Katherine Wagner Gamos Ltd.

Community Television for the poor

Abstract

This report aims to examine the role of community television for the poor. Research sources are acquired from the internet, and compare a range of media, in both developed and developing countries.

The technology and process for presenting messages to the poor has changed. The focus is now on promoting horizontal communication, involving the local people in the creation and distribution of the message. This has been enabled by the presence of digital technology, which has already contributed to the problems of the digital divide, but can now be used to bridge that gap, by forwarding development.

Community radio, community television and telecentres already exist, and work under this description. However, with the development of technology, and the steady move of media towards going digital, television seems the way forward to present messages and involve the community in local issues and awareness.

It has also been made clear that each project must be designed specifically to its area and community, in order for the media to be accessed fairly and appropriately, and for action to be taken by the community to improve development.

Examples of community television stations in the developing world have shown positive responses, as well as slight problems, mainly concerning licence fees. As community television is a more recent development than community radio, it is useful to assess the successes and failures of radio. From examples of community radio, it has been shown that heath and education messages can be broadcast in such a way to receive large audiences, for instance, by incorporating these messages into soap operas, or simply by an ask-the-doctor type programme.

Therefore the way forward looks to be with community television, although for success, pilot projects, assessing the audience, and training are essential.

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Introduction

As technology has changed, the approach taken towards development must also change. The diversity and quality of this technology makes media communications ever more easy and accessible for people. However, the invisible boundaries belonging to developing countries has led to the creation of a digital divide, where the rich 'north' has leaped ahead of the 'south' in terms of it's access to information and technology. It is assumed therefore that to further development in these less well-off countries, information must be made available.

As the technology is now available, the implementation must be addressed. This report focuses on how the approach to message presentation is steering towards horizontal communication, rather than top-down organisation. This involves the local community being involved with the creation and presentation of the message, for example, through community television. Several community-based media will be examined, in both developed and developing countries.

The Digital Divide

The Digital Divide is the gap between individuals, household, business and geographic areas at different socio-economic levels with regard both to their opportunities to access information and communication technologies, and to their use of the internet for a wide variety of activities.

Opportunities and Dangers of ICT

According to BT (http://www.btplc.com/society/pdf/digital_long.pdf), information and communication technologies can pose opportunities and dangers: -

- Dangers – insecurity, collapse of geographic communities, loss of privacy, acceleration of poverty.
- Opportunities – safe natural environment through 'e-materialisation', progressive innovations in work opportunities, and technology-enabled, direct citizen participation.

There are then many different dimensions to the inequality in the use and advantage made of ICTs, including Gender, Ethnic Group, Economic Group, Geographic area and Size of Enterprise.

The Need to Bridge the Digital Divide

In October, 1999, BBC News (http://news.bbc.co.uk/1/hi/special_report/1999/10/99/information_rich_information_poor/466651.stm) reported a speech at Telecom 99 in Geneva, Switzerland, where the UN Secretary General Kofi Anan warned of the danger of excluding the world's poor from the information revolution.

The report highlighted the latest UN Human Development Report, which shows industrialised countries, with only 15% of the world's population, are home to 88% of all Internet users. Less than 1% of people in South Asia are online even though it is home to one-fifth of the world's population. There are only 1 million Internet users on the entire continent of Africa compared with 10.5 million in the UK.

It also claims that even if telecommunications systems were in place, most of the world's poor would still be excluded from the information revolution because of illiteracy and a lack of basic computer skills. However, if the information is presented in a way that does not discriminate against the illiterate, then it has the potential to be accessible to all.

Bridging the Digital Divide

Digital Partnership Online (http://www.digitalpartnership.org/solutions_rural.htm), a partnership facilitating affordable access to technology in developing economies,

lists five key components required to be integrated to bridge the digital divide:

- Access to equipment and appropriate software,

Telecommunications links with Internet connections,
Technical assistance and training,
Access to relevant content,
Access to affordable equipment.

The ITU's (International Telecommunications Union) Telecommunication Development Bureau (http://www.itu.int/ITU-D/) has well-established programmes to facilitate connectivity and access, foster policy, regulatory and network readiness, expand human capacity through training programmes, formulate financing strategies and e-enable enterprises in developing countries. This is a winning combination for bridging the Digital Divide."

http://www.ananova.com/news/story/sm_366562.html describes how the Digital Divide is also being financially addressed by a $1.5 billion World Bank plan, to use the internet to help developing countries speed up knowledge acquisition rather than becoming victims of a 'digital divide'.

In a report by the Rockefeller Foundation on communication for social change (http://www.devmedia.org/documents/Position%20paper.htm), interest is shown by a wide range of people to know more.

Therefore, addressing the digital divide is perceived as important and the problem is already receiving action.

The Need for Information

Technology Needs of the South

In a research proposal by the Commonwealth Network for Information Technology (http://www.is.lse.ac.uk/ifipwg94/ifipnews.htm#3), problems associated with telecommunication structures in developing countries are discussed. It claims that even in areas with good telecommunication structures and skilled people, progress is slow and many initiatives flop. The most important reasons are probably related to the perceived needs for data, information, and/or information technology. Local communities are often too occupied with their daily struggle to survive to engage in such activities without compelling reasons.

Successful development of information systems in complex environments must be based on decentralised, flexible strategies, with data/ information and experience-sharing catered for through conversion routines, gateway technologies, interconnections and transition strategies.

The diversity and adaption of technology for the South also features: we need information infrastructures to focus on efficiency, competitiveness, sustainability, and democratization, with potentially massive impact on living conditions and it must be done using a telecommunication structure varying from VSAT and fiber optics to manual exchanges, and with educational levels varying from Ph.D. to illiteracy. Information infrastructure and technology is not culturally and socially neutral; it must be adapted to its environment to be useful.

The direct and indirect participation of grass-root communities and local administrations in existing and future information infrastructures are necessary elements in the drive for democratisation (empowerment), economic/social development, and cultural understanding. Successful development in these areas will in turn reduce the possibility of violent conflicts over resources or power in the future in any country.

It is necessary to transfer and adapt both system development products and processes to developing countries. Furthermore, the transfer of both products and processes must continue during domestic diffusion. A successful process in one community, yielding relevant products, must not be used as a product-oriented blueprint for other communities, but as a more refined and better-adapted product and process. Participation and flexibility in development, in data collection and database maintenance, in dissemination all these process aspects contribute to local activism, 'system ownership', and ultimately system sustainability.

The need for community communications

A report by the Rockefeller Foundation (http://www.devmedia.org/documents/Position%20paper.htm) argues that communication for social change is a distinct way of doing communication – and one of the few approaches that can be sustained. Such sustainability is largely

due to the fact that ownership of both the message and the medium – the content and the process – resides with the individuals or communities affected.

They believe that this approach can help make greater contributions to the pace of development.

Present and Future Usage of Technology

How communication for development has changed

(http://www.devmedia.org/documents/Position%20paper.htm)

New technologies represent a huge opportunity for many participants in the communication for social change initiative: The capacity for people and organizations in developing countries to communicate information -- their aspirations, demands, experiences, analysis -- becomes cheaper, more powerful and far more pervasive.

Nevertheless, we also recognize the limitations of these technologies. In particular, the "information gap" between rich and poor is stark.

Communication for social change is part of an evolution of communications methodology that can help accelerate global development. The process began in the first quarter of the 20th century with the use of publicity tools to bring attention to social problems such as hunger and disease. It grew to a reliance on public relations as a means of identifying stakeholders and creating programs to fit the audience's interests. More recently, social marketing took center stage – where sophisticated marketing and cause-related advertising tools were applied to influence individual and societal behaviors – such as convincing couples in poor nations to use contraceptives. This was followed by development communications and strategic communications, the latter which rightfully considers communication to be a process rather than as a series of products.

How communication is used (is it enough?)

(http://www.devmedia.org/documents/Position%20paper.htm)

Communication programming has, very simplistically, tended to fulfill three roles in development thinking and practice:

- To inform and persuade people to adopt certain behaviours and practices that are beneficial to them (persuasion and informing).
- To enhance the image and profile of the work of organizations involved in development with a view to boosting the credibility of their work, raising more funding and generally improving public perceptions.
- Used on a more targeted level within communities to enable community consultation over specific initiatives.

The Rockefeller Foundation argue that these traditional approaches to communication are generally insufficient in addressing the reality of the development problems that exist, and they do not always reflect the complex changes in the communications environments taking place in many developing country societies.

Communication can play a much greater role in enabling people to take control over their own lives, in enabling people and societies to set their own agendas in relation to political, economic and social development; and in enabling, in

particular, the voices of the economically and politically marginalized to be amplified and channeled to mainstream public and political debate.

The changing media: Media liberalization and deregulation

http://www.devmedia.org/documents/Position%20paper.htm describes how monopoly broadcasters have presented a convenient way of communicating simple messages to huge audiences through one medium. In much more fragmented media environments, this opportunity no longer exists and reaching the same audience requires putting messages out through many different media, and adapting it to many different audiences.

At their best, however, commercial, community and, in some cases, newly invigorated state-run news and media organizations have managed to attract large audiences with compelling, popular and informative programming. In Kampala, Uganda, the FM station Capital Radio attracts some of its highest audiences for its Capital Doctor program, which provides advice and information on issues of sex, HIV/AIDS and other health issues. In South Africa, a form of "edutainment" – "Soul City," set in a Johannesburg township -- has become one of the most popular soap operas in the country, yet has succeeded in educating people about diarrhoea, HIV/AIDS and other issues.

Again in South Africa, deregulation has spurred the creation of more than 80 community radio stations broadcasting in 15 languages. Community stations have made serious inroads into the broadcast markets, often stealing audiences from the well-established public broadcasting stations.

Finally, the last decade has seen an explosion in satellite broadcasting. Take the South Asia region, home to one-fifth of the world's population which is today within the footprint of at least 50 broadcast satellites. In India, Pakistan and Bangladesh alone there are more than 70 million households with television sets, adding up to a total viewership of 300 million. By 2007, there will be 550 million television viewers in these countries. Half of them will be hooked up to cable – able to watch the 350 channels that will be available to them by then.

Reaching lots of people with prepared messages is becoming more difficult and more expensive.

Communication for Development and Democracy

Videazimut (http://videaz.tao.ca/) is an international non-governmental coalition promoting audiovisual communication for development and democracy.

It is the International Coalition for Democratic Communication, and includes:

The Southern Africa Communication for Development

- Deep Dish TV
- Media Democracy in Korea
- Bundesverband Offener Kanaele
- CENDIT
- Community Media Network of Ireland

- Open Window Network
- Al Quds Television Productions
- Fundacion Cine Mujer
- Forum for Citizens' Television

They are all in their own way working to advance democratic communication in the audiovisual sector.

Videazimut links people and organisations working in both the North and the South in independent and alternative video and television, and others who are in active agreement with Videazimut's Declaration of Principles. They are united by their interest in democratic communication and communication for development.

The Future for Communications in Developing Nations

The interaction between communication and the social well-being of people in developing countries will be radically redefined over the next few years. Global economic liberalization of communications, the deployment of the Internet, mobile telephony and other new technologies and the changing political environment in most developing countries are all coinciding to make the cusp of the new millennium a defining moment which will determine how successfully all countries, especially developing nations, adapt to and exploit these changes.

Projects and organisations expect technologies to change, as shown by the Agencia Informativa Pulsar project in Ecuador (http://www.rdg.ac.uk/AcaDepts/ea/AERDD/Csds.htm). One of the goals of Pulsar is to promote new communication technologies to enhance the subscriber network and create awareness surrounding ICTs. The technology used should be evaluated over time with a view to its appropriateness and to making use of new technological developments.

A new model of communication could be emerging from a mixture of political, technological, economic and social change. It is decentralized, pluralistic and democratic; it seeks to empower rather than persuade people; it fosters debate among and between citizens, among and between communities, and between people and government. This model envisages increasingly horizontal communication allowing people to communicate with each other easily and inexpensively. It also involves the steady disintegration of traditional monolithic vertical lines of communication, where governments owned radio and television stations in order to control flows of information.

The 2002 annual report of the Inter-American Human Rights Commission's Special Rapporteur for Freedom of Expression (http://www.ipsnews.net/interna.asp?idnews=22659*) reported community radio to be a crucial source of information, abandoned by the mass media:* "Radio stations that style themselves as community, educational, participatory, rural, insurgent, interactive, alternative, and citizen-led are, in many instances and when they act within the law, the ones that fill the gaps left by the mass media;

they serve as outlets for expression that generally offer the poor better opportunities for access and participation than they would find in the traditional media,".

Community Media in Kenya

The Community Media Programme is part of The Communication Initiative (http://www.comminit.com/streview/sld-5237.html). Its primary objective is to promote the development of community-based media in Kenya, east Africa and the east and southern African sub-region. The premise is that media owned, controlled and produced by, for and about communities can serve as vital for a for debate on development, governance and human rights at the local level as well as for the preservation and promotion of local culture(s) and indigenous knowledge. Such media also can provide critical two-way conduits for the flow of information between the local level and the national and international levels, enabling communities to feed issues of concern to national and international policy-makers and vice versa.

The Kenya Community Media Network (KCOMNET)

The Kenya Community Media Network (KCOMNET) is a national network of individuals and organisations interested or involved in participatory, community-based media for development and democratisation. Formed in November 1995 at a sub-regional workshop on community media convened by EcoNews Africa in Nairobi, the network comprises professional media workers as well as community-based and non-governmental organisations dealing with information, communications, development, civic education and human rights.

The Role of Community TV

(http://www.openchannel.se/cat/index.htm)

Community or public access television is still a quite unknown alternative to privately or government-run commercial or public service television. However, this local television *"run by the citizens for the citizens"* is now expanding in several countries. Some of the reasons might be that fully-professionalized television has become too much streamlined with a heavy load of a one-way information and entertainment output depriving the viewer of the communication process. Community channels provide an electronic forum to express social and political concerns, as well as the opportunity to share valuable information with friends and neighbours. There is a need to put television in the hands of the common citizen.

All access channels are carried by cable except in Australia, Denmark, France, New Zealand and the U.K. where Community Television is broadcast by air (UHF).

Some access TV channels are run closely together with community radio channels on FM especially in Germany. Many U.S. community access TV

stations are also becoming more involved in using the Internet web and email. In the near future community access will mean a convergencial usage of three media - television, radio and Internet. Already television programmes are "aired" worldwide through Internet.

New technique such as Digital Video (DV) will support this development. We are now able to run a local TV station equipped with small digital 1,000 dollar video-cameras and PC or Mac based editing. In fact the whole editing process can be made on a laptop computer *(as the Apple PowerBook G3 with the Final Cut Pro software).* Distribution will not only be made by cable but also by low-power UHF, microwave (MMDS) and Internet webcasting. Local television will go global. The limits will be political, not technical!

In June 1996, the U.S. Supreme Court ruled unconstitutional a provision in the 1992 Cable Act that would have allowed cable operator to remove "indecent" programming from public access channels. This was a landmark decision for the development of democratic television.

Example of how technology in developing countries does not reach the poor: The African Virtual University

(http://news.bbc.co.uk/1/hi/special_report/1999/10/99/information_rich_information_poor/466651.stm)

The World Bank-sponsored programme has broadcast over 2000 hours of instruction to over 9000 students in all regions of sub-Saharan Africa. The initiative has allowed AVU students to take courses given by professors from world-renowned educational institutions in Africa, North America, and Europe.

That does not impress Ethiopian Meghistab Haile: "With that money just imagine how many lecturers you could have. If the World Bank is really wanting to help African universities then the first step would be to encourage and support the Africans to return back. In the end it is only the Africans who could solve their problems."

Others complain that high-tech education - available only to a select elite - is not worth it when so many places on the continent are still without electricity and running water.

Experts estimate that the Internet will be virtually global in five to seven years. But for that to happen infrastructure must be put in place, which means a lot of money - and fast.

Summary: Technologies for Communicating Information in Developing Countries

As technology has developed, more varied and accessible forms of communication have evolved, in particular, digital technology. These can be harnessed to improve the livelihoods of people in developing countries, and also bridge the digital divide. The traditional uses of communication for development

have not always involved the local people. Therefore, the future for development is through encouraging and facilitating communication between local people (horizontal communication). It involves "returning" research and analysis to where it originates.

This type of communication has been applied through community radio, community television, telecentres, and the internet. These will be discussed in more detail later.

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Gender / Racial Constraints in Media

Representation of women in the media in Southern Africa

A study by MISA (http://www.misa.org/) analysed 25,100 news items broadcast and printed during September 2002 by 116 media in 12 southern African countries. It concluded that the media in southern African give very little space to the views of women, and, when it comes to subjects such as politics, economy, sport or agriculture, their voice is virtually unheard.

This problem will need to be addressed and changed if development is to occur, as women have an influential role in the home and the upbringing of children, influencing the values and practices of the next generation.

Empowerment and Participation of Migrants and Refugees in the Media

http://www.multicultural.net/empowerment_results.htm#survey reports how a workshop invited representatives of migrant and refugee organisations to explore ways to realise and make better use of contacts with the media.

