum Progressio, says that fifty years ago many people emigrated from his native region in northern Italy, one of the country's poorest. As a result of that emigration, this area is now rich and prosperous. His perspective is also that of the Ecuador-Spain Migration, Communication, and Development Program. In this context, the *Callos y Guatitas* radio program is a contribution to the ways in which popular and community radio stations are interpreting both new technologies and their own roles in society.

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Section V

Rural Radio: Case studies from the USA, Africa and Latin America

This section includes three chapters with information that will be particularly useful to readers unfamiliar with rural radio and the essential role it plays in people's lives.



Robert Hilliard's chapter, *Farm and Rural Radio in the USA: Some beginnings and models*, provides an overview of the last eighty years of rural radio in the United States. The fact that even in the world's largest economy rural radio continues to be a vibrant medium for securing farmers' and farm workers' rights.

Jean-Pierre Ilboudo's chapter on the history of rural radio, *After 50 years: The role and use of rural radio in Africa*, charts the transformation of rural radio from a production department within the State broadcaster to a local community-based model.

Finally, Bruce Girard's chapter, *Radio Chaguarurco: Now we're not alone*, is an intimate look at the political, cultural and social role of a rural radio station. While the station looked at is in Ecuador, South America, much of what is described can also be found in rural radio stations in Africa and Asia.

Chapter 15

Farm and Rural Radio in the United States: Some beginnings and models

Robert L. Hilliard



In many countries in the world today, radio is used principally for entertainment. In the United States, for example, there are virtually no more radio documentaries and relatively few of the country's 12,700 radio stations are news and public affairs stations. Even most of the 2,100 educational or public radio stations are, like their commercial counterparts, devoted mainly to popular music.

We find much the same situation in other countries with principally commercial broadcast systems. In too many places in the world today, radio has either seriously underachieved or entirely abandoned efforts to be a meaningful medium for news, information, education, and culture. In part, this is because subsequent media – like television and the Internet – have replaced radio in countries with economies strong enough to accommodate widespread use of the new media. This is also due to factors such as migration from rural to urban areas – rural and geographically isolated populations relied on radio for basic information connection more than urban ones do.

It was not always like this, and rural and farm broadcasting have long been an exception. In fact, in the United States the first significant use of radio communications, aside from early ship-to-shore communications, was in rural and farm areas.

The first radio operators in the country were amateurs, known as *ham radio operators* or simply *hams*, experimenting with the new invention. There were over a thousand of them by 1912, many of them using radio to bridge the distances between their rural or farm homes to others in similar situations or to hams in towns and cities. Universities were the focal points for the development of radio in the United States during and following the end of World War I. Engineering, physics, and other science and technical departments in a number of universities introduced courses covering the new phenomenon of wireless communications. As with any new scientific development, it was important that students learn not only how it worked, but also how to use it. Going from theory to application, universities set up laboratories so students could put the scientific principles they had learned into practice. Realising that it was not enough just to send out signals at random, many of these labs became radio stations.

Universities in the Midwest, the heart of America's farmland, were among those that decided to use their facilities to offer a public service, choosing to focus their efforts on geographically isolated rural and farm areas, where at that time it might literally take days to travel over rough, unpaved roads to a city or town to get the latest news. These university-based stations began providing life-saving information to farms: weather bulletins from the U.S. Weather Bureau; soil and air information from the U.S. Department of Agriculture; market reports on livestock, crops and other farm products; prices of grain, feed, machinery, and other farm needs from dealers in distribution centres; warnings about floods, tornadoes, drought, and storms; news about any events that affected farmers; even appeals for help in a crisis or disaster. In other words, radio provided information that farmers needed but were otherwise unable to obtain without long delays such as waiting for it to arrive via mail or through lengthy personal travel.

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Some of the universities, especially the “land grant” colleges that had been chartered for the purpose of serving rural areas and which had extensive agriculture departments, offered distance education courses over the radio to people who were too far away from a school or university to attend in person. These courses were mainly in the fields of agriculture and home economics, covering subjects and skills necessary for the efficient running of a farm, both in the fields and in the house. It is noteworthy that the critical and necessary role of women in running farms was recognised in the courses offered – not only acknowledging the home economics aspect of the work women did, but as well their increasing field and management work. In fact, during hard economic times when many men took on non-farm city jobs in order to keep the farms going, and during World War II, when many men were in the military, women ran the farms either principally or completely. Then, as in many developing countries and in nations with vast land expanses in the world today, these were much-needed and appreciated “Schools of the Air.”

Commercial radio also recognised the importance of the new medium for rural residents. A 1916 memorandum attributed to David Sarnoff, later to become the most powerful broadcasting executive in the United States as head of the RCA and NBC networks, called for the development of a “radio music box”, placed on a table in the parlour or living room” which could provide lectures and events of national importance that “can be simultaneously announced and received.” Sarnoff concluded the memo with the words, “this proposition would be especially interesting to farmers and others living in outlying districts.” And indeed, that is what happened with the new medium.

In the early 1920s, as radio in the United States began to expand, many stations went on the air for the purpose of serving isolated people in farm and rural areas. In 1921 there was one radio receiver for every 500 households in the United States. Only five years later, in 1926, there was one for every six households. One major problem for the expansion of radio in rural areas will be familiar to people working with radio in many developing nations of the world today – in the 1920s only about half of the farm and rural population in the United States had electricity, and batteries were expensive. Nevertheless, within a few years a radio receiver was a necessity for farm and rural populations in the United States. When economic depression and drought hit simultaneously in the 1930s – resulting in the loss of thousands of farms and millions of acres of farmland, radio was the principal link to the world for poor people in rural areas and on farms. Most people were willing to sell their beds, iceboxes and other household necessities before they would give up their radio sets.

Farm radio programs were popular, important and influential. One in particular, the weekly *Farm and Home Hour* on the NBC network, was a favourite for decades, even in cities. It combined entertainment with information and was carried on commercial radio stations across the country, not only serving rural listeners but also making money for its sponsors and for the NBC network. There were many similar regional and local programmes on radio throughout the country. Even today, there are more than 100 agricultural radio stations still on the air in the United States, providing programming to farm and rural listeners. Several hundred more devote at least some time every day to farm topics, often in the form of franchised programmes supplied by independent production companies.

Over the years the use of radio to serve rural and farm areas grew. Through the development of an extensive radio service in the U.S. Department of Agriculture, even the government got involved in producing programmes for broadcast on commercial and public stations.¹ Highly-qualified writers and reporters were recruited to prepare and air materials

¹ Under U.S. law, the government is not permitted to own or operate domestic radio stations, a law intended to prevent the medium from being used as a propaganda vehicle by the government or party in power. As a result, in the United States the government relies on private commercial radio stations or “public” stations belonging to foundations, universities or community groups, to provide air time for the programs it produces.

with the help of agricultural experts and, as time went on, many of the writers and reporters themselves became well-versed in farm and rural needs and solutions.

One of the pioneers in the field, working for radio stations that emphasised agricultural programming, was Lane Beaty, who later became chief of the U.S. Department of Agriculture's media office. In a book on the history of American radio and television, Beaty described some of the services provided farmers through radio:

It may be coincidence that the first use of "broadcast" was agricultural, referring to the sowing of seeds. It is nonetheless fitting because in the early days of radio when rural people lived in varying degrees of isolation, radio became a link to the outside world and a live-in companion for farmers and their families. Those first two radio stations, KDKA, Pittsburgh, Pennsylvania, and WHA, Madison, Wisconsin, emphasised such services. Stations justified the use of their assigned frequencies and power by their broadcasts of market prices, updated weather forecasts, information on better farming practices, government regulations, and commercials adapted for far flung rural listeners. In my long career, those years spent broadcasting agricultural programs were undoubtedly the most rewarding in terms of public acceptance. My listeners included not only country folk but urban professionals as well, and one network program (the old NBC "Farm and Home Hour") drew mail regularly from the Wall Street area. On the air, I tried to be warm and friendly with some natural humour, not contrived, too corny or suggestive—no inside jokes. I made as many personal appearances as possible, and this helped build goodwill for the station. Entertainment (music, etc.) and long features, early staples on farm programs before good roads and television, have disappeared, making way for shorter, more concise reports aimed at helping farmers and ranchers (and sponsors) turn a profit.²

Indicative of the kinds of services provided for farmers by radio was a trip Beaty took to Mexico in 1947 when he was farm editor of a radio station in Fort Worth, Texas. Foot and mouth disease had broken out in Mexico and was being combated by killing and burying thousands of heads of cattle in a quarantined area in the central part of that country. Because of the danger to U.S. livestock and the concomitant economic effects on farms and ranches, American farmers were concerned and the United States government was cooperating with Mexico in trying to halt the outbreak. Lane Beaty went to Mexico with the then-new wire recorder³ to interview key government, veterinary, and farmers. His reports were gratefully listened to by Texas cattle ranchers.

