Community Television for the poor – A Scoping Study Final Technical Report

"the one to watch – literally?"

FINAL TECHNICAL REPORT
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1. Executive Summary

The Purpose of the research was to explore the opportunities presented by digital convergence for locally produced and broadcast integrated television & radio for development education, development communication strategies and local content capture among the poor.

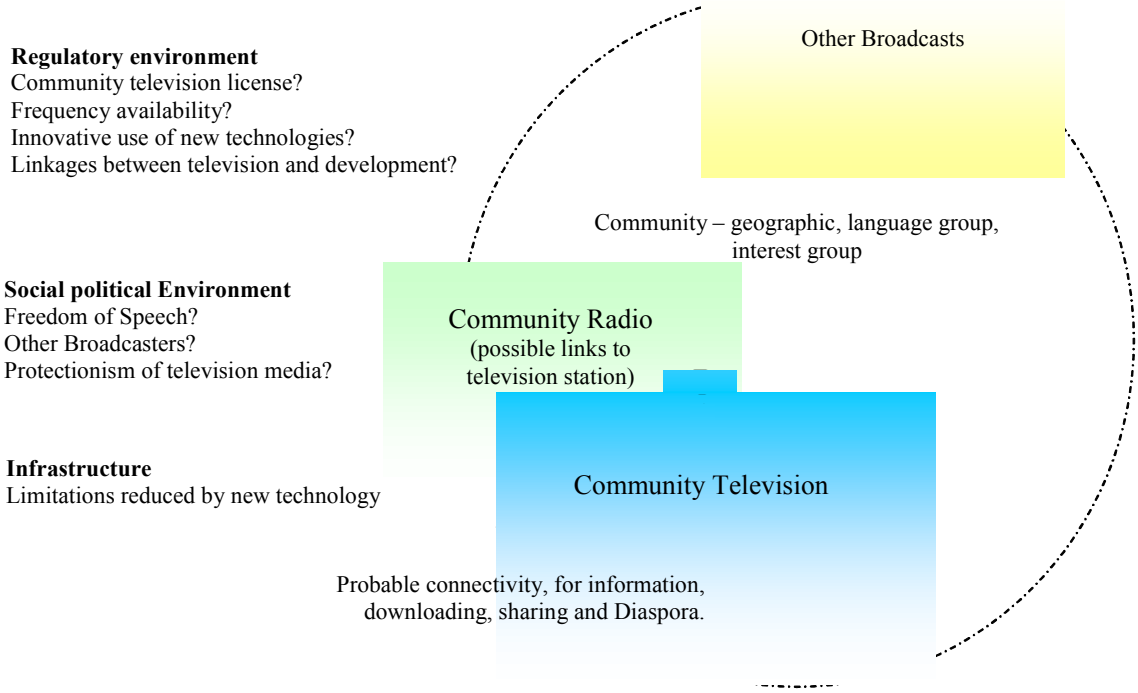
The starting premises of the research were:-

- Community radio is known to have strong developmental benefits +
- There is a strong trend towards television, even among the poor +
- There will be new opportunities for audiovisual media presented by digital convergence

These propositions together resulted in the question:

- Will there be widespread deployment of such a thing as Community Television and if so, what might be its shape, what might be its essential features, and what role might it play in development?

The research was informed by desk research, two technical reviews and a stakeholder consultation in four countries – Honduras, South Africa, Tanzania and Ghana. It proved very timely as it contributed significantly to ongoing consultations in South Africa and Tanzania. In South Africa ICASA announced the availability of a four year community television license and ongoing lobbying for frequencies should result in a number of initiatives happening in the next year or so. In Tanzania, the regulator consulted on community radio licensing, resulting in a lowering in license fees.



The research confirms the starting premises. It confirms that community radio can be an agent of change. It uses data from household surveys to investigate the information needs of the Africa's rural poor, and confirms that the poor migrate to television. This migration is not so much due to wealth but depends more on the availability of electricity.

Regarding technical changes and digital convergence, the research outlines many different technological opportunities for broad and narrow casting – many of which are low power options which need not depend on infrastructure for either the broadcast or reception. It links many of these options to emerging digital technologies which by definition tend to be linked to wider connectivity.