A representative of the Bulgarian NGO Human Rights Project (HRP) stated that through its 'Training, Media and Advocacy' programme, the HRP promotes a greater participation and fairer representation of the Roma in the Bulgarian media (http://www.multicultural.net/newsletter/article/issue5-angelova.htm).

Literacy Levels of Target Audiences

The literacy rates of the community will affect the type of communication technology most suited to them. If this is analysed before-hand, then information has a greater chance of reaching those in need, and development will advance.

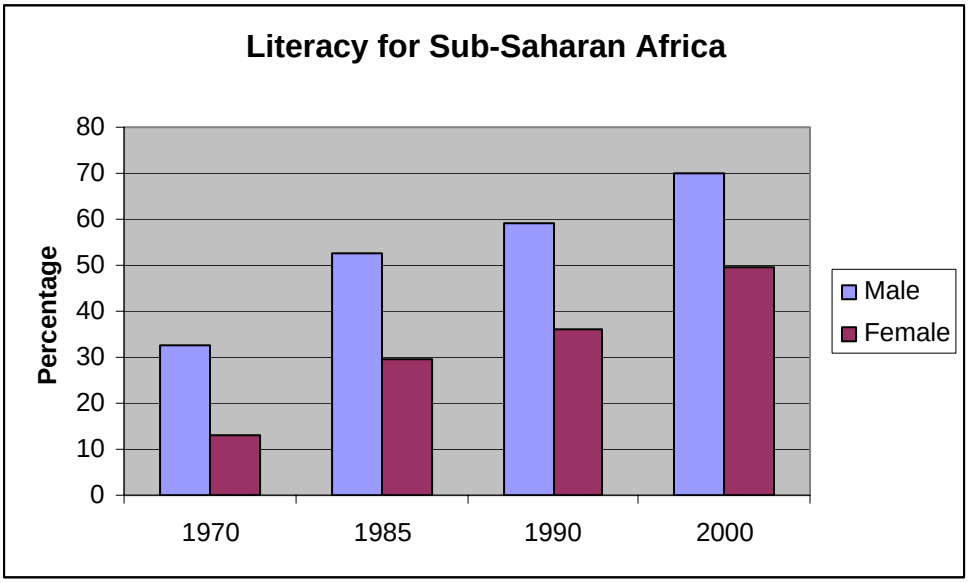
http://www.dfid.gov.uk/AboutDFID/Education/research/library/html/dep06e/ch18.htm#2.7.2%20literacy%20and%20development

Estimated Adult Literacy Rates by Sex 1970-2000 (percentages)

	Male				Female				Total			
	1970	1985	1990	2000	1970	1985	1990	2000	1970	1985	1990	2000
World	69.6	78.1	80.6	84.6	53.5	63.1	66.4	71.8	61.5	70.6	73.5	78.2
Developing Countries	57.8	71.1	74.9	80.3	32.6	49.9	55.0	63.2	45.3	60.7	65.1	71.9
Sub Saharan Africa	32.5	52.6	59.0	70.2	13.2	29.5	36.1	49.6	22.6	40.8	47.3	59.7
Arab States	39.5	59.2	64.3	73 1	13.7	31.5	38.0	50.6	26.5	45.5	51.3	62.0
Latin America/Caribbean	77.5	84.3	86.4	89.7	70.1	80.3	83.0	87.3	73.8	82.3	84.7	88.5
Eastern Asia	67.3	82.0	85.7	90.0	38.7	60.7	66.4	75.4	53 2	71.5	76.2	82.8
Southern Asia	44.8	55.6	59.1	66.2	16.9	27.9	32.2	41.2	31.3	42.2	46.1	54.1

Least Developed Countries	31.9	46.3	51.4	60.8	13.0	23.4	27.9	37.3	22.5	34.8	39.6	490

Source: UNESCO World Education Report 1991:97



In absolute numbers China and India have the most illiterates as a result of their very large populations.

Literacy rates are highest in Latin America, the Caribbean and East Asia, and lowest in Sub-Saharan Africa, the Arab States and Southern Asia. Improvements in the latter group appear to have been slowest in Southern Asia. Gender disparities remain striking in all regions except Latin America and the Caribbean. The literacy gap between men and women (the differences in the proportion literate) appears to have remained the same or reduced in all regions except Sub-Saharan Africa.

The absolute number of illiterates has increased significantly in Sub-Saharan Africa, the Arab States, and Southern Asia over this period, though as the graph shows, they represent a diminishing proportion of the total population.

UNESCO projections anticipate that overall literacy rates will improve from 65% to 72% in developing countries between 1990 and 2000. Southern Asia will remain with the lowest average (54%), marginally above that projected for the least developed countries (49%).

Summary: Gender and Literacy

In developing countries there are pronounced problems with ill-representation of women, and poor literacy rates, especially for women. For communication models to fit into these local conditions, they must be suited to the audience (accessible to illiterates) and also help to change and improve these gender and

education issues. Therefore, a community-focused media, which involves all local people and provides opportunities for improvement, will bring development and equalities forward.

Content and Programmes

The following are examples, mainly in the developed world, of how local content programming is created and controlled.

Promoting Awareness through Development Films

The Television Trust for the Environment (TVE) (http://info.tve.org/network.html) is an independent production and distribution non-profit company, established by Central Television (now Carlton TV) in 1984, to specialise in environment, development, health and human rights issues. All its films for broadcast are made on a strictly editorially-independent basis.

TVE uses broadcast television and other audio-visual resources - including the internet and radio - as its key platforms. It works above all to promote informed debate, public awareness of new policies and practical solutions to the growing challenges of human development in the twenty-first century.

TVE's skill is to take the seemingly complex issues on the global development agenda and turn them into television programmes that will attract audiences worldwide: to take issues like child development, primary health, poverty or desertification, and translate them into mainstream TV programmes - drama, 'soaps' and children's programmes, as well as documentaries - that focus on the human stories involved in sustainable human development.

Creating Local Programmes in the USA

The Alliance for Community Media (http://www.alliancecm.org/) provides the telephone numbers of many centers throughout the country (USA). By using their staff to film and produce programmes, volunteers produce more than 20,000 hours of new local programming each week.

The funding for media access comes from your town or county which receives "franchise fees" from cable television operators and other commercial telecommunications businesses. The payments are compensation for the use of public property.

The decision for providing your community with media access rests with your local government's contract with your local cable company.

Media documenting indigenous experiences in their own voices

Reel Voices (http://www.reelvoices.org/about.htm) is a non-profit organisation in Philadelphia that creates, and in collaboration with other organizations, supports the creation of media documenting indigenous experiences, unfiltered and in their own voices.

Public education in developing countries through radio: Assessing the Audience

The award-winning media consultancy Radio for Development (RfD) (http://www.rfd.org.uk/middle.html) specialises in the design and implementation of public education campaigns in the developing world. Since its inception in 1995, RfD has worked in over 20 countries across the developing world.

The audience is the principal stakeholder in your campaign. We believe that by understanding the unique perceptions and interpretations of your audience we can develop meaningful and relevant messages. RfD uses innovative approaches in assessing the needs of the audience. For example, we have used the methodologies of participatory theatre and rural focus groups in our radio programmes in new and exciting ways.
All materials are pre-tested with the audience before broadcasting, ensuring that your message is focused and that the content and language of your programme is appropriate.

Worldwide material transmitted to community TV stations (USA)

Deep Dish TV (http://deepdish.igc.org/aboutus/index.html or http://www.deepdishtv.org/) is a national (USA) satellite network, linking access producers and programmers, independent video makers, activists, and people who support the idea and reality of a progressive television network.

We assemble material from producers around the world and transmit it to community television stations and home dish owners nationwide. Where commercial networks present a homogenous and one-dimensional view of society, Deep Dish thrives on diversity. Instead of television that encourages passivity, Deep Dish distributes creative programming that educates and activates.

Systematic exchange of programmes for Community TV in Australia

http://members.ozemail.com.au/~catman/ice/ gives information about programmes made by community video workers which are available for exchange between organisations and individuals.

Community TV and video exists on all continents and nearly every country in the world. As technology has become more accessible to the general population there has been a dramatic increase in the amount of local documentation of attitudes, opinions and views. Over the past decade international organisations have slowly developed to bring together community video makers to increase co-operation and information dissemination.

As part of that development there has been a need for a systematic approach to exchanging programmes made. This is the first attempt at setting up an international programme exchange system.

TV Viewing and Impacts in India

According to research by the International Development Research Centre (http://www.idrc.ca/books/reports/13indiat.html), in just over 5 years, television for the Indian viewer has transformed itself from a single-channeled, largely

indigenous, state-controlled network to a system offering multiple options and unprecedented access to a deluge of domestic and foreign programming.

The TV set has come to acquire an unprecedented priority that puts ownership of a TV over education, safe water, decent food and other basics of life.

Migrant labourers at a construction site in Delhi told us that they could not afford to own a TV set, but it had become the norm to regularly watch up to 10 hours per week of TV and videos.

At the other end of the spectrum, some children from affluent families can watch TV in their own bedrooms. But since they can also swim in their private pool, or take music and dance lessons, our survey showed that children from upper class backgrounds watched TV the least, whereas children from middle-class homes watched the most.

A significant finding of the research is the sudden displacement of less affluent viewers who no longer identify with the imagery, people, scenarios, language, dress, and lifestyles of characters on television.

Language and Content Development

The Agencia Informativa Pulsar project in Ecuador (http://www.rdg.ac.uk/AcaDepts/ea/AERDD/Csds.htm), with the objective of providing Latin American news service and local language content over the Internet in audio, provides an audio service in the predominantly oral language of Quechua and news pertaining to the cultural diversity of the region.

Local content policy; Broadcaster responses to the KPMG survey

The Report for National Association of Broadcasters showed that the high levels of compliance to, as well as exceeding of, the local content quotas are indicative of broadcasters support for local content programming.

Summary: Local Content

There are many organisations creating films with local content, to stimulate awareness, education, development, etc. There are also systems set up by where these programmes can be sent to many other community TV stations to be broadcast. The standards set for commercial broadcasters concerning local content seem to be met; however, as shown by the example in India, acquiring the television itself can prevent development, especially if the channels watched are commercial.

Therefore, for successful improvement in development, community TV stations are best served to broadcast local-content programmes, either by producing them themselves or by a programme exchange system. The content must be relevant and reflect the local identity. As shown by Radio for Development, this can be done through drama groups, etc.

Community Radio

Community radio involves a local station broadcasting for the local people, and involving local people. This medium can be used to initiate local awareness, discussions, and hence lead to development, particularly in developing countries, where other forms of information communication are limited.

Arguments for Radio

According to http://www.leeds.ac.uk/ics/sl-glasgow2.pdf, between 1980 and 1996:

- Radio sets per 1000 population have increased for developed countries (900 to 1100), developing countries (100 to 200) and least developed countries (10 to 100).
- TV sets per 1000 population have increased for developed countries (420 to 550) and developing countries (10 to 160), but only slightly increased in the least developed (0 to 5).

This suggests that the provision for radio is much greater than for TV, especially in the least developed countries. However, in developing countries the number of TVs is not much less than the number of radios. In many of these countries, programmes could usually still be viewed from a community television.

Conference on Communication for Development

WACC (http://www.wacconline.org.uk/404.php) is a Christian organisation that promotes and implements democratic communication, to empower the people.

Major gatherings of funding agencies, operating aid agencies, professional practitioners and business partners, during the summer of 1996, created new intersections and released a flow of information relating to the evaluation of effectiveness and the directing of funds for a next stage of initiatives in communication for development. One of them, breaking new ground, focused on Creative Radio in Emergency & Disaster (CRED) and analysed how radio succeeds as a tool for development.

The conference recognised that in the past 25 years there has been a sevenfold increase in the number of radios in the developing world. 'The figure is now estimated to be 500 million -ten times the number of television sets.' It was also pointed out that fifty percent of women in low income countries were illiterate, putting newspapers beyond their reach. 'Radio may be their only source of unbiased information.'

The aid agency is now training more than 50 local journalists and health workers in script writing, radio and video production and in audience research methodology in a training initiative that they aim to use as a model for future community radio projects in developing countries.

Training people is probably the most sustainable development activity 'because people do development, not machines'.

Outcomes of community based radio projects:

- Fertile environment for development communications
- Low operating costs
- Access to scattered people
- Promotion of traditional oral cultures
- Potential for local language programming

Authentic expression and empowerment of people at local level, which happens once a community radio station becomes established

Problems of community radio:

- Low on the list of funding priorities
- If set up by a local NGO, funding can come to an abrupt end. This mitigates against the need to build up a regular audience
- The problem of how to show value to funders, especially if a station is broadcasting in a local dialect that the funders themselves do not understand

Areas of Conflict

In an overview of communications in unstable regions of the world, Gordon Adam (BBC/ICHR Partnership) also emphasized the powerful role radio can play. Pointing out that the number of people affected by disaster had increased from 11 to 75 million in the past 30 years (Federation of Red Cross and Red Crescent Societies) he said, 'Unlike much other emergency aid work, radio can avoid security constraints by transmitting educational programmes regularly from relatively secure locations.'

Deregulation

The deregulation of radio stations in Africa and Asia has contributed to the new opportunity for effective radio broadcasting for development, emphasising the need for training in the special skills needed to use radio effectively in emergency or development situations.

Community Radio using the Internet

OneWorld (http://www.oneworld.org/ips2/oct00/02_20_005.html) reports news from organisations. It claims that a radio station with tens of thousands of listeners that makes active use of the Internet can greatly multiply the impact of its Internet connection.

This will further contribute to bridging the digital divide, as more information can be accessed.

The BBC (http://news.bbc.co.uk/1/hi/sci/tech/1796236.stm) reported how radio is bringing the internet to people in a mountain village in central Sri Lanka. Every

day for an hour, presenters in the studio translate and read out web pages on topics suggested by the listeners. The aim of the Kothmale Community Radio project is to provide access to the web to villagers who do not have computers and may not be able to speak English. This will reduce the Digital Divide.

The project was started almost three years ago with funding from Unesco. It has proved a big success, with no shortage of volunteers to help out.

The concept of extending the internet via radio to rural regions in developing countries was devised in 1996 during discussions between Unesco and community radio broadcasters. The idea was that the two mediums could be integrated to make the internet accessible to a wider audience.

Combining Satellite Broadcasting With The Internet For Community Radio In India

According to http://www.tenet.res.in/commsphere/s7.3.pdf, Community radio stations have been completely absent in India. The government has made several attempts at setting up local radio stations, some of which were highly successful. However, these efforts were largely top-down, lacked long-term commitment, and have languished.

Rural communities typically are not rich, and will probably not be able to afford a conventional radio station, with investment costs in the range of $ 1 million. Setting up an Internet radio station, including web space rental on a server with a high bandwidth connection to the Internet, is in the range of $ 10,000, about 2 orders of magnitude lower.

Serving Community Radio

AMARC (http://www.amarc.org/amarc/ang/) is an international non-governmental organisation serving the community radio movement, with almost 3,000 members and associates in 106 countries.

They are creating a Community Media Fund to encourage development agencies and other international actors to contribute to the creation of a community media fund. Currently, the International Board is researching an appropriate operational structure for the implementation of such a fund.

The Origin and Traditions of Community Radio

The Community Media Association (http://www.commedia.org.uk/library/training/html/rpp/Section1_1a.htm) gives information about community radio.

Community radio exists in a wide variety of forms throughout the world. The first community stations began broadcasting over fifty years ago in Latin America.

Latin America: There has been a huge variety of radio stations in Latin America since the medium first arrived on the continent. The Church, Universities, Trade Unions and Indigenous groups all run their own stations. Other groups produce programmes that are broadcast on larger, mainstream stations. Some community

radio stations literally use a loudspeaker to broadcast to the immediate neighbourhood. Latin America probably has the most dynamic radio sector in the world.

Africa and Asia: Traditionally have not had true community radio. Most radio in these regions is government controlled. But recently, there have been developments towards a community radio sector. There are some community stations opening up throughout Africa, with a very dynamic community radio network developing in South Africa. In Asia, there are some rural radio projects, and educational radio projects operating in The Philippines and a number of quite independent community stations in Vietnam.

The picture in *Eastern Europe* is different, with most new licenses going to commercial radio stations run by the west European media industry. However, there is strong interest in community-style radio and a number of stations are springing up.

Community Radio, (in contrast to mainstream) tends to:

- Encourage participation in all aspects of the station - including broadcasting and management of the station;
- Serve a local community or specific interest group;
- Encourage a wide range of people to be involved in the station, regardless of their age, race, gender etc.;
- Put the quality and diversity of information ahead of a slick programming style;
- Encourage strengthening of the local culture - music, language, literature, debate
- Get most of the programme material from local rather than national sources;
- Be governed by people with strong connections to the community and the production of radio;
- Have a number of sources of income and are not concerned with making a large profit for shareholders;
- Encourage paid and voluntary staff to work alongside each other on equal terms.