In the 1970s, Cesar Chavez, one of the great labour leaders of US history, turned his attention to rural and farm broadcasting as tool for organising farm labour. Migrant farm workers were virtual slaves, working under horrible, unhealthy and dangerous conditions. They had no medical assistance, filthy housing without facilities, no schooling for their children who also were forced to work in the fields, long, back-breaking hours in excessive heat or rain or cold, and they were charged exorbitant prices for food and other necessities they were forced to buy from the farm owners. They had no guarantees of work from one day to the next and entire families could work for months and, after paying the farm owner what they owed for food and necessities, find themselves penniless, with no food, no shelter and no job. In addition, whenever workers tried to organise, the farm owners would hire thugs to beat them and even kill them. Police and other authorities generally sided with the owners.

² Robert Hilliard and Michael Keith, *The Broadcast Century and Beyond: A Biography of American Broadcasting*, 2001.

³ An electro-magnetic recording device that recorded on spools of wire. The format was later replaced by the modern tape recorder.

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It was under these conditions that Cesar Chavez, himself a migrant worker, established the United Farm Workers of America (UFW). This union not only successfully organised migrant farm workers, it also mastered modern public relations techniques to organise highly effective public campaigns that convinced many American consumers to boycott the products of some of the worst companies.

Radio was a natural area of interest for Chavez and the UFW and they used it effectively to fight for better lives for farm workers and their families. The union's activities in this area offer an example that may be useful in other countries where farm workers and other rural people want to use radio to better their conditions.

In the early 1980s⁴ the UFW applied for licences for non-commercial – or public, as differentiated from commercial – radio stations in California, where the union had its headquarters and where most of its members worked. Still fighting exploitation by the owners, Chavez thought that if he could get the owners to allow the field workers to carry a small portable radio with them, presumably to raise their morale and motivate them to work even more efficiently for the owners, he could use the stations for more specific union purposes. If he could establish instant communication with all of his members in the field through radio, he could call a strike at a moment's notice when there was a reason, such as an owner refusing to negotiate for decent wages and working conditions; or he could call a work stoppage or a protest when the workers took ill or were poisoned by the pesticides and the owners refused to give them medical help; or he could deploy the workers when the thugs the owners hired brutally beat or shot protesting workers, which was a frequent occurrence.

As the use of the stations was discussed, most of his advisers argued for programming designed to strengthen the workers' resolve and ability to push for union contracts with the reluctant owners – information and education programmes, discussions, speeches and so on. Chavez, to everyone's surprise, said he wanted entertainment, not education and information on the radio channel. He explained that people working hard in the fields wanted something to help them relax. They wanted entertainment programs. They did not want to listen to speeches. Entertainment, mainly music, would guarantee that they would keep the radios tuned in and then the union could be sure that when there was an important announcement, farm workers would be listening. The UFW-associated National Farm Workers Service Center now has seven radio stations in California, Arizona and Washington State and their practical approach to the use of radio is one that can inform situations all over the world.

In recent years many groups in Africa, especially NGOs, have taken to radio to help them organise, inform and educate their constituents, despite the geographic distances and obstacles. It is not surprising that many of these NGOs are women's groups, suffering similar kinds of discrimination and prejudices that farm and rural women did in the United States before their significant roles and rights were recognised. At a recent series of workshops in one country, we heard many comments from women and women's groups. They spoke of women's need for information about legal and economic rights; of their need to know where to obtain information and assistance on health and childcare; of their desperation in trying to learn what to do about AIDS when their husbands refused to use condoms and did not care about infecting their wives or future children; of their desire to find out about technologies that might make their lives a bit easier. They also spoke of their desire for better education and opportunities for their children and to learn about more efficient, easier and more profitable ways of raising and selling their crops and cattle. In essence, these are similar to the needs and desires of farm and rural people, including women, in the United States when radio first came into use. And, as happened in the United States, radio in Africa and elsewhere, is proving to be a key factor in beginning to solve some of these serious problems.

⁴ The author was Chief of the Public Broadcasting Branch of the Federal Communications Commission at the time.

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Chapter 16

After 50 years: The role and use of rural radio in Africa

Jean-Pierre Ilboudo



To consider today of the role and use of rural radio raises the question of its place in the new African media landscape, and in particular in the radio environment marked by deregulation and the end of broadcast monopolies. Given the pluralist nature of the contemporary broadcasting environment, what role can rural radio play to support the emerging civil society? What does the future hold for rural radio, indeed for public radio, in Africa, in view of the ever-increasing number of local stations, be they commercial or community?

This new issue is a major challenge for us all. To understand the contemporary challenges, it is useful to take a historical perspective; to analyse the changes in the role and use of rural radio that have occurred over the last fifty years.

It would be a truism to say that rural radio has known various forms and objectives. The speed at which its roles and uses are evolving stems from the fact that it cannot be seen as an educational technology independent of the social system or untouched by integrationist policies designed to keep the prevailing leadership in power.

In what has by and large been a rapid process, African States, that is to say the governments which take the decisions affecting radio, have become aware of how most broadcasts meet the tastes and needs of citizens. As a result, it has been necessary to revisit the nature of rural broadcasting, and from this the concept of rural radio has emerged.

How has this evolution taken place? In short, that depends on the countries concerned, for each one has known different rhythms of change.

Let us now consider what have been the fundamental steps in this development, whether successive or simultaneous.

From Farm Radio to Radio Forums or Radio Clubs

Even prior to independence, there were radio broadcasts which aimed to give the community advice on hygiene, health and practical finance, mainly for farmers. This meant that the new countries in sub-Saharan Africa very soon used radio as a means to promote economic development – this was the case in Cameroon from 1956 onwards, Mali in 1957, or in English-speaking Africa, mainly in Nigeria. In Ghana, from the eve of independence, in 1956, Radio Accra broadcast in Ghanaian languages and had programmes for rural communities; the weekly programme ‘The Cocoa Family’ about life on cocoa plantations is an example. In 1957, Radio Ghana started talk shows on agriculture, albeit in English.

In Benin, as early as 1960, Radio Dahomey had a special programme in the Fon language; it is at this time that the government of Dahomey requested the FAO to design a rural radio broadcasting service. It worked together with the agricultural department based in Porto-Novo and effectively started operations in 1967. It broadcast in six languages, covering palm planting, layout of maize fields and the introduction of rice and cotton farming.

In Niger, the Association of Radio Clubs was set up in 1962, with its first broadcasts in 1965, following the line of farm radio. The major topics covered were improved seed varieties, soil management, fertilisers and cattle rearing; it also dealt with such issues as the marketing of food stuffs, irrigation, water hygiene, women in the household, the National Assembly, and animal husbandry.

In Nigeria, it was at Radio Kaduna that a programme encouraged farmers to adopt agricultural mechanisation and improved seed varieties. And in Kenya, from 1962, the *Education by radio* programme broadcast advice for farmers.

In the so-called English-speaking countries of Africa, this sort of radio was widespread. Often programmes were produced by the Ministry of Agriculture, with its own radio production units.

In Cameroon, beginning in 1966, there were broadcasts of agricultural advice in the Fulfuldé and Fulani languages, and in Hausa on regional stations. In Ivory Coast, the programme *La coupe nationale du progrès*, or The National Progress Bowl, was started in 1966 with a mixture of extension-style agricultural information, traditional music and contests between sub-prefectures, all with the goal of improving agricultural output and social conditions.