Community Radio in Africa and Latin America

The Rockefeller Foundation (http://www.devmedia.org/documents/Position%20paper.htm) highlights that the community radio movements that stand out are in Africa and Latin America. By definition, community radio stations cannot succeed without local control, citizen participation, local issues-based programming and open access. Yet radio remains essentially a top-down methodology; that is, someone decides what will be broadcast, it airs, and is received passively by listeners.

The better community radio stations, such as Cape Flats' (South Africa) Bush Radio, Radio Zibonele in the Khayelitsha community of Cape Town, South Africa,

and Alexandra Township's community station focus on audience participation. New programming stems from the suggestions listeners make when phoning into the stations, or when they are working there as volunteer staff. Critical issues facing the communities are discussed – and problem solving happens in real time – on the air.

Community Radio station in New Mexico

Kaleidoscope Radio (http://www.angelfire.com/poetry/gallup/) has been created to give the people of Gallup, New Mexico, a forum for freedom of speech on the radio dial, limited only by the boundaries of nonviolence and love. Kaleidoscope Radio will not tolerate hatred and violence in our programming, because the point of community radio is to hold each other in high esteem and to share our resources.

The East African Pilot Project – community radio and resource centres.

The Communication Initiative (http://www.comminit.com/streview/sld-5237.html) lists community media projects. One of these is an east African pilot project to establish three community resource centres and radio stations in Kibwezi, Kenya, Terrat, Tanzania and Kagadi, Uganda. The pilot project was initiated in 1993 at the request of three community-based organisations: the Mang'elete Women's Group through the African Medical and Research Foundation (AMREF) in Mang'elete; the Orkonerei Integrated Pastoralists' Survival Programme (OIPSP) in Terrat; and the Uganda Rural Development Training (URDT) in Kagadi.

Community Radio in India

http://www.comminit.com/news/mediabeat/mb_a0276.html describes how for decades, India's radio stations have been centralised, government-controlled, over-dependent on relays and lacking in editorial independence. In recent years, a small number of citizens' groups across India have been pushing for something very different, through the community radio model.

Privatisation and total deregulation will not mean much to the average citizen if radio fails to get a chance to play a vital role in their lives. India has so far clearly given step-motherly treatment to public service, community, educational and development broadcast networks.

Over five years back, the Indian Supreme Court gave an interesting ruling. This judgment strongly critiqued the long-held government monopoly over broadcasting in this country. In early 1995, the court declared the airwaves as public property, to be utilised for promoting public good and ventilating plurality of views, opinions and ideas. (AIR 1995 Supreme Court 1236).

This judgment held that the 'freedom of speech and expression' guaranteed by Article 19(1)(a) of the Indian Constitution includes the right to acquire and disseminate information. And, in turn, the right to disseminate includes the right to communicate through any media -- print, electronic or audio-visual.

Recently, a group meeting in Hyderabad issued the Pastapur Initiative on Community Radio, released at the end of a four-day UNESCO-sponsored workshop. It pointed out that "a truly people's radio should perceive listeners not only as receivers and consumers, but also as active citizens and creative producers of media content."

If the government is really serious about freeing broadcasting from state monopoly, then it needs to proceed to its logical conclusion by expanding the available media space and permitting communities and organisations representing them to run their own radio stations.

It was also pointed out that community radio should have three key aspects: non-profit making, community ownership and management, and community participation. Community radio is distinguished by its limited local reach, low-power transmission, and programming content that reflects the educational, developmental and cultural needs of the specific community it serves.

India could well benefit from the creation of a three-tier system of broadcasting in the country: a state-owned public service network (existing framework); commercial private broadcasting; and non-profit, people-owned and managed community radio stations.

Non-profit and development organisations have been lobbying for more than five years to get permission to broadcast information that could help the "information poor" to get an understanding of issues critical to their lives. Recently, neighbouring countries like Nepal and Sri Lanka edged past India by allowing non-profit community radios to be set up. Asian countries like the Philippines have already shown the beneficial impact of such locally-managed, non-profit initiatives taken up by citizens themselves.

"In Sri Lanka, we are using a community radio station in Kotmale to find information on the Internet, which readers ask for via phone or post. This helps simple villagers to get access to the information superhighway too," University of Colombo journalism lecturer Michael J.R. David said during a recent visit to India. He is the project leader of the Kotmale community radio station, which took off in May 1999 but is already being studied worldwide as an innovative experiment in development communication.

India's state-owned All India Radio (AIR) had set up a string of local radio stations some years ago. But without carrying these plans through effectively, the stations were not locally relevant and community-run. By contrast, community stations can play an important role. Repeated changes in governments and bureaucratic red tape has meant that community radio is still to become a reality in India.

Today, it is technically and economically feasible to set up hundreds, if not thousands, of low-powered FM radio stations across the country. These would not interfere with one another. What is lacking are the government laws to permit this, and the political will to allow radio to play its role in a country like India.

Some suggestions that have recently been considered in this country include: small transmitters with a reach of ten kilometers, one studio with recording and

broadcasting facilities, and broadcast hours flexible to fit into local demand -- for example, before and after field work in early morning and late evening in rural India.

India's middle classes seem to have re-discovered radio - with the FM boom -- in the 'nineties. But for the bulk of the citizens of this country, radio is virtually the only electronic gadget they can afford. There's no medium other than radio that can offer relevant, local information too, provided it is aptly utilised.

Radio has already proven its relevance to Indians. Recent studies suggest that radio in India has a potential listener-ship of 98.5% of the population of this vast country. There are some 104 million radio homes, double the number of TV homes. Radio has a far broader reach than television.

Over the last decade, All India Radio has focused more on the rural population and the urban lower middle classes, unlike TV's preoccupation with the relatively smaller number of urban upper middle classes. It has also been argued that considering the low levels of literacy in India and the low purchasing power of the large majority, radio will inevitably retain its edge over the print media and television in terms of outreach.

Setting up Community Radio Stations

Community Radio Satellite (ComRadSat) (http://www.cbaa.org.au/content.php/207.html) is a service for community radio stations - allowing you to access a wide range of national programming to complement your own local programs.

To receive this service the equipment needed is:
1. A solid dish (costs between $400-$800 depending on size and quality).
2. An LNB (a down converter at the focal point of the dish, costing between $100-$400)
3. A digital receiver (around $1,000).
4. Smart card ($100)
5. Balancing equipment (around $300)
6. Installation (between nothing and $500)
7. A device for recording your program onto - many use a VHS recorder, but you could use a computer, mini-disc or another system.

Some stations have lost money trying to use other cheaper satellite reception equipment which does not work satisfactorily.

Weaver Street Market

PTFP (Public Telecommunications Facilities Program) provides matching grants for equipment purchases for public radio and TV stations. Weaver Street Market community radio (http://www.google.co.uk/search?hl=en&ie=UTF-8&oe=UTF-8&q=TV+Broadcasting+equipment+costs&spell=1) requested a grant for 75% of the cost of the needed equipment, or about $33,000. The PTFP will provide 75

percent of the roughly $44,000 in equipment costs to build a low-power radio station in Carrboro, said Ruffin Slater, the group's president and general manager of Weaver Street Market.
Chapel Hill Herald April 10, 2003

KFOK 95.1 FM - Community Radio, GEORGETOWN

According to http://www.google.co.uk/search?hl=en&ie=UTF-8&oe=UTF-8&q=TV+Broadcasting+equipment+costs&spell=1 , the capital cost for putting together the equipment for the station was estimated to be between $18,000 and $20,000, however, thanks to the efforts of everyone involved we have managed to get on air by acquiring used and donated equipment on a budget of only $7,000. There are many needed equipment upgrades and the yearly cost to run the station is estimated at $8,000 which includes rent, utilities, insurance, office supplies and BMI and ASCAP licenses.

The micro-power radio movement

According to http://www.angelfire.com/poetry/gallup/, since 1978 the FCC (Federal Communications Commission) no longer offers licences for stations under 100 watts ("micro-power" or "low-power" fm) so that all such licensed stations disappeared by the mid-1980s. This left the regulation of unlicensed low-power stations up to the decentralised responsibility of the local stations themselves.

Micro-power Broadcasting

The Micro-power Broadcasting, Free Radio Movement (http://www.radio4all.org/how-to.html) has shown that an FM broadcast station does not have to consist of rooms full of equipment costing tens of thousands of dollars.

Micro-power broadcasting uses FM transmitters whose power output is in the range of 1/2 to 40 watts. These transmitters combined with other equipment including inexpensive audio mixers, consumer audio gear, a power supply, filter and antenna enable any community to put its own voice on the air at an average cost of $1000-$1500. This is far more affordable than the tens or hundreds of thousands required by the current FCC regulatory structure.

The main argument the FCC uses against micro-power broadcasting is the issue of interference with other broadcast services. Interference is a valid concern. By using equipment that is frequency stable and properly fitted with harmonic suppression filters along with good operating procedures and standards, the FCC's argument can be effectively neutralised.

The technical aspects of micro-power broadcasting require some basic knowledge in the areas of electronics and broadcast practices. It is hoped that as this movement grows a network of people with the required technical skills will be formed to assist in the process of empowering every community with its own voice.

This website also gives information on setting up a community radio station.

Setting up Community Radio in the UK

A document (How To Set Up A Community WLAN) has been prepared to provide a guide to setting up a community based not-for-profit Broadband Wireless Local Area Network in the U.K.

The community self-help co-operative alternative as a new concept originated in the U.K. and has been promoted since 1998 via the World Wide amateur radio community and the original website: - www.wlan.org.uk.

In its simplest manifestation a Community WLAN starts with a “HUB” - a single strategically placed, shared wireless “Access Point” (AP) connected to an omni-directional community antenna located at some common vantage point. This allows at any one time up to 128 computer users with “wireless LAN transceivers” at any ”line-of-sight” visible distance of over 10 miles, to interconnect free of charge to an 11Mb/sec local area network “hub”.

All facilities normally available to users of a “wired” network and especially broadband internet gateways to the outside world; neighbouring community networks, multiple video conferencing nodes, independent community TV & Radio webcasting and file servers may be added in due course on an ad hoc and possibly commercial sponsored or subscription paying basis from ANY point on a newly created alternative network.

A Community Wireless Local Area Network differs from commercial alternatives, in its primacy of core consumer values. Traditional Co-operative structures preserve a neighbourly community sharing ethos, fair disposal of collective profits and long-term strategic benefits.

Adaption to Digital Radio Transmitters

NTIA (National Telecommunications and Information Administration) (http://www.ntia.doc.gov/otiahome/ptfp/Application/equipcost_Radio.html) anticipates funding digital-compatible transmitters to replace analog transmitters, if requested by applicants and justified as urgent replacement. Recipients may add HD Radio (IBOC) exciters to PTFP-funded digital-compatible transmitters or use grant funds awarded for an analog or digital-compatible radio transmitter towards the purchase of a transmitter with an IBOC exciter.

This website includes a list of pricings, according to different power levels of transmission.

International Amateur Radio Union

The International Amateur Radio Union (http://www.iaru.org/iaru-soc.html) puts forward the view that Amateur Radio must organise nationally and internationally. This is to achieve better mutual use of the radio spectrum among radio amateurs throughout the world, to develop Amateur Radio worldwide, and to successfully interact with the agencies responsible for regulating and allocating radio frequencies.

The website also includes addresses for unions worldwide.

Summary: Community Radio

Community Radio provides unbiased information, which is particularly important in areas where literacy rates are low, or women are under-represented in media. Community participation is encouraged, bringing empowerment to the local people. Radio is also a safe way of providing information to areas of conflict, or during an emergency. When radio is combined with the internet, the audience increases, and the source of information available to people dramatically widens, bridging the digital divide. Many examples show the positive management and effects of community radio stations.

Radio stations are often affected by licence fees and legislation. Payments can be funded by donors, such as UNESCO, or advertisements. But many micro-power stations are released from centralised regulation.

There are organisations that provide equipment to developing countries, appropriate to the local environment, such as fuel availability or population density. These prices can start at $1000, in contrast to $16,750 to set up a local American mall radio station. Therefore, by using suitable equipment, micro-broadcasting can be achieved with no interference and little cost. However, technical skills are needed to set up a station. It is also anticipated that digital transmitters will soon be widely used.

Internet

Availability of Computers

The Commonwealth Network for Information Technology (http://www.is.lse.ac.uk/ifipwg94/ifipnews.htm#3) put forward the argument that computers are more widely available than televisions, hence providing greater access for internet communication.

Intel Corporation now expects computer sales to overtake TV set sales in 1999, but the gap in per capita computer availability is widening. Whereas the number of computers per thousand people is 300-500 in countries like USA and Norway, the world average is 36, in India it is 1.1, and sub-Saharan Africa with its 500 million people less than one.

Internet in Africa

http://www.is.lse.ac.uk/ifipwg94/ifipnews.htm#3 describes research, noting the change in the technological environment by the recent proliferation of Internet access points in sub-Saharan Africa and South Africa.

Uganda is still backward, but Internet facilities have grown from a non-profit Fidonet node two years ago sending email via a modem linkup to GreenNet Gateway in London to now two major commercial providers with 128Kbits VSAT links and 1- 2,000 users. South Africa is at the other end in sub- Saharan Africa: from a start in the mid-80's, the country now has 40-50 Internet providers with at least 1,000 new users per week (100% growth per year). Around 500,000 students and staff in tertiary institutions also have access to Internet. There are also massive efforts underway to expand telecommunication services to previously neglected areas, both urban and rural. South Africa is expected to be the technological and economic locomotive in sub-Saharan Africa.

Global Telemedicine Network

According to the International Telecommunications Union (http://www.itu.int/ITU-D/bdtint/general/specialprog.htm), most developing countries suffer from a severe shortage of health care professionals, especially in remote and rural areas. They need improved communications between remote health centres, urban hospitals and international medical specialists; better supply of pharmaceuticals and other medical supplies; efficient access to information on distant hospitals' bed capacity and programmes on health care practices. For these and many other needs, the Global Telemedicine Network provides:

- Access to medical services and data bases via the Internet - for identification of problems or information on new developments
- Teleconsultation and tele-education - for health care professionals and public health programmes

- Vital signs monitoring - communication of patient data to distant doctors using simple devices for recording ECG, pulse rate, oximetry, blood pressure and respiratory parameters
- Image transfer and videoconferencing - for distance conferencing, consultations with local and international specialists.

Using Telemedicine, medical assistance and supplies can be delivered rapidly to developing countries and in particular the LDCs, for health care and management of epidemics. Pilot projects are under preparation in Cameroon, Mozambique, Tanzania, Uganda, Ukraine and Uzbekistan.

Countries with low GNPs will qualify for free medical information over the Net

http://news.zdnet.co.uk/story/0%2C%2Ct270-s2090993%2C00.html reported that six of the world's leading medical journal publishers pledged on Monday (9th July 2001) to use the Internet to give third world medical institutes access to their publications free of charge or at a drastically reduced rate.

The deal, brokered by the World Health Organisation (WHO), will enable almost 100 of the world's poorest countries to gain access to vital scientific information that they otherwise could not afford. The service -- which does not yet include any American journals -- is scheduled to launch in January 2002, and will last for at least three years.

Developing countries will be assessed according to their ability to pay for the information. In the 65 countries where the GNP (Gross National Product) is less than $1,000 per capita per year, the service will be completely free, and for the 30 countries where the GNP is between $1,000 and $3,000 per capita the journal subscriptions will be "deeply discounted".

The initiative is part of the United Nation's Health InterNetwork project, focused on providing public health workers, researchers and policy makers with access to up-to-date health information via an Internet portal.

Australia to train developing countries via the net

According to http://www.ananova.com/news/story/sm_366562.html, Australia is to spend millions of dollars on bringing education to developing countries over the internet.

Tens of thousands of teachers, students and officials will be trained in specific skills over the net, becoming 'virtual students' of Australian universities.

As well as offering courses, Foreign Minister Alexander Downer said Australia would also help with the cost of setting up the necessary technology centres.

Mr. Downer said the $200 million (£72 million) scheme, to be known as the Virtual Colombo Plan, would become a reverse version of the original Colombo Plan. That was a 1950s aid programme by which thousands of Asian students and professionals came to Australia to acquire state-of-the-art skills to help develop their countries.

Initially the scheme will concentrate on setting up technology centres outside the main cities of around 12 poorer countries

The plan will link in with a $1.5 billion World Bank plan to use the internet to help developing countries speed up knowledge acquisition rather than becoming victims of a 'digital divide'.

The Internet in Developing Countries

The internet can bring opportunities. Pan Asia (http://www.compusig.org.uk/articles/devcount.htm) is running a pilot project in areas of northern Pakistan, via telephone lines. Using digital photography, Gilgit Eye Hospital is able to consult specialists worldwide.

The Internet can also be disempowering. The risk is that it will bring with it new forms of dependence on and economic subjugation to the North. Heyzer tells of a local industry project in Guyana, where traditional gender roles and expectations did not adapt to the opportunity the Internet offered. Issues such as these must be addressed if the Internet is not to become a white elephant.

Therefore, the internet may not be the most suitable media to be accessed by people in developing countries, where literacy levels are often low, and gender imbalances exist. It is also shown to disempower the people, which will hinder development.

Multiplication of internet use from a few computers

http://www.oneworld.org/ips2/oct00/02_20_005.html gives news about how internet use can be widely extended by the use of only a few community computers.

Multiplication takes place, for instance, when a single telecentre with a few computers can multiply the number of people connected by a factor of 20 or more, giving access to hundreds of people with only a dozen computers.

Bringing advanced communications technologies to grassroots organisations

Beginning in 1987, the Institute for Global Communications (IGC) (http://www.igc.org/html/aboutigc.html) played a formative role in bringing advanced communications technologies to grassroots organisations worldwide working for peace, human rights, environmental sustainability, women's rights, conflict resolution and worker rights. This is done through flagship global computer networks, and hosting websites for non-profits.

Computers to Facilitate Training

The Digital Partnership (http://www.digitalpartnership.org/solutions_rural.htm) is an international partnership facilitating innovation and affordable access to technology, training and the Internet for learning, enterprise and development in

developing and emerging market economies through a sustainable private/public partnership model.

The website gives case studies from the South Africa programme of facilitating doctors, teachers, etc. by supplying computers, training and technical support.

Partner: NICRO

Women's Westville Prison: e-learning centre to train female prisoners with 12 months sentence left in life skills and computer skills, and all staff of the prison in computers skills. Commitment by Digital Partnership – PCs and training for ITC support staff

Soweto Centre – a Digital Partnership Resource and Learning Centre opened in July 2002 serves the adjoining technical college, which do not have access to PCs. This centre also serves the adult community and surrounding 6 schools and teachers who only have one computer in each school. Commitment by Digital Partnership – set up of Centre, PCs, enhanced technology

Partner: Accenture - POP-UP Centre

This aims to test the application of the Digital Partnership to community projects with the homeless through a non-profit refuge and retraining centre in Pretoria for homeless adults and school for young boys. E-Learning Centre for teaching of ICT skills and an Internet Café. Commitments by Digital Partnership- supply PCs and associated training.

Limitations to Internet use

http://www.oneworld.org/cta/afagrict-l/telecentres.htm gives information about MDIC (Maputaland Development and Information Centre). It is an integrated rural development project in South Africa. The MDIC is a community-based organisation with a diverse range of projects, including a Telecentre.

Little Internet use takes place because the people don't know what information is available says the Telecentre manager, Sihle. Market information is also not accessible through the Internet yet, so many of the Nguni cattle farmers and vegetable producers in the area can't use it yet to find out the current prices before taking produce or animals to the market 300kms away.

Summary: Internet

The internet holds a vast collection of information, and can also widen the audience to local radio stations. However for many local communities in developing countries the information is not relevant or represented. The examples of telemedicine show that the internet is only used here by the well-educated. Access to the internet is also limited by the number of computers, and literacy levels. Therefore, telecentres play a vital role in providing the facilities and understanding required to operate the internet. If the internet is to be used

to improve development it should be combined with other media sources, as is often done in telecentres.

Community Telecentres

Telecentre is a rather loosely used word to describe places that offer the public connectivity with computers and networks. A public place where people can get a variety of communication services, and where a major part of the operators' purpose is to benefit the community.

The more narrowly focused cyber cafés or Internet kiosks are also important because of their potential to become telecentres as they mature.

Reducing the digital divide through combined local media

http://www.unesco.org/webworld/news/pdf/telecentre-us.pdf gives information about community multimedia centres, which can combine local media, especially radio, by local people in local languages with ICT and a public library. This can reduce the Digital Divide.

The website also includes information on how to get added value when setting up multimedia centres (including community TV).

The International Telecommunications Union (http://www.itu.int/ITU-D/bdtint/general/specialprog.htm) has helped to develop the concept of Multipurpose Community Telecentres (MCTs); a shared information and communication facility for people in rural and isolated areas. Such centres provide information technology and telecommunication facilities, user support and training for the majority of the population of a community who cannot afford such facilities on an individual basis and/or do not have the skills to use such tools.

Besides access to public telephone and fax, the MCTs may offer (shared) office facilities for local small business and "teleworkers", including computers, printers and photocopiers. Such centres provide access to data networks (e.g. Internet) for e-mail, file transfer, electronic libraries and databases, government and community information, systems, market and price information and environment monitoring. They may also offer support and facilities for teletraining and telemedicine, and/or provide equipment and training for local production (and reception) of radio and TV broadcasting programmes. Such facilities are planned for two of the MCTs in a pilot project, currently being implemented in Suriname in order to promote local culture.

Pilot projects are being implemented, in partnership with concerned UN-agencies and NGOs as well as national partners, in Bhutan and Vietnam including projects in five African countries within the framework of the UN-System-wide Special Initiative for Africa. These pilot projects provide a test bed for new technologies, applications and services relevant to the populations in rural and remote areas and are expected to provide "best practice" models for provision of universal access in such areas.

Telecentres in the UK

http://informationr.net/ir/4-2/isic/ellen.html gives information about telecentres, particularly in the UK.

Within the UK telecentres are being established as well as other initiatives such as Community Networks which provide electronic community information. Telecentres provide local centres where individuals can utilise ICT for personal or business use in order to gain access to electronic information. These developments are aimed at providing access to ICT to those who do not have such facilities in their own home or workplace; to ensure that they are not excluded from accessing increasing amounts of electronic information. Teleservice centres typically have trained staff dedicated to support and training for users.

Emerging themes of Telecentre use in the UK

- The importance of informal information and communication in dealing with everyday situations;
- Access - the most important factor is cost, not providing the hardware. People do not feel they have access when they have to pay £3.00 per hour to use a service;
- Patterns of usage - people either use alternative information sources or seek out access that is free (friends, college, businesses out of office hours);
- Need for support in using the Internet - this is crucial in order to encourage novice users not providing support will effectively exclude a large number of people;
- The Internet is becoming too slow for efficient use;
- Online shopping - hypothetical situations show a lack of enthusiasm for this activity;
- Older people - those interviewed have been enthusiastic to learn about the Internet.
- Community involvement strategies - few identified from the pilot and first case study; development is driven by category of funding sources available.

The African Telecentre Experience

http://www.oneworld.org/cta/afagrict-l/telecentres.htm gives information about access to ICTs in rural areas of Africa.

Example: Ghana

In Ghana there are numerous Internet access points located at 'Communication Centres' mainly in urban areas.

A pilot project is proposed for the Volta Region of Ghana. The aim of this project will be to test the hypothesis that global knowledge can be converged within a target rural African community to decode and integrate indigenous African knowledge into modern knowledge and, as such, can lead to human capacity

enhancement, rural poverty alleviation, improved health care and environmental rejuvenation.

We have built a wide network of local and external individuals and institutions, informally for now, around the themes we have developed to provide examples of the blend between knowledge systems. Powered by convergent IT tools, the model translates into a knowledge network which presents indigenous institutions of African knowledge in modern formats. The network will provide connectivity among global knowledge and research centres, similar centres in Africa, as well as access to a specified or target communities in rural Africa. This would provide the mechanisms for brain convergence in national-international research system linkages which would necessarily reach the target rural population.

Example: Nigeria

Fantsuam, an NGO, is running an on-going micro-credit project in Nigeria aimed at alleviating poverty among rural women. As an extension to their existing program, Fantsuam is putting in place a computer based distance-learning programme to meet the educational needs of the rural communities they serve. The Mobile Community Telecentre, which is run by Atsen Ahua for Fantsuam, uses a van that is rigged to carry 4 computers between rural communities in a 20 mile radius. The pilot programme will provide:

- communication access to secondary school students to supplement their formal studies,
- access for teachers to re-train for diplomas and degrees as well as a means for Community Health Workers to access information for their re-training and skills up-date.

Example: South Africa

The MDIC (Maputaland Development and Information Centre) in South Africa, as mentioned earlier is a community-based organisation with a diverse range of projects, including a Telecentre. The Telecentre has a particularly interesting project making use of the new digital satellite based broadcast Internet services (which send high speed data down to the standard low cost digital satellite TV dish) to hook two of the local schools to the Internet without the use of phone lines.

Costs (South Africa)

Using the lower frequency radios, normally used for telemetry, running at 460 MHz, is an interesting match with the satellite equipment, and it may be worth applying it in other similar situations around Africa. There are now three satellite Internet broadcasting services in Africa, and their low cost - about $30/month for 64Kbps - combined with license-free use makes them very attractive. They don't normally require a license because standard TVRO/satellite TV has been allowed in virtually all countries now, and as these types of services use the same one-way system, they can usually by-pass local telecom restrictions.

http://www.communitysa.org.za/projrev.htm givesmore information and prices of Universal Access ICT projects in South Africa: 'A full telecentre costs between R150,000 and R200,000. This buys you phones (around 5), Computers (around 4), a photocopier, fax machine, printer, scanner, OverHead Projector, TV & Video and modem. The building also is renovated, with furniture and security being added. A mini-telecentre follows a model developed by the CSIR - a computer in a moveable cabinet with a 3-in-1 (printer, copier, scanner) with phone lines and a modem - costing around R15,000.'

BRACS broadcasting stations

BRACS (Broadcasting for Remote Aboroginal Communities Scheme) (http://www.google.co.uk/search?hl=en&ie=UTF-8&oe=UTF-8&q=TV+Broadcasting+equipment+costs&spell=1) is a network of community broadcast stations. Each BRACS unit costs between $30 000 and $40 000.

Equipment used

The original BRACS design comprised a wooden cabinet that housed all the radio and video replay and transmission equipment that included satellite receivers, UHF transmitter and FM transmitters. Located outside in close proximity to the BRACS room was a satellite dish and a nine metre guyed, pipe mast.

The transmission side generally consisted of two 20 watt, rack mounted FM transmitters, giving a range of approximately 15km and 2 watt UHF rack mounted television transmitters, this equipment was located in the rear of the consoles.

Ten Themes for Telecentre Sustainability:

1. The power of a national commitment by policy-makers who recognise the value of connecting the people of the country through the modern tools of the Information Society, and follow that commitment with funding and organisational support for multi-year programmes.
2. The importance of partnerships in translating national policy into action through governmental and non-governmental bodies at the regional and local levels.
3. The value of having local "champions" (innovators) who can mobilise others (early adopters, opinion leaders) to accept the vision of an ICT telecentre programme.
4. The significant value of community volunteers in operating telecentres
5. The advantages of clusters or networks of telecentres working together in a region to develop and share a variety of resources.
6. The importance of raising awareness about information and ICTs as a valuable resource for individuals, families, organisations and communities.

7. The role of research in creating a viable telecentre enterprise.
8. Telecentres need long term sustainability and business plans that fit the culture of the community.
9. Focusing on information services rather than on computers and the Internet alone to build a local institution more fully woven into the fabric of the community, with a larger base for generating income.
10. Participation as an important goal that requires a strategic approach.

Obstacles to access

Literacy
Relevance
The culture of information
The cost of information
Technophobia
Complexity of ICT protocols
Power

The Role of Training

Training in operating the hardware and software of computers and networks, but particularly reaching out to the community and strategically building a clientele that can make a telecentre demand-driven.

Telecentre personnel may need to train personnel in other organisations such as agricultural co-operatives and community health clinics to help build the recognition that the telecentres can support these organisations and their members with relevant information resources.

Future for telecentres

It is clear that, because of their connection with community development and social change, and with the dramatic telecommunications innovations of the 21st century, telecentres will be a topic for research and development for several decades ahead.

Summary: Telecentres

Telecentres contain a variety of information technologies, so are less likely to discriminate against any one particular section of society, as might happen from a single media source. For telecentres to be useful, well trained staff are essential. Low costs and free licences make financial problems minimal. Examples show that if these criteria are followed, then telecentres can provide information and resources, to aid development.

Satellites

Satellites in India

http://www.mubs.mdx.ac.uk/research/Discussion_Papers/Economics/dpapno94.pdf describes the development of satellite TV in India.

Since 1975 India has built 25 satellites under the satellite programme (part of the Space Programme) for remote sensing and communication. It combines foreign technological imports (in the formative stage) with local knowledge (in the accumulative stage); both are essential! However, developed countries appear reluctant and concerned about losing their competitive advantage.

Most satellites are expected to last between 6 to 7 years in the hostile environment of space. India is therefore one of few developing countries to afford and have capabilities for such technology.

Broadcasting commercial programmes to small, remote communities

http://ourworld.compuserve.com/homepages/ggninfo/78.htm gives information that a research program, originally designed to provide the answers to some of the u.h.f. transmission and reception problems, shows promise of "paying off" in the low-cost TV station field.

Sylvania Electric Products Inc. of Emporium, Pa. has successfully developed an experimental *"satellite"* TV transmission system which is designed to provide video reception in areas where good signals are now blocked by mountains, hills, etc.

Under the satellite system of television, transmitted signals are picked up from one or more distant television stations. Those signals are amplified by the satellite station, and then are re-transmitted on a different television channel.

These experiments have indicated that satellite transmitters operating with 10 watts output power and approximately 175 watts e.r.p. will provide acceptable broadcast service within a radius of six miles without appreciable change in the interference conditions of existing stations.

WorldSpace Satellites transmitting programs to community radio

http://www.dse.de/zeitschr/de299-3.htm gives information about WorldSpace. WorldSpace, an enterprise based in Washington, DC, USA, was founded in 1990 by Noah A. Samara, an African of Ethiopian/Sudanese ancestry. Its objective is to provide direct satellite delivery of digital audio broadcasting services to the emerging and under-served countries of the world, including Africa, Asia, Latin America and the Caribbean, and the Middle East. By the end of the decade, WorldSpace plans to have three satellites in orbit to transmit information, education and entertainment programming to a coverage area of over 4.6 billion people.

Small community radio stations or large international broadcasters will be able to rent channels on the WorldSpace satellites to transmit their programs directly to hand-held radio sets on the FM channels. Now that is going global from the local village!

Linking Africa through cable and satellite systems

The International Telecommunications Union (http://www.itu.int/ITU-D/bdtint/general/specialprog.htm) has several projects to improve communication in the developing world:

Africa One

The concept of the submarine cable system linking the African continent and providing both direct links between African countries as well as with the other continents was launched and denominated AFRICA ONE by the promoter, AT&T. Using SDH and WDM multiplexing technology, this cable ring is expected to complement existing and planned land and satellite infrastructure thus enhancing interconnectivity between African countries.

Spacecom

The SPACECOM Project, once fully implemented, will combine satellite and terrestrial communications systems to bring basic telephone services (telematics, data transmission, advanced data applications including tele-health and tele-distance learning) to more than two billion people worldwide.

SPACECOM aims at promoting the wide-spread application of space technology in developing countries, with primary emphasis on increasing the accessibility of telecommunications services in rural and remote areas.

The project activities implementation process is well advanced:

- More than thirty sponsors, representing the world-wide telecommunication industry, satellite owners and operators, governments and regional organizations, have offered cash and in-kind contributions
- More than sixty countries have expressed interest to take part and benefit from the project
- Fifteen pilot projects have already been identified for possible implementation in Africa, Asia, Central America and South America.

Future of Satellite TV

The Federal Communications Commission (FCC) has recognised the need to extend television coverage to communities too distant to receive signals from established stations and too small to support a television station. On August 1, 1955, the FCC reduced the minimum power requirements of commercial TV stations to 100 watts at any antenna height. Public Notice FCC 54991 of August 5, 1954, invited applications for stations which do not propose to originate local programs. These rule changes are the first step in the Commission’s efforts to provide each community with at least one television station.

As a result of Public Notice 54991 several stations are now being operated as satellite stations, rebroadcasting programs received by off-the-air pickup from other TV stations. Technical operating requirements of these stations, however, are the same as regular commercial TV stations except for the programming.

It is difficult to predict whether or not the financial advantage gained by lower first cost will be great enough to compensate for the lower income obtainable in small community.

The website also gives advantages and disadvantages of the satellite station/ community antenna system.

Summary: Satellite TV

Launching satellites is extremely expensive and therefore can only be undertaken by rich nations. However, the technology can still be harnessed to relay programmes to community TV stations, although these may not have local content. For remote areas, where normal TV signals cannot reach due to the relief of the land, satellite can redirect its signal to reach them.

Community TV

Community television produces local programmes, made and viewed by the community, to empower the people and enhance development. The management and content varies between developed and developing countries, so both will be examined.

Public access television in the USA

Davis Community Television (DCTV) (http://www.dctv.davis.ca.us/) has a mission to strengthen the community by using public access television to:

- Facilitate the sharing of information
- Enhance community dialogue
- Encourage individual and artistic expression
- Create an awareness of local interests, views and cultures
- Provide a vehicle for collaborative problem-solving
- Promote community involvement

Programs produced through the DCTV facilities are the sole responsibility of the volunteer producers involved. DCTV's staff provides assistance when asked but does not influence content in any way. In this way, the programs seen on DCTV channel 5 reflect the diverse interests and viewpoints of the Davis community.

This model in the USA shows how the local community can create and then learn from programmes about local issues.

New independent television station in New Orleans - costs

According to http://www.inc.com/magazine/19900101/4988-2.html, Barbara Lamont has set up a new independent TV station, WCCL. This is not community television for development, as many of the programs are commercial; however, it shows an example of how a full-equipped station in the developed world manages it budget, etc.