There are many examples of this early orientation in the use of radio for development. Such was the case with *Radio Progrès* in Benin in the years 1968–1969, and with the development radio contests on the rural radio of the Burkina Faso in 1975. It is important to emphasise that radio club approach was adopted in other countries: Ghana (1956), Niger (1962), Benin (1967-68), Burkina Faso (1969) and Togo (1970). Later, in a second phase, it was no longer a question of developing awareness of these issues within the stations themselves, but of using radio to support agricultural policies and, in a more general way, rural policies.

Farm radio, with or without the support of radio clubs and their collective listening approach, had been seen as a supplement to agricultural extension work, and even as a palliative for the shortcomings of training services. The purpose of a broadcast was to give the farming community short and to-the-point information segments, sometimes known as micro-programmes, with which to improve their agricultural output. Farm radio was seen as a radio school, serving to consolidate the process of organising emerging cooperative groups.

With the introduction of listening clubs, farm radio was quickly transformed. This second phase saw a strategy of radio forums and radio debates, where listening, discussing and decision-making were brought together, following the example of Niger's radio clubs:

- Look at observable facts (or build a foundation of facts through a process of enumeration, description, comparison, distinction, classification and definition);
- Generate ideas (develop understanding, look for the consequences, rules and theories);
- Plan actions whilst determining goals, means and methods.

What lessons can be learned from these first and second phases, which in practice almost merged one into the other?

By amplifying extension services and programmes, the impact of rural radio broadcasts led to a notable increase in cash crop production in most African countries in the 1970s. It must be noted, however, that rural radio erred towards a reductionist approach to development, reducing development to a simple increase in agricultural productivity, and choosing to focus its messages on rural problems rather than on concepts of under-development. It can also be noted that the issue of socio-economic change was not grasped by many, and that political action – mobilising rural communities – was avoided. Consequently,

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this educational work was carried out in isolation, without collaboration with other efforts to improve rural livelihoods.

With regard to radio clubs, it is hard to say which changes, in the long-term, were due to them or to other influences at work in the community. It is also hard to determine their costs of radio debates: staff (local facilitators in each club), equipment (714 radio sets distributed in Benin in 1973 and 580 in Burkina Faso in 1980), printing and distributing listenership reports, and so on. Nevertheless, it is possible to point to four major sets of constraints:

- The lack of networks linking extension workers and programme hosts. Contact between the two opposite ends of the chain was only through written reports;
- The production centre was also isolated from the listening groups, and could not benefit from their feedback to improve the programmes;
- There was a lack of coordination between rural radio programmes and projects run by other ministries or NGOs;
- Listening clubs were often set up without prior identification of community needs, or without having involved those primarily concerned. After an initial period of fascination, people switched to a phase of criticism, and finally saturation.

From the Classic Model of Rural or Educational Radio, to Local, Community-Based, Rural Radio

One thing is clear: radio campaigns and propaganda pushed by the top echelons from capital cities rarely achieved the desired effect. Was there then a change in the intentions of rural radio? Did the experience of radio clubs usher in a third phase?

Rural radio ceased to be handled as just another programming unit, producing agricultural programmes just as other units were producing programmes for young people or programmes with technical information. Instead, it became an autonomous body within the national radio broadcasting system.

In Senegal, in 1968 we saw the establishment of rural educational radio (although the idea dated back to 1965). It sought to go beyond earlier experiences and was designed as an overall programme for integrated rural development. In 1969, in Burkina Faso, the same model of rural radio was launched, drawing much of its inspiration from the broadcasts of the rural division of Radio Mali. These rural and educational radio units of the 1970s stood out for their freedom of expression (as in the case of Radio Disoo in Senegal), and above all for their increased coverage of agriculture, livestock, health, news and culture.

Not only did they aim at changing farming methods, but they also sought to change people's attitudes and behaviour. In fact, such is the diversity of their phases, methods and objectives and such is the multiplicity of their styles, that we should be talking of rural radios in the plural form. The main issue facing them was that of a communication strategy. Even though they had fixed schedules, the broadcasters were not able to measure the impact their messages had on an unorganised audience. Mere letters from listeners do not provide evidence that a message, after being received, has been assimilated or has led to any concrete action. Furthermore, one has to repeat a message on the radio several times because it is fleeting in nature. Scheduling constraints also pose a problem, especially when programme directors and station managers refuse to allocate much time or the best listening slots to educational broadcasts. And there is the shortage of funds which seriously affected rural radio stations' operations, as became clear when projects supporting them came to an end.

Of course, the economic crisis which has afflicted the continent for more than two decades, devastating the economies of African countries, did not leave the world of communication unscathed. Funds from both national and external sources dried up, and this

has generally led to a crisis in African radio, particularly in the field of rural radio. Having moved ahead by leaps and bounds in the 1970s, rural radio was gradually restricted by a bureaucratic approach to production, due largely to the lack of resources permitting programme makers to travel to rural areas and to meet with farmers. Rural radio was been in danger of complete asphyxiation, and a second breath of oxygen had to be found.

To do more with less, rural communicators had to resort to imaginative financial means, drawing inspiration from the experiences of others and making use of the new possibilities offered by advances in technology. Nevertheless, they soon found themselves faced with a lack of trained competent staff, with problems of distributing their final product due to the constraints of having share their transmitters with foreign language broadcasts, with the issue of the many languages that must be used to reach target audiences, and with a class censorship which tended to block programmes which challenged the prevailing social, political, cultural and economic environment. All these led to a lack of credibility, itself engendering a breakdown in communication.

Outside, vigorous demands were being made for a new information and communication order; inside, equal passion was devoted to doing next to nothing to change things. There, the new order was driven by a handful of technical staff – so-called development facilitators – who were unwavering in their positions and much enamoured with the good tidings heard at a CIERRO-ACCT training seminar for rural broadcasters held in Ouagadougou in 1981.

The studio has been transformed into a church where only the grand organ is played, where the only message to be amplified is that of the Channel of Truth. The believer who hears this, deeply aware of that which is sacred, promises deep down to act in accordance with the sound principles of the sermon. Yet, no sooner has he left the cathedral than he takes another path, to the great astonishment of the noble preacher who was sincerely steadfast about having convinced his parish of the validity of his arguments.

The severity of this judgement betrays its somewhat excessive nature, but it does highlight the perverse character of the information flows organised by some services and bodies in rural radio; it is a one-way flow, and at the last resort, it leads to a situation of ‘*non-communication*’. Several alternative solutions were advanced, and the promotion of local rural radio in Africa is one that has been at the heart of debates among rural communication professionals since the early 1980s, discussed in various meetings organised by the Agence de coopération culturelle et technique (ACCT), the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Union of National Radio and Television Organizations of Africa (URTNA) through its Inter-African Rural Radio Studies Centre in Ouagadougou (CIERRO).

At the beginning of the 1980s, these reflections led to the conclusion that there was a need to question the methods hitherto experimented with for reaching rural areas, and to search for new ways to improve communication. In 1981, from 4 to 28 October, a training seminar was held in Ouagadougou (Burkina Faso) for rural radio programmers, organised jointly by the ACCT and CIERRO. It was attended by fifteen participants from Burkina Faso, Mauritania, Niger, Togo and Tunisia. At its conclusion, the seminar report stated that “rural radio stations have done well to communicate to farmers the knowledge they needed, but they have forgotten that to learn is to express oneself and to teach oneself, especially when the true goal is for the community to assume its responsibilities.” Seminar participants agreed that local rural radio could provide a new basis for the possible renewal of communication in Africa, aiming for participatory methods linked to the problems of development.

In 1982, the community radio station of Homa Bay in the province of Nyanza in Kenya started regular broadcasts in the local language, Luo. Led by a producer of the national

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broadcasting service, the Voice of Kenya (VOK), with three assistants, it had a daily one-hour broadcast of local news. Health problems and family planning topics replaced the Ki-swahili news programmes from VOK. Most programmes were based on interviews held in the market place, on farms, in schools and with organised groups such as the local women's organisation. This community radio station was part of a UNESCO project which sought to create a low-cost radio station in rural areas, where the equipment would be designed and built using local labour. The station had a low-power FM transmitter (10 watts) and with its low energy consumption, it could use solar energy. The cost of imported material totalled US\$900. The station later was later closed, due to disagreements between local people and the authorities.