She spent about $3.6 million on land as well as transmission and broadcast equipment -- a good price, thanks to bargains such as the state-of-the-art production equipment that she bought, slightly used, after it had been deployed at the Seoul Olympics.

WCCL projects annual expenses of only $2.2 million (due to old re-runs).

To cover her yearly nut, she figures she'll need about a 4.5% market share and nearly $4 million in sales.

She projected net ad sales of about $1.7 million for her first operating year, ending June 30th 1990; that would translate into a net operating loss of $508,000 and -- after taking into consideration fixed expenses such as loan interest and equipment lease costs -- an after-tax net loss of $1.9 million. But by fiscal 1991 she expects to achieve her 4.5% market share and to report operating profits of $1.6 million (after-tax profits would run about $175,000). Keeping the focus on

cash flow, she hopes to turn a first-year negative of $816,000 into an impressive $1.2 million in positive cash by year two.

Community TV Channel in UK

The Community Channel (http://www.communitychannel.org/) is dedicated to inspire people to do more with their lives, by increasing the amount of original programmes featured directly from communities across the UK. It is available on Sky Digital, Telewest Channel, and Freeview.

Community based media in Ireland

Northern Visions (http://www.northernvisions.org/whoweare.htm) maintains an independence from profit led or broadcast interests, leading to a diversity of programme making from fiction films and documentaries for television to low budget community productions. The provision of skilled support services, both people and technical, releases high quality programming and has offered opportunities to local people marginalised by television or denied self and/or collective expression. Northern Visions, precisely because of this independence, has been able to develop long term working relationships with local people and communities and offer genuine access to resources and services.

Costs of Amateur TV equipment in Canada

According to http://www.gpfn.sk.ca/hobbies/rara/atv3.html#EQUIPMENT, a ham can transmit a "full motion" colour video/audio picture from one location to another. According to the proposed Canadian Band Plan, ATV hams can work on 70cm and 23cm in Canada.

ATV transmitters are available from *PC Electronics in the United States* or from *Alpha & Central in Edmonton Alberta, Canada*. The transmitters come in 1 watt & 10 watt versions for 70cm and in 1 watt versions for 23cm. The 10 watt 70cm transmitter comes with a built-in downconverter and retails for about $750 CDN. The 1 watt 70cm transmitter does not have a built-in downconverter and retail for around $400 CDN. Transmitters for 23cm cost about $530 CDN. Downconverters for 70cm or 23cm run about $150 CDN.

Digital Techniques in Amateur TV

According to http://www.cq-tv.com/articles/introduction.htm, it is anticipated that the digital compression and modulation techniques now used in broadcasting will be adapted to amateur use leading to conservation of bandwidth with improved range and picture quality.

This shows that digital technology is being used by all degrees of television and radio transmission.

Feasibility of Community TV

Wantok Enterprises Ltd. (http://www.wantokent.com/) has a mission "*to make it feasible for every group/organization in the world to own, operate and maintain their own community broadcast station regardless of their socio-economic conditions*".

Television standards throughout the world

http://www.tvradioworld.com/directory/television_standards/default.asp explains how signals and receivers differ throughout the world. Different countries use different types of television broadcast systems, video, audio and channel systems, most of which are incompatible with each other.

The website includes the Internet Broadcast Directory and Listing of Radio Television Stations on the Web.

http://www.openchannel.se/cat/index.htm also gives worldwide links to 600 Community & Public Access Television sites.

Financing Public Access TV

http://www.openchannel.se/cat/index.htm states that in Denmark non-commercial local television will be governmental supported by fees both from commercial TV-stations and the license fee.

In the United States approx. 2,000 access channels are financed by the cable operators through concession agreements with the local governments which will provide one or more local non-commercial must-carry channels including free production equipment and training for local citizens. In general there are three types of access TV in the U.S. *public, governmental* and *educational access*. In some smaller cities PEG is combined into one channel.

Commercials

Also according to http://www.openchannel.se/cat/index.htm, in the Netherlands some local access channels are allowed to carry commercials if the income is used solely for running the TV station. But in general the idea of access television is not to become dependent upon commercial financing.

Fiji Community TV: Problems with Licensing Charges

Fiji Community Television is run by volunteers and broadcasts educational programmes daily. It gives the people their own channel and one which elevates the quality of life.

CTV, funded by WACC (http://www.wacconline.org.uk/404.php) from 1998-2000, does not get any Government funds for providing non-profit, Public Service broadcasting. Furthermore they are charged the same licence fees as the commercial station.

Without charge messages are broadcast from various ministries (Youth and sport, Health, Water supplies, Agriculture etc.). Four years ago the Ministry of Finance allowed us to import equipment and waived the duty but not the VAT. This is the stance of the various Fiji Governments that have come to power. We have to pay licence fees to the Government F$1,350 for each of the broadcast spectrums that we use plus $250 for the actual TV licence (yearly).

This last fee has been reduced from the original $1,100 after four years of appeals. Our annual fees that were $3,800 are now reduced to $2,950.

As far as we can ascertain Community Stations in other countries pay much less… in Australia $411 PA, New Zealand $50, and radio stations are a lot less.

I feel that the problem is that when the Fiji Government set the licence fees by statute in 1992 they did not take into account that there could be such a thing as non-commercial broadcasting with less ability to generate revenue for fees.

The ministry will not withdraw the licence as the channel is so popular that there would be a hue and cry.

A later report from http://www.wacconline.org.uk/404.php shares the positive responses from one of the station's organisers:

"We're about to expand - people have donated premises in the capital city, Suva; people have said they would help us to the north at Rakiraki and Ba to extend our three language service. We are going from strength to strength - all on voluntary help and donations.

The station produces clean wholesome educational programmes for the whole family. Ministers should support the channel. Perhaps the ministers could persuade the government to give Community TeleVision a kick-start with funds which will enable it to broadcast around the country. We will then have a decent TV station."

Akaku Maui Community Television

Akaku (http://www.akaku.org/) is the non-profit public service agency providing local media access for the islands of Maui, Moloka'i, Lana'i and Kaho'olawe.

Akaku strives for maximum transparency and accountability to our local community.

Our local cable access TV channels, Calabash TV, Visions TV and MCC-TV, are exclusively available over Oceanic Time Warner Cable. More channels and stations are in the works. The following goals are in order to empower the community's voice through access to media:

- Encourage the production and cablecasting of non-commercial programs directly related to the community of Maui County.
- Encourage the creation of programs aimed at preserving, developing and enhancing the diversity of thought, culture and heritage within Hawai'i.
- Facilitate lifelong learning and community participation in the democratic process.
- Provide equipment, facilities, training and other support resources to try and meet the needs of our community users.
- Serve as a local information exchange.

Public TV in Latin America

According to http://www.wacconline.org.uk/404.php, in Latin America, the concept of public television encompasses a huge variety of television systems with different ownership, different forms of financing and different emphasis in programming. Exceptionally, Paraguay and Ecuador do not have Public TV. A detailed study of public stations shows that almost all of them are facing serious problems of survival. This crisis situation can be explained by three fundamental causes that coalesce:

- Poor industrial and business administration
- Lack of economic support
- TV programming found small audiences

Therefore, a successful TV station needs:-

- Stability in management and continuity in the development of long-term strategic planning
- Professionalism in executive/administrative business management and programme-making
- To take in the interests of the audience
- To be involved in competition for funding
- To break into commercial and dubbing networks for programmes that could be re-sold
- Credibility
- To be in the context of the real economic and socio-political situation of the region
- To attract a large audience (compete for obvious choice in what is viewed)

Thus studying the current state of public TV shows failure both in the industry and in the propaganda or schooling functions assigned to it and in the little viewed high culture broadcasts. According to Rafael Roncagliolo, public radio and television stations in Latin America 'above all else have been political tools rather than oriented towards public service and have failed to have significant socio-cultural impact.'

Survival of Public TV in Latin America

If it wants to survive, Public TV will have to set out to achieve substantial reforms both as a company as well as in programming that has new social functions, with socio-ethical utility that legitimises it publicly and en masse - or its channels will inevitably be subjected to the pressures of privatisation.

Effects of Privatisation, as seen by Mexico

The privatisation in Mexico of public channels 7 and 13, and the establishment of TV Azteca as a second company in competition with Televisa, has only confirmed a duopoly and has not led to substantial improvement in what television offers nor to socially useful programming. The only thing privatisation has achieved is to get rid of an industry that the Mexican government did not know how to administer efficiently nor to programme televisually.

In December 1996, the Colombian Congress approved a reform law introducing private TV, broadening the scope of regional TV, and creating community TV.

Community access television in South Africa

Open Window Network (O.W.N.), is a national network of twenty-two community based video/television initiatives as well as service organisations working in training, production, distribution and exhibition.

O.W.N. is advancing a national program aimed at promoting community access to television in South Africa by working within a developmental context in the building of community access television in South Africa (http://videaz.tao.ca/1media/11conc/111A.htm).

Address Apartheid

Redressing the imbalance of the legacy of apartheid has to be the first consideration in any movement toward the development of community television in South Africa.

For Success…

The Government's Reconstruction and Development Program recognises that information and an informed population will be vital to the success of the program.

In a largely illiterate society, broadcasting has a critical role to play in the development of a participatory democracy.

If community television is to play this role effectively then we need to take the notion of access a step further. South Africa's unique history has given South Africans a deep sense of participation and ownership of the political process.

Communities, or at least sectors of communities, are well organised and coherent. The social foundations for the success of community television have been sown. Community television can contribute to this by enhancing communities' ability to communicate with itself and the world.

In order to make this possible, community television needs to be developed from the bottom up over a period of time through distinct developmental phases.

Training

A National training program involves numerous training institutions around the country and the building of Video Access Centres (VAC) in areas where no such production capacity exists.

Licenses and Signals

When VACs build up sufficient capacity they will apply to the Independent Broadcasting Authority for a community television licence to broadcast. The network is presently debating various signal distribution options, looking into ways in which community television stations can share programming material over the long term. Serious attention is being given to the Consortium model. This model has already been through two test transmissions in the Durban and Cape Town metropolitan areas. Satellites are also being looked into as a future means of redistributing community programming nationally.

Time for Action

Now is the time to enshrine the notion of community access and participation within the new South Africa by linking it permanently to information and communication technologies.

Conditions for a community broadcasting licence in South Africa

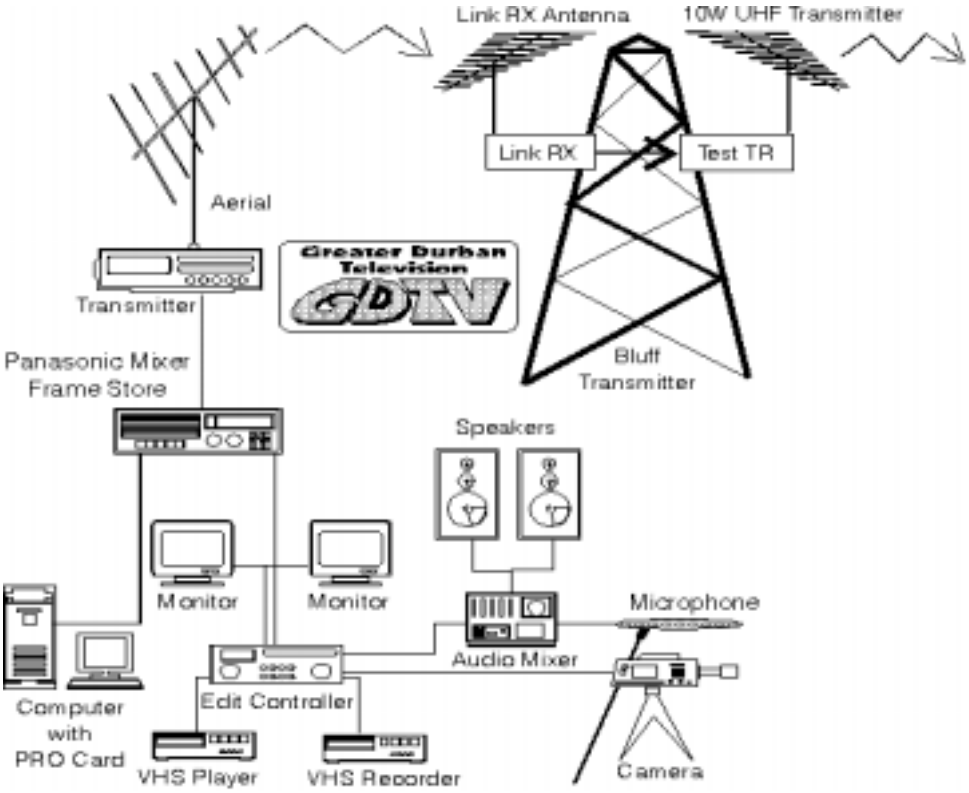
The genesis of the GDTV (Greater Durban Television) project (http://www.und.ac.za/und/ccms/mike/gdtv2.html) was the establishment of the Independent Broadcasting Authority (IBA) in 1993, which cleared the way for the formation of electronic community access media in South Africa.

The IBA Act stipulates that the following conditions must be met for a community broadcasting licence to be granted:

- The applicant must operate a non-profit entity like a Section 21 Company or a Trust as the governing structure. Any profit that is made must go back into the station or the community which it serves.
- A CTV station must provide a service for a community. This may be a geographical community or a community of interest.
- The community broadcaster must operate with the support and participation of the community it serves.

- The station should be viable financially and in terms of capacity and the skills of the trustees. Finances can be gathered from a number of sources including advertising, sponsorship, grants and donations, membership subscriptions etc.

http://www.und.ac.za/und/ccms/mike/transmit.html shows the set-up for the equipment at GDTV:



Local television stations in Honduras

http://videaz.tao.ca/1media/12exp/129A.htm describes how due to the mountainous relief of Honduras, televised broadcasting encounters many obstacles and, despite its small size, none of the six private TV channels can reach the whole country. Reception is only possible in the central zone and part of the north.

Therefore separate communications were developed in a number of communities as of 1990.

The initiative grew out of new technology such as cable transmission, portable recording equipment, but particularly out of people's interest in keeping abreast of what is happening in the country and the rest of the world.

Many communities only received news through the radio, which is not a bad thing, but considering the sparse educational and recreational activities in the area, not having television was a disadvantage.

Example

ACATEL SA (Asociación de Cable y Televisión) was established in Sabá, Colón, a town dedicated to farming and livestock raising. A group of teachers organized a cooperative to have a cable system installed and transmit programs on community activities. Sports, social, religious and political events of import to local viewers are broadcast from 4:00 to 8:00 p.m.

Impacts

In terms of communication, the experience is positive since the broadcasts serve to shape opinion, to hold educational drives and to put forward thinking that responds to local interests. It also breaks the monopoly of national television networks.

Problem

There is, however, the problem of copyright since these small cable companies do not pay for the right to use the programming; only the big cable companies in Honduras meet this requirement.

Future

We believe that community cable TV will continue to grow as the technology becomes cheaper and the demand for "different" information increases among the inhabitants of isolated communities in the country.

Training

Praxis Video intends to train people working for these alternative channels to improve the quality of their productions; advise them on technology, management and programming; and provide them with video materials that have a regional and Latin American focus, thereby contributing to the development of our countries.

Local Television Stations in Ghana

http://www.tvradioworld.com/region3/gha/ lists the TV stations in Ghana.

- Metro TV
- TV3
- GTV- Ghana Television (National Television Network),
- GhanaNet Television (Internet Television Station),
- Fantazia TV, M-Net Ghana, V-Net TV (Cable / Satellite Television Broadcasters)

- MultiChoice Ghana (Television Broadcasting Services).
-

Receiving and Rebroadcasting ABC programmes (Australia) by community stations

(http://www.abc.net.au/reception/services/selfhelp_howmuch.htm)
When estimating the set-up costs of a Self-help facility, there are a number of points to consider:

- The number of services required
- The size of the community and the extent to which it is concentrated or spread out.
- Systems which rebroadcast signals over the air may be easier to comminssion and therefore less costly than cable systems. However, a cable system may be the only available option particularly for groups in densely populated areas.
- The transmitted power of the proposed system
- Requirements for masts, transmitting antennas and equipment accommodation
- Site preparation, installation and frieght charges
- Planning approvals from local council
- Power establishment at site
- Site security such as fencing for safety and damage prevention

When planning a Self-help system communities should also allow for on-going costs:

- Future maintenance costs. A maintenance agreement with a professional company may prove beneficial. Some groups enter into maintenance contracts in which the contractor guarantees to fix faults within a specified time frame to ensure that services spend less time off air.
- Insurance should be taken out against damage to equipment
- Electricity costs
- There may be an annual fee if the Self-help service shares an existing mast or building
- An annual fee is charges for the issue of a transmitter licence for a rebroadcasting facility (transmitter). The cost is in the order of $26 per year, per transmitter.

Equipment and Installation

The table below gives estimated set-up equipment costs only (in 2000 AUD), for mid range quality equipment. The prices are indicative and do not contain all the elements required. The ABC strongly recommends that a broadcasting consultant be employed and firm quotes received from several suppliers.