In early 1983, a second CIERRO/ACCT seminar on local rural radio was held in Ouagadougou, with the goal of further developing what had been done in October 1981. The seminar discussion focused on the first seminar's report, "Towards a local rural radio".

In late 1986, a workshop-seminar on the production of messages for community media defined the underlying concept behind the variety of terms in use: local radio, community radio, free radio and participatory radio. The same workshop – hosted by UNESCO and URTNA – determined the characteristics of the content and orientation of messages to be broadcast by a rural radio station. In September 1990, a seminar-workshop was held at CIERRO with the assistance of the Swiss Romande radio and television service, on the linkages between national, regional and local radio.

Let us see what conclusions can be reached from these developments and efforts to arrive at more focused roles and functions of rural radio. The overall observation to be made is that African rural radio stations were almost all created in the 1960s, following the various preparatory meetings launched by UNESCO and FAO, and in particular following the meeting held in Giseyni in Rwanda which called for the general replication of debate-radio and radio clubs already set up in Ghana (1956) and in Niger (1962) in the Association of Radio Clubs of Niger (ARCN).

After a decade of existence, the limitations of collective listening groups as the basis for rural radio in sub-Saharan Africa were to be clearly seen. The failures of ARCN and of the radio clubs of Benin and Burkina Faso speak volumes about the dissatisfaction of farmers with these uses of radio for development. Those limitations lie principally in the fact – and here we recall what has been said earlier – that rural radio stations have done well to communicate to farmers the knowledge they needed, but they have forgotten that to learn is to express oneself and to teach oneself, especially when the true goal is for the community to assume responsibility for its own development.

The question that arises is thus not to change the educational goals of rural radio, but to allow them to attain their full meaning. This implies a reversal of the methods used previously. It is this new approach which rural radio services have been trying to achieve since the 1980s, by adopting an interactive strategy and methodology. Elements in this strategy are the public broadcasts and debates held in villages, which give rural radio stations a role of dialogue between communities. International organisations such as FAO, CIRTEF (the International Council of French-language Radio and Television Services) and CTA (Technical Centre for Agriculture and Rural Development – ACP-EU) should support these moves towards a broader process of democratisation on the roles and uses of public rural radio.

The vice-like grip of 'top-down'

What is at stake here is the need, today and in the future, to reinvent farmer participation in radio broadcasts, to give farmers free expression, and to arrive at a radio school of self-education where each listener can recognise their language, and better make it their own. Such

an approach in radio must get close to the field it seeks to report. The future of rural radio is in local rural radio. It becomes what the community makes of it.

The basic characteristic of this type of radio service is that it belongs to the community, and that it aims at responding to the community's needs. It has the privilege of riding the wave of democratisation of communication, which enables the broad participation of men and women of the local community, although the nature of this participation depends on the particular social context.

This is part of an alternative approach to the use of radio – one in which the radio station adapts to the socio-cultural environment. It is led by the desire to be in close proximity to local circumstances and to provide the local community with the real possibility to participate in programming, to define content and to manage the station. By making the means of communication available to a social group, this approach, and these radio stations, encourage and engender a certain degree of democratisation because it is the very nature of participation. This participation goes beyond the medium in question; it also changes the form of the radio stations. Take the example of educational rural radio: true, it broadcasts literacy programmes and provides ample advice on health, agriculture and livestock, but it also has to innovate, to create attractive forms and 'genres' of radio which carry local values and knowledge.

In conclusion, these four aspects of radio – one could almost speak of four phases – come with four distinct methods. The first lays emphasis on sensitising rural people to the radio itself. Even though radio receivers are far from being ubiquitous, this stage has long been overtaken in most countries. The second phase is to encourage people, by radio, to adopt specific agricultural practices, by informing and initiating them in new techniques. It depends more on agricultural policy than on information policy. The third phase, taking an opposite approach, lets the farmers speak and has a positive impact on agricultural policy. The fourth phase comes from the challenge of democratisation, given the propensity of the radio medium to enable the demanding goal of democracy. When this facet is well-understood and wisely used, it can confer upon local radio not the function of being a tranquilliser but that of an instrument of popular expression and education. A facet which could open up some excellent perspectives for farmers' self-improvement.

Some people have posed the legitimate question of whether local communities might not be ready to take charge of and run democratic structures in Africa. The ensuing debate has been seized by some communication specialists to express reticence about, or even opposition to, community-based local radio.

Let us be clear. Radio is a political tool for governments. To accept its decentralisation and regionalisation in the form of local community radio is to take power from the government, and to give it to local communities, which have long been excluded from the scene of public administration. For thousands of years these communities had their own democratic forms of justice and organisation, but they have been confiscated. Let these responsibilities be handed back gradually, let people again take ownership of them through the various social, political and economic organisations broadcasting on the continent, and – why not – let this happen through the use of local rural radio stations.

The experiences of Burkina Faso, the Central African Republic, Guinea, Congo and Ivory Coast in this process, under the leadership of the ACCT, are such that attention needs to be given to mechanisms enabling the community to assume ownership of their radio station, to issues of programme content and production, to the languages used, and to the roles assigned to specific broadcasts.

The new radio landscape

There is a direct link between the period in which private, commercial, and community radio blossomed, and the rise of political demands in Africa. Radio stations which were linked to associations or to political parties made claims for frequencies in order to gain liberty and democracy. As a result, in 1989 and 1990, in the process of drawing up their constitutions, some countries elaborated communication policies which authorised the establishment of private radio stations, regardless of the type.

And so, at the end of 1990, the first commercial private radio station was set up in Burkina Faso, under the name of Horizon FM, and another three were set up between 1992 and 1995. In Mali, it was not until the establishment of a constitutional government in 1992 that several radio stations sprung up, both in towns and rural areas. The same trend was set to grow even faster in Niger, Senegal and Cameroon where communication professionals, associations and rural communities all demanded more space for freedom of expression.

These stations were to fulfil various political, cultural and spiritual roles, depending on their background and circumstances. Some served to link the village with the Diaspora community of its emigrant sons and daughters, as in the case of the radio station in Kayes. Others have been commercial stations broadcasting primarily music and advertising.

One thing they have in common: they all broadcast programmes with information components, covering questions of health, environment, making skilful use of national languages and local music. In fact, many of them have started playing the initial roles and uses of rural radio with even a greater degree of attention in targeting specific audiences (youth, women, farmers, fishermen) or entire communities. All this raises the question of what rural radio will be like five years hence.

Civil society is getting organised, and is gradually acquiring communication tools for the simple reason that it needs to communicate. Radio is such tool because it is the cheapest of (mass) communication tools and rural people can easily obtain it. Radio has the flexibility for playing the following roles:

- A means for the rapid dissemination of key information, in a great many languages, and in geographically vast or restricted areas;
- A platform for dialogue and debate among development stakeholders;
- A platform for rural and urban communities to express themselves;
- A tool for awareness-building and social mobilisation;
- An instrument for research, providing genuine information about rural communities (upwards) to decision-makers.

This is why it is not realistic to seek to divide the ‘clientele’, as some aspire to do, into two opposing groups of urban and rural audiences. Reality is more refined, and the differences and differing lifestyles which are specific to ethnic or community membership – language, gender and age – play an increasingly important role.

The roles and uses of rural radio in the early years of the 21st century will be determined by the forces which separate or bring together existing rural radio stations and community, public, private, religious and commercial services. The end of broadcast monopolies opened the way to a division of tasks and roles. Henceforth the determining factors will be the freedoms, rules and unifying practices needed in the framework of Africa’s emerging media pluralism.

What alliances between public, commercial and community radio services can we expect to emerge in the future? What sets of structures, what regulations, and what other measures will be required to allow commercial, community and public service broadcasters to

coexist? What can public service, commercial and community radio learn from each other? How can financial sustainability be assured?

These are the fundamental questions, inspired by half a century of rural radio experience in Africa, that must be asked as we prepare for the next fifty years.

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Chapter 17

Radio Chaguarurco: Now you're not alone

Bruce Girard

I think the famous phrase that described the radio and what we wanted to do with it was 'now you're not alone'. Now there's a communication medium where you can talk, say what you feel, and denounce that person who is giving you a hard time. Now you're not alone. That was the phrase that motivated people. – Marcela Pesantez, member of Radio Chaguarurco



It was in Latin America that the world's first community radio experiences were initiated fifty years ago, when two very distinct movements turned to radio as a way of increasing their influence and contributing to community development.

First to appear on the airwaves, in 1947, was the Catholic Church's *Radio Sutatenza*, in Colombia. Founded by Father José Joaquín Salcedo, Sutatenza had two objectives – to broadcast the Christian doctrine to Colombian peasants, and to teach those same peasants skills that would contribute to the community's development. In spite of the amateur equipment at their disposal, Salcedo's message travelled further and faster over the airwaves than from the pulpit. The *students*, listeners organised into informal classes, would meet mornings or evenings at neighbourhood houses to listen to the programs and discuss the lessons.¹

Five years later, in Bolivia, the members of a tin miners' union decided to contribute a day's salary each month to a communication fund and *La Voz del Minero* (the Miner's Voice) was born. The mines surrounding the town of Siglo XX, four thousand metres above sea level, had been recently nationalised in the Revolution of 1952. However, as the Latin American socialist writer, Eduardo Galeano, was to say years later, the tin mines of Bolivia were the best argument in the world against nationalisation. Working and living conditions were so bad that the life expectancy of a miner was less than 35 years. Although its doctrine was different than Radio Sutatenza, the Voz del Minero was born to evangelise. In time the station took on a role that went beyond spreading militant doctrine and made immeasurable contributions to democratisation and community development.

From these roots of rural Christian charity and militant trade unionism, community radio has come to have a significant presence in Latin America, where private commercial, church, university, trade union and indigenous peoples' radio stations have combined to make the region's radio the most dynamic and diverse in the world. This chapter looks at one station and its contribution to its community.

¹ Radio Sutatenza eventually became a national network of educational radio stations. Until 1989, when it was bought by Caracol, another national network, and converted into the commercial Cadena de Noticias, it was one of six national networks in Colombia.

The need to communicate

Radio Chaguarurco, located in a rural part of Ecuador's southern province of Azuay, is a young station that continues the tradition set by Sutatenza and the Voz del Minero.

The idea of setting up Radio Chaguarurco started with a series of workshops in 1990. These were organised by *campesino* organisations and by the local churches in the counties of Santa Isabel and Pucará, in the province of Azuay in the southern part of Ecuador. The workshops were intended to organise the communities in order to get access to basic services such as drinking water and electricity and to ensure that human rights were being respected. A document written by the station's founders explains how the discussion of the need for basic services started the process that eventually gave birth to a radio station:

As we were getting organised, we started to talk about what we needed; first we mentioned electricity and drinking water, but after that, and above all other needs, we started talking about communication, about being able to share a common reality and being able to analyse it in order to improve it. That was how Radio Chaguarurco started. Some people who didn't live in the countryside asked: Why do you want a community radio station if there are so many other priorities? It would be much more logical to prioritise projects that cover more basic needs. Isn't a radio station a luxury? Sure, there are lots of other needs: health, nutrition, education, better agricultural techniques to improve production, day-care. But more than filling holes and patching things up to temporarily fulfil our needs, it's important to think about the causes of these problems, about the injustice and inequality that bring about misery and marginalisation.

Humberto Berezuela, director of the station adds:

The idea for Chaguarurco grew out of the need to communicate. In the counties where Radio Chaguarurco is located, it's very difficult to receive radio stations from the region. Even though we're in the mountains, we can only receive stations from the coast. That's one problem. Another is that most people don't have access to television, and even fewer to newspapers, which only reach a very few people in the urban centres of the two counties. Telephones are still unavailable in many of the towns, and not at all in the countryside, where most of the people live.

The communities are very scattered. Some communities are 30 minutes from the county centres, where the political structures and the markets are located. Others are an hour's walk with no roads. Others are three hours away. Others are ten hours. Some are as far away as twelve hours. For them it's practically impossible to be in daily, or even weekly, contact with the county centres.

Communication began to be seen as a necessity by the Church and campesino organisations in the area that had already been working together on various development projects. They recognised the potential of radio to work alongside other development initiatives, and decided to establish a station.

The idea caught on quickly and within a few months the possibility of a community radio station became one of the main topics of discussion at the ongoing workshops. According to Nelson Campoverde, a member of Chaguarurco's board, people in rural areas were used to being excluded from the media. Once they started talking about having their own radio station, they became excited by the possibility of having a communication medium that would provide an ongoing means to talk about the necessities of their communities and about

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the problems in getting basic services provided by local authorities. “This is something that used to be difficult because commercial media wouldn’t let us on the air because, as you know, sometimes they just don’t let people from the countryside on the air.”

Everyone agreed that the idea of a radio station was a good one, but the problem was, who would make it a reality? A frequency and government permission would be required. Equipment would have to be bought. Who would own the station? Where would the station be located? Which communities would it serve?

The local Church parishes and the peasant organisation, Proyecto Norte, quickly emerged as the two main drivers of the project. They had already collaborated on previous development projects and had both participated in the discussions about establishing the radio from the outset. With help from Diego Delgado, the area’s representative in Congress, they started making plans for the station.

The first problem they faced was obtaining a broadcast licence. In 1992, Ecuadorian law did not recognise community radio.² Getting a commercial licence involved a complex and long process that, even after years of waiting, was as likely as not to fail unless one had better political contacts and more influence than the people of Santa Isabel and Pucará did. Fortunately, Diego Delgado remembered that there had been a station in Santa Isabel a few years previous. The man it had belonged to had died and the station had been off the air for many years. However, the licence was still valid and the former owner’s son, Rodrigo Palacios, was willing to sell it. Buying a station still requires government permission, which involves a process almost as long and complicated as being assigned a new frequency, but it doesn’t require the same political influence.

With the process of legalising the ownership of the frequency underway, the founders next turned their attention to deciding where the station would be located. The two choices were Pucará and Santa Isabel.

Pucará and Santa Isabel

With a population of 3,000 people, Santa Isabel is the centre of the county of the same name. For many reasons, it seemed the logical place to locate the station: it is the largest town in the region and an important supply centre for the surrounding communities and countryside. Apart from the Church and the parish community centre, the central plaza is ringed by banks, doctors’ offices and shops with shelf space shared by plastic kitchen utensils, hardware, rum, fertilisers, television sets, and blue jeans. Not only because of its market, but also because it is less than two hours from the provincial capital of Cuenca, on the main road linking most of the communities to the capital, and because it has telephone service, Santa Isabel is an important communication centre for the region. At 1,500 metres above sea level, the climate is moderate year round – warm in the day and cool at night – perfect for growing tomatoes, onions and even sugar cane, products that are marketed throughout Ecuador.

The village of Pucará, centre of the county of Pucará, is only 40 kilometres from Santa Isabel. However, the non-stop bus takes two hours to climb to more than 3,100 metres above sea level. The unpaved road winds alongside steep cliffs and rises quickly. In the rainy season, the road can be closed for days at a time. There are no telephones in Pucará and when the road is closed, the town is shut off from the world.

² Community radio was not recognised in Ecuador until 1996. Most community radio stations are licensed as commercial or cultural stations. In 1996, the government approved a law that made provisions for community radio stations. However, it placed severe restrictions on them including prohibiting commercial activity, limiting transmission power to 500 watts and requiring approval from the army for reasons of “national security”. CORAPE, the national association representing community radio, brought a constitutional challenge to the law, eventually winning important concessions.