Service	***10W (ABA Category A)***	***100W (ABA Category B)***	***1000W (ABA Category B)***
TV transmitter (includes mast)	$15,000	$31,000	$65,000
FM Radio transmitter (includes mast)	$8,000	$15,000	$26,000
Off Air Receiver	$1000-$5000	$1000-$5000	$1000-$5000
Satellite Receiver*	$2,500-$15,000	$2,500-$15,000	$2,500-$15,000

**Satellite dishes range in size from 1.5m to 3.7m. Larger dishes have greater immunity to rain fade. Domestic receivers would generally be at the lower end of the price range given above.*

It should be noted that costs can vary substantially between individual sites. The above estimates do not include provision for:

- On-going costs
- Power establishment at a new site

Costs of a rebroadcasting system

According to http://www.google.co.uk/search?hl=en&ie=UTF-8&oe=UTF-8&q=TV+Broadcasting+equipment+costs&spell=1, depending upon the quality and durability of the equipment you purchase, the total cost for a single rebroadcast system (one rebroadcast station) could range from around $15K to $5K. Prices for equipment are available on the web, via the links on the NWSH-maintained EMWIN page.

Recurring costs of a community TV station, Dublin

www.activelink.ie/cmf/dwl/ctv_rep.pdf gives a table of recurring costs for a community TV staion in Dublin in 2002:

RECURRING COSTS	**In Euro**
Equipment maintenance & depreciation	52500
Annual transmission cost	20000
Salaries and labour costs (approx)	
Manager (1)	65000
Partnership, Outreach, Fundraising (1)	50000
Training and production (3)	117000
Technical support (1)	38000
Admin, accounting (1)	35000
Support (1)	25000

RECURRING COSTS	**In Euro**
Video/broadcast materials	30000
Training equipment and materials	15000
Outreach, promotion, publishing budget	30000
Travel and subsistence	10000
Printing, postage etc.	6000
Photocopy lease & maintenance	4000
Office materials	5000
Utilities	8000
Phone	8000
Premises services and maintenance	9000
Audit, Accountancy etc.	15000
Professional services	30000
Evaluation and monitoring	25000
Staff development and training	30000
Insurance	10000
Total Recurring Costs	**637500**
Rent 505 sq.m. @ ¤180 each	90900
Investment in Medium Term Development	60000
Total Including Rent	**788400**

Expenses for Olelo Community TV

'Olelo Community Television (http://www.olelo.org/_board/2004%20Operating%20Budget.pdf) is O'ahu's PEG access provider. The site gives the Operating Budget for Fiscal Year 2004 (January 1, 2004 – December 31, 2004):

EXPENSE

Description	**FY 2004 Budget**
Personnel	2279055.37
Payroll Taxes & Fringe Benefits	676195.73
Employee Relations	18016.00
Employee Development	18580.00
Outside labor	44450.00
Augo Expense	12673.50
Repairs & Maintenance	156738.10
Advertising & Promotion	87640.00
Client Relations	24534.00

Description	FY 2004 Budget
Rent	447150.00
Computer Services & Supplies	4360.00
Acctg & Auditing Fees	18100.00
Bank & Trust Fees	28296.00
Depreciation	900000.00
Dues & Subscriptions	12594.06
Insurance Expenses	100606.00
Admin Service Fee	4540.00
Legal & Professional Fees	157750.04
License Fees & Permits	1130.00
Video Tapes	27404.00
Training Materials	2100.00
Office Supplies	36500.00
Postage & Shipping	11000.00
Printing & Reproduction	21370.00
Public Relations	15100.00
Production Supplies	22795.00
Taxes	57130.50
Telephone	18485.00
Travel	16000.00
Utilities	190590.00
Public Contracts & Grants Expense	35311.00
Edu Contracts & Grants Expense	975000.00
Govt Contracts & Grants Expense	86779.00
TOTAL EXPENSES	**6507973.30**

Mauri community TV station costs less than a national channel

http://www.nzherald.co.nz/storydisplay.cfm?storyID=3556330&thesection=news&thesubsection=general&thesecondsubsection=&reportID=462584 reported on 23rd March 2004 that a Far North Maori group has received a $115,000 taxpayer grant to set up a regional television station, just as the Government spends millions developing a national Maori channel. This shows how local community stations are far cheaper than the cost of setting up a national channel.

Cost of community TV station

http://www.freep.com/index/religion.htm reported on 3rd March 2004 that 'the $18,000 cost to get the license and set up the station was paid for with a federal grant'.

Costs of Community TV Pilot Project, Bankilare

The pilot project at Bankilare (http://www.wantokent.com/Tv.htm) is a new development within the RANET-Africa Programme for community television delivery. In February 2003, the anticipated costs were given: 'While it is difficult to give a solid quote on the final unit, we expect it to come in around the same cost as a 50 watt Wantok community FM radio (US$ 4000.00). This does not include the cost of TV receivers, nor does it address recovery of the US$35,000.00 already spent on research development or that which is still to come to fine tune the whole community TV broadcast system.'

Summary: Community TV

There are many local community channels in developed countries, especially the USA. However, the aims these stations will have are different to the development aims encompassed within community TV in developing countries.

Many of these stations in developed countries, particularly commercial stations, receive a large proportion of their funding from advertisements and commercials. Although some community stations in developing countries have experienced problems with paying the license fees, commercials may not be ideal for sustainable and appropriate development in poor countries.

The effects of privatization of public access TV channels have proved, by the example of Mexico, to show no improvement in socially-useful programming, so will take away the opportunity for development this media might have contained before.

As seen by the case of community TV in South Africa, the project must be tailored to the specific history, culture and environment of the local community. In this case, to gain an audience and promote appropriate development, the issues of apartheid have to be addressed. Therefore, each new station or channel will be different, with its own personal identity.

All the examples of community TV highlight the importance of training; to provide the local people with the capability to produce quality programmes, and to improve development through each other.

Multi-media

Public Service Media in the UK

Access Media Alliance (AMA) (http://www.alertaccess.net/) is committed to fair access to media platforms and contents.

The conversion to digital broadcasting has immense implications for public service media and the excluded. AMA members are committed to work with the governments, regulators, media employers and unions to help them identify innovative approaches to tackling the root causes of “institutionalised exclusion culture”. AMA members promote public interest values and non-commercial services for the national and international information infrastructure through research and policy analysis, outreach to nonprofits and foundations, and print, video, and online publishing. As the capacity for broadcasting increases with the implementation of digital broadcasting, the possibilities for public service media will increase as well.

AMA members believe that the success of public service media in the digital age will depend on alliances with local community organisations in order to ensure access to diverse voices in programming. Our ongoing observations of public service media suggest that fertile ground exists from which new models might be grown, including putting the capabilities of digital broadcasting to use for the public interest and for common good.

AMA analyses issues and options for the public interest and non-profit communities in the digital broadcasting debate.

Cultural media arts to educate

Media Working Group (http://www.mwg.org/) is a hybrid of media arts center, arts incubator, producer network and laboratory, and service organization that provides training and education to its community-at-large. The organisation provides capacity for producers, educators, telecommunications policy analysts to carry-out their work on their own terms. It is an experiment in artistic control, intervention in media culture, and the creation of a networked organization capable of participating in the emerging local and global economies and cultures.

Supporting media for communities in the UK

The Community Media Association's (http://www.commedia.org.uk/a2d/atd.html) primary purpose is to support the development of local media enterprises for community based creative and cultural expression, community development, information and entertainment. Media forms include community radio, cable broadcasting, community TV and multimedia on the Internet.

Exchanging Information about community media

DevMedia (http://www.devmedia.org/) helps people exchange information and news about how communication tools can promote development and democracy. DevMedia's focus is on media that are in the hands of people and communities. It draws attention to ways of improving peoples' access to media to encourage the sharing of ideas, voices and knowledge: locally and globally.

DevMedia users generally include people interested in participatory and community uses of radio, video, TV, telecommunication tools, and the Internet.

Interactive Television for Distance Education

This cooperative effort uses new information technology which combines the potential of television, telecommunications and computers and brings knowledge and learning directly to those with the most need and least opportunities. This programme (http://www.itu.int/ITU-D/bdtint/general/specialprog.htm), a partnership of ITU-D and UNESCO's Educational Communications Division, will provide interactive teacher training for developing countries.

The pilot project, coordinated by ITU-D and UNESCO and its partners, will run in 15 Learning Centres in Morocco beginning in 1997. Other developing countries have stated their interest in this pioneering endeavour. Combining sophisticated technological systems with clear educational objectives, cooperation projects ensure that development resources are efficiently used where they can be most effective and sustainable.

Education in Africa through multi-media: The Imfundo Initiative

Imfundo (http://www.infundo.org/souterthirteen/netsum.htm) is a unique initiative, providing partners with a rare opportunity to help transform the education sector in Africa.

Policy makers in developing countries are exploring ways to establish national and regional peering of Internet take-up in their countries. At the moment virtually all traffic from Africa travels to the United States before it is exchanged. National and regional Internet exchange points can considerably reduce traffic on expensive international circuits and thus bring down end-user costs. The manager of the South Africa-based Johannesburg Internet Exchange Point (JINX) estimates that exchanging national traffic saves the South African Internet industry $5.75 million annually at minimal management cost.

Future Projects

Our menu of possible projects in pilot countries includes:

- Provision of ICT in teacher training facilities
- Cyber cafés to provide access to the internet
- Telecentres, with satellite and/or internet access, providing a range of community and education services
- Cyberbus, equipped with workstations and a satellite link to the internet, providing mobile access to schools

- Computer labs in schools, possibly open to the community out of school hours
- Education ministries management information systems and connectivity
- Providing connectivity to community radio stations, to enable them to use the internet to access broadcast quality programmes, to obtain information for broadcast, to network community radio stations to each other, and perhaps to provide internet access to the local community
- Higher and further education institutions connectivity
- Production and customisation of educational software, and connectivity of educational material production
- Production of low cost digital books
- Video conferencing
- Educational management information systems

For every project we are involved in, our philosophy is that they must be sustainable.

This leads us to believe that education-only projects are unlikely to be sustainable. We are therefore attracted to mixed-use facilities, which might provide education services some of the time, but which would also provide commercial or other services from the facilities.

Media Diversity in Southern Africa

The media in Southern Africa (http://www.misa.org/) promotes media diversity, pluralism, self-sufficiency, independence. However, it is under constant attack from the more repressive governments in the region and those institutions and individuals who wish to restrict the free flow of information. Media practitioners face detention, arrest, imprisonment and even death.

Multimedia to improve education in rural Niger and Burkina Faso

www.ftpiicd.org/files/research/reports/report6.pdf gives a research report from August 2001 about new technologies and education in developing countries:

ABSTRACT

Education in many West African countries is especially weak in rural areas, where teachers are deprived of up-to-date information and other basic educational resources. New satellite services, which were recently introduced in Niger, are paving the way for improvement of the educational infrastructure in isolated areas. As these wireless services become a reality, advanced content production techniques are required. In fact, content plays a key role in the adaptation and long-term success of these new information architectures. This study by Noterik & Doonder Multimedia for SNV and IICD examined the applicability of new multimedia technologies in the field of education in Niger[1] and Burkina Faso.

Within the framework of our research project, we found a growing interest in the use of new technologies for educational programmes. We demonstrate that the use of audio-visual information in combination with the new XML standard SMIL can help to accelerate the

production of attractive and inexpensive multimedia applications. We also point out that educational material can be stored in television and radio archives. The conversion of these archives into digital formats will help develop an inexpensive educational content library, suitable for computers as well as for radio and TV.

Niger is, interestingly, one of the first countries in the world to integrate novel satellite services with rural radio projects, giving rise to cost efficient information architectures in isolated areas. These developments are promoted by RANET, a coalition of organisations that attempts to create awareness of the use of community radio and the Internet in the region. We believe that a pilot project should be conducted in collaboration with RANET to elucidate the conditions under which new technologies can be productive in educational programmes in West Africa and further strengthen the coalition that has been formed around RANET.

The information architecture emerging in West Africa (Niger) is illustrated and described in figure 1. The new satellite services can provide a good basis for sharing valuable content and promoting collaborations in ICT and education in different developing countries.

COSTS

Basic Multimedia Studio	**Costs (Hardware in US $, including VAT)**
Pentium class system	$ 1,500
DV camera	$ 700
Digital photo camera	$ 400
Storage	
CD (650 Mb)	$ 0.5
Hard disk (20 Gb)	$ 120
Computers (clients)	
Desktop	$ 1,000
Laptop	$ 1,400
Solar energy stations	
Low energy station	$ 400
High energy station	$ 3,000
Community Radio & TV	
Radio station, including training and power supply (Wantok Enterprise)	$ 13,000
Second hand TV transmitters, 350 Watt	$ 4,000
Second hand TV transmitters, Kilo Watt	$ 12,000
FreePlay ™ (Wind-up and solar, no batteries radios)	$ 50
Satellite	

Basic Multimedia Studio	**Costs (Hardware in US $, including VAT)**
WorldSpace	
WorldSpace receiver	$ 90
Adapter/modem	$ 130
Receiver DMS fee /month	$ 10
WorldSpace Foundation Channel Service (Minimal contribution per year)	$ 10,000
VITAsat	
Ground station (Assembled by Wavix)	$ 2,500
Additional annual charge per station	$ 500

Depending on the final architecture a fully operational infrastructure for an advanced communication centre will cost between the US $ 15,000 and US $ 30,000.

REVIEW AND CONCLUSIONS

In Niger (NGOs) and in Burkina Faso (University of Ouagadougou) there is a growing interest in using new satellite and multimedia technologies for educational programmes, particularly in rural areas. The recent introduction of WorldSpace digital media services (DMS) and VITAsat email exchange services demonstrate that a relatively inexpensive communication network is applicable in these areas. RANET is integrating these developments with community radio stations, giving rise to a cost efficient information architecture.

The use of multimedia content offers interesting opportunities to augment community radios with TV broadcasts. Digital content can easily be converted to TV with reasonable quality, for example using the Matrox dual head G450 graphic card (US $ 150). Second hand TV transmitters (350 W, 15 KM range) can be purchased for US $ 4,000 and many electronic companies have small portable TV receivers available these days. New developments in the field of home entertainment, such as reported by Nokia, Realnetworks and Sony, will provide alternatives for PC's and boost up the delivery of streaming media into user-friendly devices.

http://www.noterik.nl/nnd2/research/africa/ also recognises that education in many West African countries is especially weak in rural areas, where teachers do not have up-to-date information and other basic educational resources at their disposal.

The site notes that exciting new developments are currently taking place. SNV (Netherlands Development Organisation) and IICD (International Institute for Communication and Development) intend to improve the conditions at rural community schools as part of the ongoing battle against poverty. SNV and IICD requested Noterik & Doonder Multimedia to conduct a feasibility study on the applicability of multimedia technologies in the field of education in Niger and Burkina Faso. The study was conducted this spring. The plan for this study was triggered by recent developments in the field of satellite technologies.

The study indicates that the combination of satellite services, multimedia technologies and community radios can give rise to a very powerful and cost-effective information architecture for rural areas.

Multi Media approach

The conference held by WACC (http://www.wacconline.org.uk/404.php) set its agenda within the context of all print and electronic media. It examined TV/radio collaborations as part of educational multi-media approach, together with the publication of detailed back-up information where print support materials are also needed.

Summary: Multi-media

There is evidence for the use of a range of media used for community communication. This is acknowledged by several groups and organisations as a more comprehensive and inclusive form of getting a message across. The gradual conversion of many media types to digital will also have implications for the use of multi-media. The multi-media approach is of course used by telecentres.

Katherine Wagner Gamos Ltd.

Digital TV, Video and Libraries

Technicalities of Digital TV

Ntl (http://www.ntl.com/locales/gb/en/guides/digitaltv/inbrief.asp) describes how Digital TV has been the dream of broadcast engineers since the 1970s. The key breakthrough came in 1994 with the development of the MPEG-2 video compression standard – a low-cost means of reducing the bit-rate required to represent video information in about 2% of its full value, without noticeable loss of picture quality. With standard definition TV (SDTV), the digital video stream reduces from 216Mbit/s in the studio to some 4 Mbit/s in the home. Although systems vary, MPEG-2 video compression remains a common component of all digital TV standards around the world.

Digital Technology

The airwaves are used more efficiently by digital signals than by analogue broadcasting, as several TV and radio channels can be carried on a single frequency - a technique known as multiplexing. At the moment, each frequency is allocated to an individual broadcaster. Digital TV will be broadcast in three different ways: by terrestrial transmitters (using the airwaves), by satellite and through cable.

By around 2004, Satellite is likely to be the way most people take digital. Other digital services - phone services and the internet - are already carried on cable.

TV and radio news services are also already available online via the internet. Increasingly the internet is becoming available via TV sets. Digital TV viewers now also have access to enhanced, interactive text services and are able to send e-mail, order goods and services, and schedule their own viewing through an Electronic Programme Guide (EPG).

The majority of digital radio is currently listened to over the internet. There are an estimated 15,000 radio stations now available worldwide.