With a population of less than 1,000, Pucará is at the end of the road. Its single street is a tear-shaped loop, with a brightly painted Church in the middle and a perimeter of breathtaking mountains and valleys. The majestic view camouflages a harsher reality. With an average annual temperature of only 12 degrees and nights that drop to near zero, Pucará's climate won't support the tomatoes and onions that are the main cash crops in the Santa Isabel area. Subsistence agriculture is the rule, beans and potatoes the staples, and precariousness a way of life.

Pucará did have one important advantage. While Santa Isabel was larger and a more important economic and communications centre, Pucará's altitude and more central location meant that from a technical perspective it was a better place to locate the transmitter.

However, the question of where to put the station, in addition to technical and financial considerations, also had a political dimension. The community where the station was located would be more likely to have its concerns broadcast, its members interviewed, and to benefit most from the existence of the station.

The solution was to put the transmitter in Pucará, the administrative centre in Santa Isabel, and studios in both communities linked via microwave. When Chaguarurco's director, Humberto Berezuela, talks about the radio, he says it is actually two stations sharing a single frequency and a single identity:

Local information is gathered at both stations. News programmes are in duplex, with two anchors, one in Pucará and one in Santa Isabel. Interviews, in certain cases, are also in duplex, with the interviewer in one community and the person being interviewed in the other.

While the stations are located in towns, the townspeople are not the main audience. Of the estimated 65,000 people in the area, only 20 percent live in the dozen or so communities in the area (most of which are smaller than Pucará). The other 80 percent live and work on small plots of land in the countryside. While the station's listening area is primarily mountainous, it also includes part of the coastal lowlands, where banana and cocoa are produced for export crops and mining is an important activity. Most listeners dedicate themselves to agriculture. In lower altitudes they supply products to the national market. At higher altitudes, where conditions are more difficult, subsistence farming is more the norm. Many people, particularly those from higher altitudes, spend parts of the year as migrant workers in the coastal harvests or in the mines.

The Chaguarurco Foundation

The issue of ownership of the station was as important as that of location. From the beginning it was agreed that the radio station would not be owned by the local priest, or the parish, or any single person. It was to be owned by the grassroots organisations in the region, by the people. In September 1992 the "Chaguarurco" Foundation for Rural Development was established with representatives from *campesino* organisations in the two counties, from the Catholic parishes, and from the workers and volunteers of the radio station. Nelson Campoverde is a member of the foundation's board and an activist with the *campesino* organisation, Proyecto Norte, in Santa Isabel:

The radio is under the care and supervision of a foundation created with a specific objective: that the radio not have a single owner so that tomorrow or later on the owner doesn't decide not to give space to the people from the countryside. With that mission, the Chaguarurco Foundation was formed so that there will be representatives and no single owner. So, we're all owners.

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The Chaguarurco Foundation's board meets every three months, with extraordinary meetings when necessary. The board receives reports from the director and makes all the important programming and budget decisions.

By the time the foundation was set up, the dream of the radio station had been circulating for almost two years. Everyone thought that the day they would have their community radio station was just around the corner. Nobody foresaw that they would have to wait another two and a half years. Nelson Campoverde explains why it took so long:

After the formation of the foundation we had to see how we were going to make it work. We needed money to buy the equipment. We had to get the frequency. We also had to train the personnel. With the aid of technicians from CORAPE³ in Quito, we organised training for community reporters, which is what we call them now. This took a long time. To get the money, which is scarce in Santa Isabel and Pucará, was a long and difficult process.

In the end, the radio finally went on the air and started serving the community. We're happy with the work that it does for the community and with the efforts and the energy that all of us put into the project. If we hadn't stuck it out, the radio wouldn't be here. It took time but we moved forward step by step and now, here we are.

As Campoverde says, money is not easy to come by in the region, and the project was going to be an expensive one. Because of the area's geographic characteristics, the radio station required an AM transmitter, which was substantially more expensive than FM would have been. The 5 kilowatt Nautel transmitter, including its antenna and installation, was going to cost US\$80,000, an amount much higher than the community could put together on its own. Once the foundation was established, it started the slow process of getting the money together from local and international sources. However, Berezueta emphasises that while they needed money, they were not prepared to sacrifice the station's independence:

Practically all the equipment was new. What we got when we bought the old station wasn't even good enough to put in a museum. The transmitter, antenna and installation was paid for with a donation from the Spanish aid agency, Intermon. Caritas and Manos Unidas also helped. So did some Spanish volunteers who held bingo and other events in Spain to buy some tape recorders, a microphone, a computer and other equipment for the station. The Church in [the provincial capital] Cuenca donated a pickup truck.

Everything we received was for equipment and installations. That's what we got from international aid. After that the radio operated on its own. We never asked for anything for administration or personnel. The idea of the project is to be autonomous, not to have salaries or operational costs paid by an international organisation. The idea was that the radio had to pay its own way. And that's what we're doing.

Getting ready: training the community

In the meantime, the process of legalising the purchase of the frequency crept slowly ahead and a group of volunteers began training people from the community to work with the station. According to Berezueta, training posed a special problem because almost nobody working on

³ CORAPE (Coordinadora de Radio Popular y Educativa del Ecuador) represents community radio on the national level. CORAPE provides training, technical support, research and a daily news program for its 26 members.

the project had ever worked in radio so they had to train themselves first in order to be able to train the others.

They had to train people to run the stations – technical training, journalism, announcing, everything. A couple of Spanish volunteers who were helping had a little experience in community radio stations in Madrid, but nobody else had ever done radio. They read whatever books they could find and travelled to other stations to see how they did it. Experienced radio people were invited to speak and to give courses. In the end, a manual and a trainers' package were produced based on what had been learned. Then the newly trained trainers went out to start training the community volunteers.

Serious training started in December 1993. The idea was that each community would look for a person that they considered to be an appropriate correspondent. In addition, there was a general invitation to anyone who was interested in participating in the courses. Marcela Pesantez was one of the trainers:

Four of us worked in the training and we divided up the work. Every Saturday, two would go to one community and two to another. This lasted a long time, from December 1993 until October 1994. By that time we had lots of groups of volunteer correspondents trained. People were excited about the radio and lots of them would walk four, five or even six hours to get to the place where the courses were held... People would leave their houses at four in the morning to arrive at nine or ten and join the group. This was particularly so when we held courses in Ponce Enríquez, where there had been lots of conflict and lots of people who had been abused by authorities. Some people had been killed. People believed that the radio would help them put an end to the abuses.

In November 1994, the staff was selected from amongst those who had been trained. In December the new staff members underwent a month of intensive training. The ongoing training and discussions about the radio and how it would help the community kept the project moving forward and kept the organisations and individuals involved. However, it had taken five years for the station to move from dream to reality, and the wait had a cost. "In the beginning everyone thought that there was going to be a radio right away," explains Berezuela. "But the dream seemed to get more distant as time went by. Some *compañeros* got discouraged and left. It was one thing for the organisations to undertake an irrigation project to grow potatoes, but nobody had ever set up a radio station before."

Finally, the station went on the air. Marcela Pesantez was there on the first day:

On January 1, 1995 we went on the air. It was the most beautiful thing. Beautiful. With lots of people listening. We were crazy. Greeting all the people. Thanking the ones who had been with us since the beginning, those who had taken courses with us, the correspondents. Making calls to Cuenca to see if the signal reached the city. We made calls to Machala to see if they were listening. There were some people who knew we were going to be on the air and they called us. It was crazy. We played lots of music and every few minutes going on the air, "This is Radio Chaguarurco! We're on the air! Listen to us, at 1550 kilohertz! Tell your neighbours to listen!" It was beautiful.

After a while, we started to calm down. But it took at least three days until we were calm enough to start doing the real work of the radio station.

Now you're not alone

It quickly became apparent that the *real* work of the radio station involved a lot more than simply producing radio programmes. After years of waiting, people's expectations were high. They were not going to be satisfied with a station that sounded like all the rest. They wanted to hear their own experiences and concerns told in their own voices and in their own language. "I think the famous phrase that described the radio and what we wanted to do with it was *now you're not alone*," explains Marcela Pesantez. "Now there's a communication medium where you can talk, say what you feel, and denounce that person who is giving you a hard time. Now you're not alone. That was the phrase that motivated people."