According to http://www.cwn.org.uk/education/university-of-warwick/99/05/990525-digital-tv.htm, digital technology is driving terrestrial, satellite, cable TV and the Internet to converge.

http://news.bbc.co.uk/1/hi/sci/tech/450492.stm gives information on how digital television converts the pictures and sound into a string of binary digits (ones and noughts). These are transmitted through modified transmitters and again received by an aerial or satellite dish, or just sent down a cable.

Digital technology - pros and cons

http://news.bbc.co.uk/1/hi/sci/tech/450492.stm lists the pros and cons:

Pros	Cons
Digital signals are more efficient than analogue, so six channels can be broadcast on the same frequency that would carry just one analogue channel.	Problem of compression, the process of squeezing transmission information so it travels faster and can be decoded quicker. The result for the viewer is a jerky motion or a blocky picture. Sometimes the picture can just black out.
Each frequency is called a multiplex. There are six terrestrial multiplexes available, which makes for a possible 36 separate channels.	Improved sound is not necessarily a given, either, since existing terrestrial Nicam sound is already digital.
A better quality picture. There is no "ghosting".	

Some service providers use a technique called statistical multiplexing, to get round this. It means "complicated" pictures muscling in on the bandwidth of less complex transmissions.

Project to Understand Digital Technology

The Community Media Association (http://www.commedia.org.uk/a2d/atd.html) has a major transnational project, Adapting to Digital, which aims to significantly develop the community media sectors use and understanding of digital technology. It covers a range of areas including research and development, input into policy at the national and European level, training and production of resources.

The project includes:

- Producing reports on the impact of digital audio broadcasting on community broadcasters and on the potential for digital terrestrial delivery of community broadcasting services.
- Producing a Community Television handbook.
- Supporting the development of local television, including TV RSLs and Cable.

The project is supported by the ESF-Adapt scheme, National Lottery Charities Board and Arts for Everyone.

Digital Technologies for Developing Countries

The International Telecommunications Union (http://www.itu.int/ITU-D/tech/) gives information on how the development of digital technologies and the convergence of broadcasting, telecommunications and informatics offer sizeable

opportunities for the implementation of appropriate new technologies by developing countries.

Applied research and the transfer of technological know-how will be an indispensable part of the task of expediting the access to new technologies on a non-discriminatory basis for developing countries and countries with economies in transition. The programme will be carried out by various means, including symposia, workshops, conferences, seminars and expert advice.

As issues of network reliability and quality of service continues to be of considerable interest to developing countries, the programme focuses on management issues, marketing techniques and the introduction of new services, taking into account the recent trends in the development of telecommunications, broadcasting and informatics.

Digital Broadcasting Encouraged by the Korean Government

http://www.atscforum.org/pr/PR-0304-KoreaBroadcasting.pdf claims that to assist and encourage the transition to digital broadcast service, the Korean government plans to reduce import taxes on digital broadcast equipment. Financial support for Broadcast Stations' facility investments and HDTV program production is also being provided.

Digital Video in Ethiopia, to prevent HIV

Greater Cincinnati's own Media Working Group (http://www.mwg.org/education/ethiopia/index.html) was recently invited to join Michigan's Grand Rapids Community Media Center in training 20 Ethiopian educators and producers of educational television. Both media groups were invited by UNESCO.

Because 15% of the population in Africa is currently infected with HIV (and that percentage is expected to double), educating the populace about the virus has become a national necessity, with that agenda being incorporated into everything. Donohue explained that the training they offered, with their emphasis on video for television production, was tailored specifically to integrate HIV education across the curriculum. She said they considered the curriculum from a cultural point-of-view, and attempted to identify which cultural traditions helped to prevent HIV, and which actually contributed to risky behavior. They then moved to teaching digital video techniques and editing. According to Donohue, the indigenous production community is working with antiquated equipment and their newfound digital skills catapulted them 30 years forward in a matter of days. The group produced two video shorts addressing HIV-AIDS prevention, which can be seen on the MWG web site www.mwg.org.

The International Institute for Capacity Building in Africa is focused on teacher education, long distance learning, as well as health and economic issues. In undeveloped nations, Donohue explained, the three are consistently intertwined.

Digital Libraries

Digital libraries are a key technology for developing countries. http://dois.mimas.ac.uk/DoIS/data/Articles/julfpcatty:2002:v:20:i:1:p:7-13.html describes how they can assist human development by providing a non-commercial mechanism for distributing humanitarian information on topics such as health, agriculture, nutrition, hygiene, sanitation and water supply. Many other areas, ranging from disaster relief to medical education, also benefit from new methods of information distribution.

Perhaps even more important than disseminating information originating in the developed world is the need to foster the ability for people in developing countries to build information collections locally.

Summary: Digital Technology

Digital technology has recently emerged as an improved form of communication, particularly used for television broadcasting in developed countries. However, it is starting to be used in developing countries as well. Digital provides a new way of sending information, which can be compressed without loosing quality. As seen in previous examples, it is possible to convert analogue transmitters to digital. However, to achieve the best transition, pilot schemes and resources to last for future generations are needed.

Equipment Prices for Antenna, Transmitters, etc

The following websites sell equipment required to set-up a community broadcasting station, either radio or television:

- http://www.radial.ru/en/catalog/katalog.html
  Base station antenna-feeder systems, with prices (up to $1000)
- http://www.antenna.be/
  Shortwave radio broadcast antenna types, with prices (up to $300,000), and links to manufacturers.
- http://www.veronica-kits.co.uk/2tda.htm
  Stacked Tuned Dipole Antenna System £ 76.46
- http://www.kathrein.de/en/bca/index.htm
  Broadcast antennas to your requirements
- http://www.go2audio.com/links/progear-broadcast.html
  List of antenna providers
- http://www.q-par.com/pages/Reflector_ant.htm
  Antenna sales
- http://www.wlan.org.uk/antenna-page.html
  lists sites for antenna sales
- http://www.saunalahti.fi/~elepal/antenna1.html
  DIY antennas
- http://www.hyperlinktech.com/hg2415u.htm
  HyperLink manufactures and markets a wide line of high perfomance products for wireless LANs including bidirectional amplifiers, antenna systems, cable assemblies, Power-over-Ethernet, lightning protection and accessories.
- http://www.canon.com/bctv/
  Canon Broadcast Equipment
- http://www.4rfv.co.uk/selldefault.asp
  TV broadcast equipment for sale
- http://www.bcs.tv/store/prod_search.cfm
  Broadcast store

http://www.rf-links.com/TVBROADCASTPRICE.pdf gives TV broadcast equipment, with prices:

RURAL TELEVISION TRANSMITTERS/CONVERTERS LOW COST

	Mono Transmitters	
MTFM/020	2 Wps, input 1xA/1xV, Band I, III, IV/V, synthesized.	$2,792

	Mono Transmitters	
MTFM/060	As above with 6 Wps output.	$3,075
MTFM/120	As above with 12 Wps output.	$3,718
	Stereo/Dual-Sound Transmitters	
MTFS/020	2 Wps, input 2xA/1xV, Band I, III, IV/V, synthesized.	$3,073
MTFS/060	As above with 6 Wps output.	$3,312
MTFS/120	As above with 12 Wps output.	$3,962
	Transposers	
CLPT/020	2 W output. In/out channels in I-III-IV-V Band. Synthesized.	$2,756
CLPT/060	As above with 6 Wps output.	$2,908
CLPT/120	As above with 12 Wps output.	$3,682

http://www.ntia.doc.gov/ptfp/application/EquipCost_TV.html gives product descriptions and prices:

100-Watt UHF Translator Station (TV)

QTY	DESCRIPTION	PRICE
1	100-watt translator with spare parts kit and spare tube	$25,000
1	Omnidirectional slot antenna	4,500
100'	Transmission line connectors and hangers	1,000
100'	Television tower	8,000
1	Tower foundation	3,500
1 lot	Tower installation, including mounting antenna and line	6,500
1	Off-air receive antenna and line	500
1 lot	Translator installation	1,500
1	Equipment shelter	17,500

Production Control and Studio Equipment (TV)

QTY	DESCRIPTION	PRICE
3	Studio CCD 16 x9 Switchable cameras w/lenses	$600,000
3	Pedestals and Mounting Heads for cameras	90,000
1	Basic digital capable production video switcher	160,000
3	Digital capable videotape recorders with monitoring	255,000
1	Digital Format Converter/upconverter	70,000
1	Character generator/Graphics Station	100,000
1 lot	Dual channel still store	50,000
12	Black and white monitors	18,000
2	Color monitors 16 x 9 (preview and line)	36,000
1 lot	Intercom system	25,000
1	Production audio console	80,000
2	Production control speakers	3,000

2	Studio monitor speakers	1,000
2	Studio color monitors	10,000
1 lot	Assorted microphones	10,000
1 lot	Production and master control headsets and headphones	1,500
1 lot	Production lighting board and grid, including installation	100,000
1 lot	Production light fixtures	75,000
1 lot	Miscellaneous installation materials (wire, ground strap, etc.)	15,000
1	Dual limiter for audio	2,500
1	Color 16 x 9 match monitor for video control	18,000
4	Serial component measurement sets	33,980
1	Video control serial digital matching switcher	3,595
1 lot	Production control installation	50,000
2	Dual black and white monitors	1,800

http://www.itelcast.com/news_s.htm gives prices for anrennas and transmitters for use in rural locations:

RURAL TELEVISION TRANSMITTERS

COD.	i	DESCRIPTION	PRICE €
		Mono Transmitters	
TTRM 2		2 Wps output, input 1xA/1xV, Band I, III, IV/V, sinthesized.	**2.115,00**
TTRM 6		As above with 6 Wps output.	**2.380,00**
TTRM 12		As above with 12 Wps output.	**2.975,00**
		Stereo/Dual-Sound Transmitters	
TTRS 2		2 Wps output, input 2xA/1xV, Band I, III, IV/V, sinthesized.	**2.375,00**
TTRS 5		As above with 5 Wps output.	**2.645,00**
TTRS 12		As above with 12 Wps output.	**3.205,00**
		Transposers	
TTZR 2		2 W output. In/out channels in I-III-IV/V Band. Sinthesized.	**2.080,00**
TTZR 6		As above with 6 Wps output.	**2.345,00**
TTZR 12		As above with 12 Wps output.	**2.945,00**

TRANSMITTING ANTENNAS 45 - 1200MHz

COD.	i	DESCRIPTION	PRICE €
Note:		For antenna systems computerized design please contact our Tech. Dpt.: phone ++39 0434 997667 or E-mail: itel.tech@itelcast.com	**0,00**
		Band I, 45 - 90 MHz.	
TL I4 N		4 elements directive logaritmic antenna. 45 - 90 MHz, broadband. Vertical or horizontal polarization. Gain: 5.4 dB. Maximum power: 400 Wps. N connector. Aluminium. Mounting clamps included.	**330,00**
TPH I 716		Horizontal polarization panel antenna. Bandwidth: 12 MHz. Gain: 4.5 dB. Maximum input power: 1.5 kWps, DIN 7/16"" connector. Deep galvanized steel. Mounting clamps included. The operating channel must be specified at the order.	**1.020,00**
TPH I 78		As above with EIA 7/8"" input connector and maximum input power 2.5 kWps.	**1.060,00**
TPV I 716		Vertical polarization panel antenna. Bandwidth: 12 MHz. Gain: 4.5 dB. Maximum input power: 1.5 kWps, DIN 7/16"" connector. Deep galvanized steel. Mounting clamps included. The operating channel must be specified at	**1.020,00**

		the order.	
TPV I 716		As above with EIA 7/8"" input connector and maximum input power 2.5 kWps .	**1.060,00**
Band III, 174 - 230 MHz.			
TL V4 N		4 elements directive logaritmic antenna. 174 - 230 MHz, broadband. Vertical or horizontal polarization. Gain: 5.4 dB. Maximum power: 400 Wps. N connector. Aluminium. Mounting clamps included.	**330,00**
TY V3 N		3 elements directional antenna. 174 - 230 MHz, broadband. Horizontal or vertical polarization. Gain: 6.5 dB. Maximum input power 600 W, N connector. Mounting clamps and stainless steel accesories included.	**405,00**
TY V3 716		As above with DIN 7/16"" input connector and maximum input power 1.2 kW .	**455,00**
TY V3 78		As above with EIA 7/8"" input connector and maximum input power 2 kW .	**500,00**
TPV O 716		Panel antenna. 174 - 230 MHz, broadband. Horizontal polarization. 6.8 dB gain. Max. input power: 1.2 kW, DIN 7/16"" input connector. Mounting clamps and stainless steel accesories included.	**565,00**
TPO 0 78		As above with EIA 7/8"" input connector and maximum input power 2 kW .	**595,00**
TPO V 716		As above with vertical polarization and DIN 7/16"" input connector.Maximum input power 1.2 kW.	**600,00**
TPV V 78		As above with EIA 7/8"" input connector and maximum input power 2 kW .	**625,00**
Band IV/V, 470 - 1200 MHz			
TY U4 N		4 elements directive logaritmic antenna. Frequency band: 450 - 600MHz. Gain: 5.4 dB. Maximum power: 200 Wps. N connector. Aluminium. Mounting clamps included.	**330,00**
TY G2 4 N		As above, with frequecy band: 600 - 1200 MHz.	**330,00**
TPO N		Panel antenna. 470 - 890 MHz, broadband. Horizontal polarization. 11 dB gain. Max. input power: 500 W, N connector. Mounting clamps and stainless steel accessories included.	**510,00**
TPO 716		As above with DIN 7/16"" input connector and input power 1.2 kW .	**545,00**
TPO 78		As above with EIA 7/8"" input connector and input power 2 kW .	**575,00**
TPV N		Panel antenna. 470 - 890 MHz, broadband. Vertical polarization. 11 dB gain. Max. input power: 500 W, N connector. Mounting clamps and stainless steel accesories included.	**535,00**
TPV 716		As above with DIN 7/16"" input connector and input power 1.2 kW .	**575,00**
TPV 78		As above with EIA 7/8"" input connector and input power 2 kW .	**605,00**

Existing Projects and Organisations that could benefit from Community TV

ActionAid

ActionAid (http://www.actionaid.org/aboutus/home.shtml) campaigns for a world without poverty in which every person can exercise their right to a life of dignity. Wherever possible, ActionAid works with community groups so that change is appropriate and long lasting. Could community TV assist in this work?

ActionAid has launched a campaign calling on the UK government to fund the fight against AIDS:

- In 2003: the UK government should urgently commit at least £32m towards the £1bn shortfall that the Global Fund to Fight AIDS, TB and Malaria faces this year
- In 2004-5: alongside other ways of supporting the fight against AIDS, the UK should commit at least £284m to the Global Fund
- The European Union and private businesses must also be encouraged to pay their share.

ActionAid in Ghana

ActionAid began operating in Ghana in 1990 and now works with over 31,000 people in sparsely populated areas. ActionAid supports the basic needs and rights of poor people, working at a practical level to improve their access to services, and lobbying government and others to change the policies and practices that affect their lives.

Marie Stopes - Family Planning

Marie Stopes International (MSI) (http://www.imdc.co.uk/marie_stopes_international.html) is a global family planning agency working in over 30 countries around the world.

Reproductive health care in Honduras

Marie Stopes Honduras (MSH) (http://www.mariestopes.org.uk/ww/honduras.htm) is working closely with the Honduran public sector to help ensure the provision of quality reproductive health care for urban and rural populations, with a strong focus on the prevention and treatment of sexually transmitted infections and the prevention of HIV/AIDS.

To achieve this, MSH has developed a model of low-cost centres supported by networks of community referral agents in the cities of San Pedro Sula, El Progreso, Santa Barbara, La Ceiba and Tela. The flagship centre in San Pedro Sula provides services to factory workers, while the centres in Tela, El Progreso and Santa Barbara are supported by community outreach workers who work with rural communities, schools and ethnic minority populations.

A range of centre-based and outreach sexual and reproductive health services include: family planning and contraceptive services; youth services; the prevention, diagnosis and treatment of sexually transmitted infections (STIs); and STI/HIV/AIDS awareness-
raising initiatives.

Reproductive health care in South Africa

South Africa's health statistics belie wide variations in mortality, family size and contraceptive access. Most at risk are women and girls in black townships and rural areas.

Marie Stopes (http://www.mariestopes.org.uk/ww/south-africa.htm) has a range of centre-based and outreach sexual and reproductive health services including: family planning and contraceptive services; ante-and post-natal care; female sterilisation; vasectomy; safe abortion, youth services; the prevention and diagnosis of sexually transmitted infections (STIs); STI/HIV/AIDS awareness-raising initiatives; and voluntary confidential counseling and testing for HIV/AIDS clients.

Population Concern – Reproductive Health Care

Population Concern (http://www.populationconcern.org.uk/) works for the improvement of the quality of life worldwide by advancing the right of all people to exercise free and informed reproductive health choice and to have access to confidential sexual and including family planning. It has a number of projects. Examples in Africa include:

Example: Iringa Youth Centre Project, Tanzania

Organisation: UMATI Country: Tanzania Funded by: DFID

The Iringa Youth Centre has been set up to provide information, education and communication for young people concerning sexual health issues. The Centre offers services to young people such as STI screening and treatment and the provision of contraception such as foam, pills and condoms. The Centre combines its awareness raising with the provision of recreational games and income generating activities in the form of a library in the Centre's grounds. The project also trains young people as peer educators who act as community based distributors of contraceptive services and information to youth in and out of schools in the local community.