To produce the kind of radio that the community wanted required a different kind of relationship with the members of the community than an ordinary station might have, and a different kind of radio producer. Only four of the eight fulltime staff and 20 volunteers at Radio Chaguarurco have ever formally studied journalism, the others learned their skills in Chaguarurco's own courses, but all of them work as journalists and programme producers in addition to sharing the secretarial, sales, technical and administrative tasks. Five of the fulltime staff are based at the station in Santa Isabel and the other three in Pucará. Nelson Campoverde thinks that their dedication to the community is what differentiates them from other radio producers:

It should be noted that the "workers" in the station are in fact practically volunteers. Their salaries aren't even the minimum that the law requires. They're volunteers who work in the radio with small salaries. As the radio's income rises, their salaries increase bit by bit. Very few of them are professionals. Its important to note that most of the personnel were trained here in the radio while doing radio and that they work here because it's their way of contributing to their own community.

Humberto Berezuela is one of the trained journalists. A native of Pucará, he studied journalism and teaching at the university in Cuenca. After he graduated he stayed in Cuenca for a couple years, freelancing for the daily newspaper, *El Mercurio*. One day, a delegation from Santa Isabel visited him. "They had seen my name in *El Mercurio*, Berezuela is a name from Pucará, and they came to ask me if I was interested in working in my own community. So I went to work with the radio station... It revolutionised the way I think about and practice journalism. At Chaguarurco, I'm able to combine my training as a journalist and as an educator, and to be a *communicator*." Humberto was hired to direct the operations of the satellite studio in Pucará and is now overall director of Chaguarurco, based in Santa Isabel.

Marcela Pesantez also studied communications in Cuenca. When she finished, she went back to her home town of Santa Isabel, not sure of what she would do, but wanting to help her own people break out of their precarious condition. When she heard about the project to start the radio station, she immediately volunteered to help. The fact that she had never studied radio did not stop her from immersing herself in the medium and becoming one of the project's trainers. "I think it was good that none of us knew anything about radio. It meant that we didn't have any preconceptions about how it had to be done and that meant that we could do it in a different way."

In addition to the paid staff, there are some 20 volunteer producers. Half a dozen of them are community correspondents from surrounding villages. They gather the news in their areas and periodically travel to the station with their stories and tapes. The station supplies them with tape recorders and rechargeable batteries, and proceeds from an annual raffle are used to pay their bus fare.

Others, such as Graciela "Chela" Morina, produce music programs. Six days a week Chela goes to the station in Santa Isabel to do a one-hour programme featuring Ecuadorian

music. Like the other volunteers, she brings her own speciality to the station. She developed an interest in national music at a time when it wasn't available on the radio. Asked how she manages to do a daily programme with the station's limited selection of CDs, cassette tapes and vinyl albums, she points to the bag under her arm stuffed with records and tapes, and describes how the radio programme has "collectivised" her personal music collection.

Other volunteers produce the weekly programme *El Mercado* (The Market). The programme is hosted simultaneously in Pucará and Santa Isabel and looks at prices and trends in the area's markets. It has played an important role in controlling prices and speculation.

Marcela Pesantez says that there is a constant turnover among the volunteers and that for this reason the station continues to offer regular radio courses to new volunteers:

We kept offering training to new people, but after a while we lost some of the volunteers. The group from Ponce Enríquez was left out. We thought the signal would reach the community but it didn't. It was a shame. There was a good group there... Later, little by little, some of the correspondents lost interest. Radio is lots of fun but when you don't have a salary or a stable job, no matter how much you like radio, you have to think about finances. You grow up and you want to get married and have kids and all that stuff. So, little by little people started leaving.

Participation and programming

Like other radio stations, Radio Chaguarurco's programming incorporates news, interviews, music and cultural programmes. There are, however, a number of important characteristics that distinguish Chaguarurco from other stations. The most important of these is the priority the radio station gives to local voices, language and culture. Unlike radio stations in the city, with announcers who try to hide any regionalisms in their accents or their language, Chaguarurco's announcers celebrate their own way of speaking.

Another important distinction is the way the station actively seeks out the participation of people from the countryside, inviting them to visit the radio station, to tell their stories, to sing, or just to greet their friends and family members over the air.

The station never forgets its important role as a communication channel at the service of the communities, the telephone for those who don't have telephones. Pilar Gutierrez works with Pucará Community Health Project:

There are places where it is very difficult to access because they have no roads. The people who live there listen to the station for any information about visitors they might have so they can be ready for them. This is the case of our community health project. We have a medical team that periodically visits these communities. Before the radio they would travel to a community and lose hours or even days waiting for the news of their arrival to get out to the people in the countryside and for the people to travel to where they were waiting to attend to their health problems. Now the radio announces the visits and the community is ready and waiting for them on the announced day and time. This means the medical team can visit more communities and provide a more efficient and better service for everyone.

In her work with the Pucará health project, Pilar Gutierrez travels to the communities and sees first-hand how important the radio's programmes are for the campesinos:

In health matters, for example, lots of people listen to the radio dramas that the station produces and broadcasts everyday. The dramas have characters

that the people in the countryside can identify with, like Don Julgencio. The characters chat with each other and tell stories about health and other matters. They talk about how to treat garbage, about vaccinations, about how to preserve the environment, which is an important health issue. They talk about nutrition. When they learn this way, they understand what is being said and they don't forget it.

People, especially in Pucará, listen a lot. They are very attentive to the radio. They are faithful to Radio Chaguarurco. They don't listen to, or rarely listen to other radio stations. Besides the radio dramas, they also listen to the news, especially news from Pucará, or that some government representative is going to visit, or that something or other is happening in Cuenca. For example, when a group goes to Cuenca from Pucará to meet with authorities about a local project, they visit the radio station on their way back and ask for an interview so they can tell people what happened.

Humberto Berezuela writes most of the radio dramas and they are acted out by the station's own staff members. The radio dramas provide a valuable way of explaining complex issues in everyday language and in a way that people can easily understand. Themes for the daily dramas are varied, covering health, the environment, politics, culture and human rights.

A recent change to the programming has been the inclusion of news from Latin America and the world that the station gets from ALRED, the radio service of the Latin American Association for Radio Education, and the Púlsar news agency. A satellite dish on the roof of the Pucará station receives ALRED's programs, and news from Púlsar arrives via the Internet. Ramiro Tapia comments:

I think that the station's programming is making progress. For example, this year we started to get information from other countries, countries that many of us didn't know about before. And information from our own people as well, we see that there are people there just like us, campesinos like us. We're exchanging information with them. In the same way we receive information here from other countries, we also send news from here to other countries. And this is interesting, to communicate like brothers between different countries, and even different continents.

A minga for Chaguarurco

While the station did (and still does) count on the support of international solidarity for major capital expenses, the Chaguarurco Foundation decided that the healthiest way for the station to operate, was to pay its own way. Like many community radio stations, Radio Chaguarurco has a secret when it comes to paying the bills – keep costs low by using the resources freely offered by the communities it serves. The volunteer labour of the programmers is one way the community contributes. In addition, the studios in Pucará and Santa Isabel are in space provided free by the local church parishes, and there is always someone around to offer their carpentry skills or make a pot of soup in a *minga* (a day of volunteer labour for a community project) when the station needs to renovate a studio or paint the offices. However, volunteer labour and community donations cannot cover all the costs, and Chaguarurco has to generate some US\$2,000 per month to cover its operational costs.

The station's financial situation is healthy. Chaguarurco not only manages to generate enough revenue to cover its fixed costs, it is also able to pit aside a few thousand dollars a year to improve its equipment or cover unforeseen costs. However, as Berezuela says, "We are in a good financial position, but if the transmitter were destroyed by lightning tomorrow, it would be impossible for us to replace it."

Sources of revenue include advertising, community announcements, production services, and remote broadcasts of cultural events.