Example: Sexual Health Services for Street Youth, Accra, Ghana

Organisation: Youth Development Foundation Country: Ghana Funded By: NCLB

This project, based in Kaneshie district of Accra, Ghana, aims to provide quality reproductive and sexual health services, education and counselling for young

people. It operates using street youth selected to work as peer motivators and by running a youth centre which offers clinical services by specially trained medical staff as well as recreational facilities for the young people. The project also has a special skills training component for the young people to help them find their own economic self-sufficiency and security.

Other projects run by Population Concern have received funding from:

National Lottery Charities Board, Headley Trust

EU

Comic Relief - [Millennium Children's Promise Grant]

UNICEF: Children's rights

UNICEF (http://www.unicef.org.uk/aboutunicef/index.htm) works in over 160 countries and territories to fulfill children's rights to health and nutrition; education; emergency relief; protection; and water and sanitation. By working in partnership with others, from governments and teachers to youth groups and mothers, UNICEF is a driving force for people throughout the world working to ensure a better future for children.

'SAT 36 Multimedia Interactive Links' - Health in Latin America

'SAT 36 Multimedia Interactive Links' (http://www.oneworld.org/ips2/sept00/10_19_033.html) is a private company using satellite technology and computers to connect the medical community in the large Latin American nation.

''Through a network of tele-centre sites that link 10 Argentinean cities, we are able to deliver live, simultaneous information to doctors who do not have to leave their cities or lose income in order to attend a refresher course,''

It is also a practical example of how technology can be used effectively for 'tele-health' and other forms of distance learning in developing countries, he added.

Accordingly, he believes, the model of using technology to create '' a learning community'' and getting the pharmaceutical industry to foot the bill, could be copied by other Latin American and developing nations. It solved the problem of distance and extended the reach of scare resources.

A constant theme of the discussion here was how to bridge the digital divide between developed and developing nations and between information-rich and information-poor communities within each country.

Tele-health and distance learning also have applications in developed countries with the global market for education estimated at over two trillion dollars in 1999. This included 700 billion in the United States and 300 billion dollars in developing countries.

Given the way the new technologies have emerged, it was widely acknowledged that growth of the sector (internet) will be private-sector driven. However, efforts

by the United Nations and other multilateral bodies would help developing countries, especially those which are not attractive to private capital.

Summary: Existing Projects and Organisations that could benefit from Community TV

There are currently many charities and organisations undertaking development and health work in developing countries. Some of these are already using community-based media. However, some of these projects have expressed the need to work at a community level, so these may benefit from the use of community TV. These organisations will have detailed knowledge of specific areas and their problems, leading to a valuable source of information to be used to make a community TV project more successful in that area. Therefore, depending on policies, community media could 'help out' the aid organisations, at the same time as improving the quality of information they broadcast.

Finance

Differences between Countries

As already stated by http://www.openchannel.se/cat/index.htm, different countries have different ways of financing their local community TV stations. For example, in Denmark they will be governmental supported by fees both from commercial TV-stations and the license fee, and in the USA cable operators give concessions to local governments.

Finance for distribution and programming

http://www.openchannel.se/cat/overview.htm gives a table showing the countries, number of TV stations, distribution, financing, and commercials/sponsorship.

Generally, distribution is financed by self, cable or community. Programme production is financed by self, licence fee, and local government.

Differing Budgets

http://world.std.com/~rghm/ gives a table showing the annual budgets of US PEG Access Centers, descending by Annual Budgeted Expenditures. The table column headings are shown below.

Source: ACM CMRD 2000

ST	City	Center	Budget	Pop	Capita	Subs	Per Sub	Hrs/wk	Cost /hr

Funding Opportunities

UNESCO

http://portal.unesco.org/ci/ev.php?URL_ID=1657&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1034690896 describes how UNESCO's work in the field of public broadcasting focuses on two areas:

- Encouraging media coverage of educational and cultural matters and promoting public service broadcasting
- Developing the capacity of disadvantaged communities to express and define themselves

Example: Moroccan News Agency Computerises

UNESCO's International Programme for the Development of Communication (IPDC) provided US$70,000 and the French Government, contributed US$100,000.

Example: Afghan Media

Italy has provided UNESCO with $4.0m to help develop the media in Afghanistan. The funds are aimed primarily at supporting television production at Radio-Television Afghanistan (RTA) and in re-establishing the country's educational television service.

Comic Relief

Comic Relief (www.comicrelief.com) make grants to UK-registered charities whose main aim is development and who work with African organisations. We do not currently fund direct to charities registered in African countries but we do expect UK organisations to be working closely with partners in Africa.

We expect all UK organisations to share and discuss these guidelines with African partners so that the application and budget has been jointly agreed.

We fund all sizes of UK charities. We also welcome applications that come from groups of UK charities that can show how working together will improve the impact of their work.

We will consider applications that target one of the following groups of people.

- People affected by conflict.
- Women and girls.
- People living in towns and cities.
- Disabled people.
- Pastoralists – people who traditionally make a living from raising cattle, goats and sheep – and hunter-gatherers.

- People affected by HIV and AIDS.

Commonwealth Science Council Grants

The Commonwealth Science Council (CSC) (http://www.comsci.org/) is an intergovernmental organisation with membership open to all Commonwealth countries (includes Ghana and South Africa).

The CSC is an innovative, creative and proactive organisation that seeks to leverage the science and technology (S&T) capability in the public and industry domain within the Commonwealth through networking of both knowledge and finance using modern information technologies to facilitate the application of S&T by member countries for sustainable economic, environmental, social and cultural development.

Fellowship Scheme

The Fellowship Scheme of the Commonwealth Science Council (CSC) was established in 1980 to provide opportunities for scientists and engineers from member Commonwealth developing countries to enhance their professional skills and experience through short-term attachments in other Commonwealth countries. The purpose of the fellowship is to enable professionals involved in the programs of the Council (see no.3 of criteria for allocation of CSC Travel Grants and Fellowship awards) especially those promoting the activities of the Commonwealth Knowledge Network (CKN) to exchange know-how and expertise.

Fellowships will consist of financial support (the equivalent of GBP2,000) for the fellow's travel and maintenance not covered by the nominating or host country or its institutions; and will include return air fares, local subsistence and travel costs, and insurance (both travel and medical).

A successful candidate must use the award within the financial year in which it is awarded. The CSC financial year is 1 July to 30 June.

DFID Funding Schemes

Financial Deepening Challenge Fund (http://www.dfid.gov.uk/)

Eligible organisations

Eligible bidders will be:

a for-profit private sector entity registered in one of the Fund’s countries of operation; or associations representing such entities; or a consortium led by such an entity,

in satisfactory financial health and able to show at least three years of unqualified audited accounts, and

registered in selected countries across Africa and Asia or the UK.

Funding criteria	The Financial Deepening Challenge Fund (FDCF) encourages and supports banks and other commercial financial institutions to develop innovative and sustainable products and services that benefit the poor. The Fund aims to contribute to developing strong financial services sectors that allow the poor, and enterprises owned by or employing the poor, to access financial services. The FDCF expects to support projects involving (a) the development and piloting of a broad range of innovative financial services (e.g. in credit, savings, insurance, health cover, mortgages, pensions, leasing, working capital and remittances), and (b) improvements to the regulatory and supervisory environment.
Funding available per activity	Cost-sharing grants of £50,000 to £1,000,000
Total available	
(2002-2003)	£3,150,000
(2003-2004)	£2,525,000
(2004-2005)	£3,500,000
Contact department	Enterprise Development Department, administered by Deloitte & Touche
Contact details	www.challengefunds.org

INTERFUND - Financial support for S. Africa

INTERFUND (http://www.interfund.org.za/) was founded in 1986 as a consortium of donors mainly based in Europe (and in particular Scandinavia) to help advance democracy through offering financial support for South African civil society organisations.

Criteria for INTERFUND's support programme reflect its commitment to development, equality, social justice and poverty alleviation. Projects assisted are non-governmental and/or community-based, and operate on principles of transparency, accountability, fairness and honesty. Priority is given to those projects which support marginalised and rural black communities, women, youth and people affected by HIV/AIDS. Although INTERFUND provides grants to organisations nationally, it prioritises for the purpose of provincial transformation, organisations in the provinces of KwaZulu Natal, Northern Province, Eastern Cape and Mpumalanga.

As a general rule INTERFUND prefers to jointly fund projects with other donors.

Ford Foundation

The Ford Foundation (http://www.fordfound.org/) is a resource for innovative people and institutions worldwide. Our goals are to:

- Strengthen democratic values,
- Reduce poverty and injustice,
- Promote international cooperation and
- Advance human achievement

Many grants are available for Community and Resource Development. See: http://www.fordfound.org/grants_db/view_grant_detail1.cfm?expand1=Asset+Building+and+Community+Development&expand2=Community+and+Resource+Development&office=&grant_year=2003

Project Example: Agencia Informativa Pulsar, Ecuador

This project has been mentioned previously, but includes detailed accounts of funding. It is among many case studies listed by http://www.rdg.ac.uk/AcaDepts/ea/AERDD/Csds.htm about new communication technologies and existing information systems of small scale-farmers and entrepreneurs in rural communities

Project began in March 1996.

Organizations Involved

- World Association of Radio Broadcasters (AMARC) Latin America and Caribbean office, Ecuador.
- Centro de Educacion Popular (CEDEP) - until 1998.

Donor Agencies

- CAF (Holland)
- SIDA (Sweden)
- Fredrich Ebert Foundation (Germany)
- UNESCO

Budget around US $100,000 per year

Situation

Civil societies' access to radio and television frequencies through fair and transparent means is necessary for democracy and freedom of expression.

Liberalisation of the broadcasting airwaves dramatically increased the number of radio stations operating yet the actual advertising revenue did not increase leaving more stations competing for a relatively fixed about of revenue.

Some Latin American country policies provided broadcasting licences for community radio stations.

The project began with an evaluation of Latin American independent and community radio stations. This included an analysis of the sources available to them for international news, which found that relatively few stations had access to international news other than regurgitating day old news from newspapers.

Solutions

- Daily news from the internet.

- Programmes in indigenous language.
- Weekly news service for and about Latin American women.

Funding

Total cost is estimated at $100, 000 per year. 40% goes to cover salaries, 12% communication costs and 6 % to pay correspondents. Pulsar did not anticipate becoming self-sustaining in the first years of production. Providing information that is 100% free of charge requires that funders step in to pay for the operational costs.

It is anticipated that future funding of the project will be sought from advertising though they are unclear about the exact shape this will take though there are novel ideas being put forth.

Language and Content Development

With the objective of providing Latin American news service and local language content provided over the Internet in audio Pulsar provides an audio service in the predominantly oral language of Quechua and news pertaining to the cultural diversity of the region.

Sustainability / New technology

One of the goals of Pulsar is to promote new communication technologies to enhance the subscriber network and create awareness surrounding ICTs. Aspects for evaluating Pulsar are emphasised Technology. The technology used should be evaluated over time with a view to its appropriateness and to making use of new technological developments.

United Nations Population Fund

The United Nations Population Fund (http://www.unfpa.org/) is the world's largest international source of funding for population and reproductive health programmes. Since we began operations in 1969, the Fund has provided nearly $6 billion in assistance to developing countries.

UNFPA works with governments and non-governmental organisations in over 140 countries, at their request, and with the support of the international community. We support programmes that help women, men and young people:

- plan their families and avoid unwanted pregnancies
- undergo pregnancy and childbirth safely
- avoid sexually transmitted diseases (STIs) - including HIV/AIDS
- combat violence against women.

UNFPA works to raise awareness of these needs among people everywhere. We advocate for close attention to population problems and help to mobilise resources to solve them.

Summary: Finance and Funding

All community media projects will require at least an initial input of money to acquire premises, equipment, staff and training. The running of many local media initiatives is low cost, and there are varied examples of how these sums

are reached. There are many charities and organisations that provide grants or funding for projects, although these often must conform to strict guidelines, and most involve a pilot scheme.

Conclusion

It has been made clear from many accounts that communication for development requires a new perspective. This involves horizontal communication, where local people are involved in the content and process of their media. This approach, described by the Rockefeller Foundation (http://www.devmedia.org/documents/Position%20paper.htm), attempts to rebalance strategic approaches to communication and change by taking the overriding emphasis...

> Away from people as the objects for change … and on to people and communities as the agents of their own change
>
> Away from designing, testing and delivering messages…and on to supporting dialogue and debate on the key issues of concern
>
> Away from the conveying of information from technical experts… and on to sensitively placing that information into the dialogue and debate
>
> Away from a focus on individual behaviours…and on to social norms, policies, culture and a supportive environment
>
> Away from persuading people to do something …and on to negotiating the best way forward in a partnership process
>
> Away from technical experts in "outside" agencies dominating and guiding the process…and on to the people most affected by the issues of concern playing a central role.

This approach is increasingly used in community radio, community TV and telecentres in developing countries. With the advance of technology, digital television seems to be the way forward. The internet is also an important factor used to bridge the digital divide, although the internet can be linked into television and radio broadcasting, as seen by previous examples. The convergence of all three of these is also a likely way forward.

Community radio, television and telecentres all have positive impacts on the community, but which one is better? The answer must lie within each individual community, according to the attitude, environment and needs of the local people. Radio and television at a local level are similar, in the fact that they both present a range of programmes aimed at informing people. Community stations often go a step further by inviting people to comment on the programming, create a programme, or even come down to the station to take part in an event. The telecentre initiative involves a range of media and equipment, aimed more at practical help, or implementing an idea. The telecentre may not be responsible for keeping the community informed, but will give the opportunity for people to take action, for instance by researching a certain subject on the internet, sending an e-mail, or using office facilities.

Therefore, as many sources have advised, a pilot project to assess the audience and the technique will provide a clearer picture of the appropriate media to use in that area.

When comparing radio with television, some sources suggest that radios have a much greater distribution than TVs. However, these figures may be misleading as close-nit communities may view a communal television. As technology changes and develops in the 'north', the people adapt to it. This is also true in developing countries. Therefore, the number of television sets and the use of TV may well increase. Also, if a local TV station begins to broadcast, interest will be sparked, and the audience will increase as they become aware of the new options available.

The local or national licence policies will be different between areas, so this must be researched for each location. As seen by the case of the community TV station in Fiji, problems can arise from licence fees. These kinds of problems are linked in with the priorities and stance of the government. It is therefore difficult to assess whether a project set up in an area of political unrest or with little democracy, will be a success.

As community radio has had a longer period to adjust and develop, it is easier to find the equipment and operating instructions needed. For instance, Mallard radio equipment is particularly suited for hostile conditions in developing countries, but comes at a relatively low price. The provisions for community television are not so well developed, and examples of costs to set up a station are limited. However, existing community TV stations are finding the funding for the running more expensive than local radio.

Appendix – Websites Used

http://www.btplc.com/society/pdf/digital_long.pdf
http://news.bbc.co.uk/1/hi/special_report/1999/10/99/information_rich_information_poor/466651.stm
http://www.digitalpartnership.org/solutions_rural.htm
http://www.itu.int/ITU-D/
http://www.ananova.com/news/story/sm_366562.html
http://www.devmedia.org/documents/Position%20paper.htm
http://www.is.lse.ac.uk/ifipwg94/ifipnews.htm#3
http://videaz.tao.ca/
http://www.rdg.ac.uk/AcaDepts/ea/AERDD/Csds.htm
http://www.ipsnews.net/interna.asp?idnews=22659
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http://www.alliancecm.org/
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http://deepdish.igc.org/aboutus/index.html or http://www.deepdishtv.org/
http://members.ozemail.com.au/~catman/ice/
http://www.idrc.ca/books/reports/13indiat.html
http://www.rdg.ac.uk/AcaDepts/ea/AERDD/Csds.htm
Report for National Association of Broadcasters
http://www.leeds.ac.uk/ics/sl-glasgow2.pdf
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http://www.commedia.org.uk/library/training/html/rpp/Section1_1a.htm
http://www.devmedia.org/documents/Position%20paper.htm
http://www.angelfire.com/poetry/gallup/
http://www.comminit.com/streview/sld-5237.html
http://www.comminit.com/news/mediabeat/mb_a0276.html

http://www.cbaa.org.au/content.php/207.html
http://www.angelfire.com/poetry/gallup/
http://www.radio4all.org/how-to.html
How To Set Up A Community WLAN
www.wlan.org.uk
http://www.ntia.doc.gov/otiahome/ptfp/Application/equipcost_Radio.html
http://www.iaru.org/iaru-soc.html
http://www.is.lse.ac.uk/ifipwg94/ifipnews.htm#3
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http://news.zdnet.co.uk/story/0%2C%2Ct270-s2090993%2C00.html
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http://videaz.tao.ca/1media/12exp/129A.htm
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