Advertising accounts for about 20 percent of the station's revenue. From the beginning it has been a controversial subject. Some people argued that advertising had no place on a community radio station. Others said that the survival and growth of the station was the most important thing and, consequently, all advertisers should be welcome on the station. In the end, Chaguarurco adopted policies that favour the promotion of local goods and services. Ramiro Tapia, a member of the foundation's board, explains:

A fundamental point since Radio Chaguarurco began to work was that it was going to be different from other commercial radio stations. What we want to do is encourage our communities to return to our past, to not forget our past. We have to try to value what is ours. What the other radios put in our ears, and television in our eyes, is the consumption of imported products and products developed with technologies and chemicals. Their message is that we should leave aside what we produce in our own fields. Our radio doesn't give space to advertising for Coca Cola or for alcohol (alcoholism is a serious health problem in the region). But there will always be space for any other type of commercial that doesn't harm people's health.

Political advertising is another controversial subject. For most of the country's radio stations, elections are a bonanza. More than a dozen parties buy advertising and it is customary for stations to put a surcharge of 20 to 150 percent on political advertising. As the owner of a commercial station in Cuenca said, only half joking, "these politically unstable times have saved most of us from bankruptcy."

The temptation is strong. During a recent election campaign, one party offered to buy large block of time for partisan programs at a price that would have paid the bills for months. However, Ramiro Tapia says that would not have provided a service to the community.

When there are political campaigns, one of our policies is that the radio has to give equal possibilities to all political parties. We don't want a situation in which the more powerful parties have more possibilities of promoting themselves on this station.

Whenever we have these debates, the disagreement always comes down to if we don't accept this advertising, what will the radio station live on? Of course, this advertising would provide a lot of revenue. However, we are seeing that we can live without it. We are getting enough advertising to keep the station going.

More important than advertising, accounting for some 40 percent of the station's revenue, are community announcements. Broadcast at various times throughout the day, content of the announcements ranges from announcing community events, to sending messages to a distant family about the health of a loved one in the hospital (see Box 1). Like the restrictions on alcohol and political advertising, the policies that govern community announcements take into account not only the health of the station, but also that of the community. Two of the foundation's board members comment:

They're one of the things that we want to do with the radio station because they offer the possibility to communicate quickly with people in the countryside. Sometimes a sick person goes to the hospital and we have to stay waiting in the house for someone who has been with the sick person to know whether he's dead or alive. But the presence of the station has made it easier. (Nelson Campoverde)

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The community announcements are one of the major benefits that the station offers to the communities. For example, if we're in Quito [Ecuador's capital city] and we want to communicate with our family, where there is no telephone, no direct means of communicating with them, the radio helps us. From Quito we call the radio, and the radio immediately transmits our message to our family. Of course, we all know that if we receive a message from a family member who is away, we have to go to the station right away to pay for the message. (Ramiro Tapia)

Box 1 – Some typical community announcements

From: the teacher Bisnarda Ochoa in Guasipamba

For: her father

Message: Try to come on Wednesday because you have to go to the school board to register the name of the school. Wednesday because our father will be in Cerro Negro Wednesday afternoon.

From: Daniel Nieves

For: Fredy Nieves and family

Message: The patient that Daniel was visiting in Santa Isabel is in the same condition and Daniel is now on his way back home. Also, tell Fredy to tell Lucio that Daniel won't be able to work with the engineer this week because he has to go to Pasaje on Sunday September 27. Stay tuned to the radio for more messages.

Message: All the residents of Shaglli are invited to participate in a general *minga* that will take place on Tuesday September 22 to get rocks from the Masucay River and bring them to the village. The material will be used in the construction of the community communication centre and the town council has offered the use of a truck to transport it. Thank you for your collaboration.

Another source of income is the production of programs on health and other issues for local NGOs and government. These programs are not only broadcast on the radio, but they are also distributed on cassette and used in workshops and seminars.

The station also gets some help from a solidarity group in Spain. According to Marcela Pesantez, Francisco "Paco" Aperador, one of the Spanish volunteers who helped get the station on the air, went to Madrid for a few months before the station went on the air:

While he was in Spain he organised a solidarity group for the radio. They were mostly friends of his, interested in Latin America. We joked that they were like a cell of a revolutionary movement. The name took and we still talk about the Cell. When he came back to Santa Isabel, he stayed in touch with them and kept them informed about the radio's progress. They started to meet every few weeks to hear about the project's progress. When the radio went on the air and we needed a little money to buy something that was missing, a chair for the studio, a desk, a telephone, they would get some money together and send it to Paco. At first they gave their own money. Later they joined with another group in Madrid and started to do bingos, dinners, handicraft sales. There must be some 18 or 20 members of the Cell. Almost all of them have come to visit at some point. In the summer my house is practically a hotel!

The best moment is everyday

Radio Chaguarurco has worked alongside other development and democratic initiatives to make a number of important changes in community life. An evaluation of the radio station concluded that it has improved communication, helped bring about more democracy and less abuse, made a positive contribution by promoting the sharing of experiences and solutions to

problems, and made people more aware of and proud of their own culture. (Box 2) Two members of the community who have followed the Chaguarurco's growth since before it began were asked what they thought was the station's proudest moment:

I couldn't say that there has been any single moment, I think the best moments happen everyday, whenever we're listening to the signal, in our homes, in our communities. The proudest moment is whenever there is a chance to say, in public, that we think there's a problem with the way a certain authority is acting, or that a given project benefits the people in the centre at the expense of those of us in the countryside. Before we couldn't do anything about these but now the station is open to us. We just have to come here, ask for an interview and say this is what's happening or this is what so and so from whatever institution is doing. And with this knowledge people start figuring out what's happening. Now we aren't slaves to information, we have it. So the best moment isn't just a single moment but everyday. (Nelson Campoverde)

I think that we get a lot of satisfaction from the radio just by knowing that we can hear the voices of other campesinos on the radio, something that was impossible before because the campesino is always silenced by the powerful and our voices are only rarely heard on the commercial stations. Radio Chaguarurco gives us this possibility. That's the most beautiful thing – to hear our own people express themselves, with our own language, and it's beautiful, isn't it? The other stations criticise us for the way we talk, but we're used to it. (Ramiro Tapia)

Box 2 – How the radio station helps the community

Communication is easier now. Before, if someone went to the hospital from a community, those who stayed behind didn't know what had happened until the patient returned, or didn't. Now the radio has a system of announcements and communiqués. Every day, from 6:30 to 7:00 in the morning, at noon from 12:00 to 12:30 and from 6:00 to 6:30 at night we can send all kinds of messages – the situation of patients in the hospital, deaths (before one would learn about the death of a family member months afterwards), lost animals (now when you lose a cow, you announce it on the radio and whoever finds it knows who to return it to), invitations to meetings, etc. ... the radio is the telephone for those of us who don't have telephones.

The authorities, institutions and merchants are more democratic. Before it was easy to abuse a campesino, charging higher prices, stealing material that was intended for public works projects in the communities or whatever; it was an everyday practice. Now when there is an abuse, everybody hears about it on the radio. As a result these kinds of injustices have practically disappeared. The radio serves as a sort of guardian in the democratic game.

The radio has served to let us **share experiences and problems.** Before if a community wanted to get electricity, it involved lots of trips to Cuenca to find out what was involved and how to do it. Now people from communities that have gone through the process of getting electricity, or drinking water, or subsidies for agricultural projects, tell about their experiences on the radio and this helps the others see the process and understand what has to be done, who has to be talked to, etc. In addition, solutions to everyday problems are shared, ideas about farming techniques or latrine building are exchanged...

The radio is contributing to the **valorisation of our culture**, our music, our way of speaking. The songs that had practically disappeared and that were only sung by the oldest people during family gatherings, are once again heard on the radio. The programmes featuring amateur singers have been very important. Every community has one or two people who sing and even compose songs and they are all being heard on the radio. They are the most popular programs and they are generating renewed pride in our culture.

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Bruce Girard is a researcher, writer and educator active in development communication and communication rights issues. He was the founder of the Agencia Informativa Púlsar and of Comunica, a network focusing on the use of new ICTs by independent media in the South. He has lectured on broadcasting, information and communication technologies, and communication rights in more than 25 countries. His other books are *A Passion for Radio*, an edited volume of stories from community radio around the world, and *Global Media Governance*. <www.comunica.org>

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