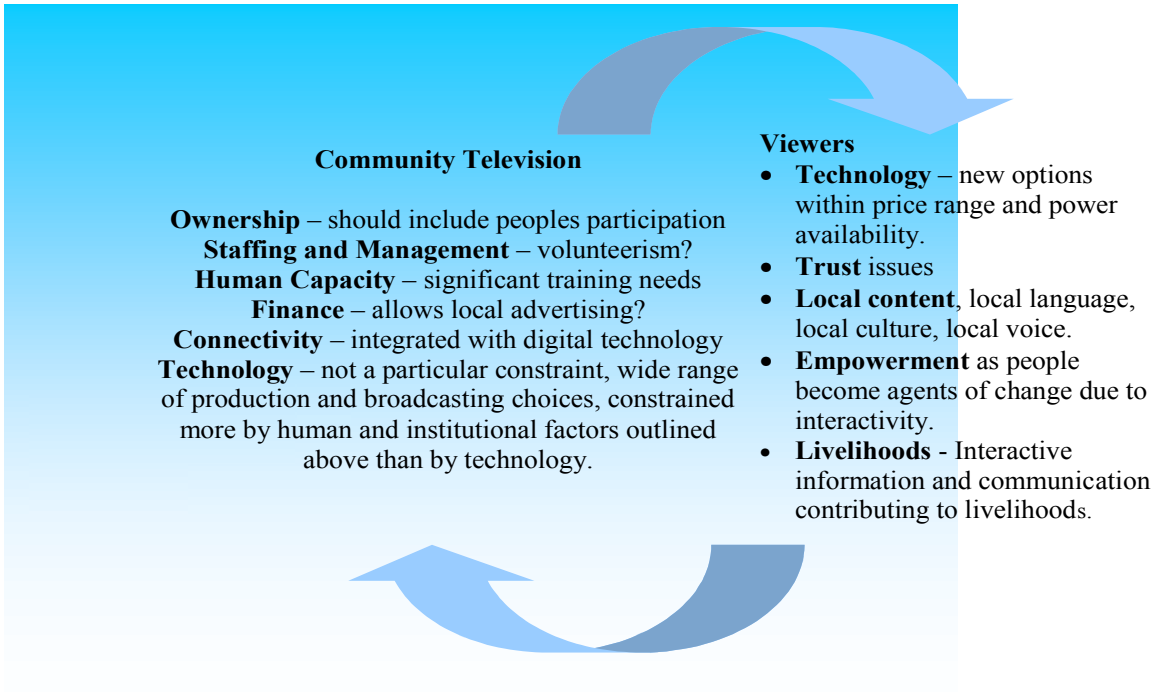
However, although by implication from communities information needs there is effectively a significant and growing demand for local and community television there are a number of challenges to be overcome if community television is to become a common reality.

Regulation is often very restrictive for television broadcasts. This is based on analogue technologies and will need to be revisited by decision makers. The research suggests a number of changes that could be made that would ease the introduction of community television, but it also alerts regulators to the fact that the wide opportunities offered by the new technologies can in some cases open up ways of "sidestepping" current regulation.

The research also notes that community television for the poor is only likely to grow in an open social and political environment.

Human capacity is another challenge. No matter how easy to use technology may become, a community television station will depend on management skills, and open and transparent working environment, skills of creativity in applied programming, and an awareness of development issues.

Finally the research notes that although the broadcast technology has become very cheap, it is the running costs of stations that remains a significant challenge. Salaries, transport (for interviews) and overheads will demand regular income for the station no matter how low the technology becomes in price.



The net conclusion is that community television could play a huge role in empowering local communities. While community radio has such a role now, it is possible that television viewing could over the next ten years erode the role of radio. Uptake of low power televisions could leave communities with national or multi channel broadcasts that are entertaining but do very little to stimulate dialogue about development, empower people as agents of change, protect local language and local culture. Community television could play a strong role in stimulating development dialogue, supporting local economies, be a vehicle for decentralised government egovernance and share local content in local language and local culture - a local voice. Advocates of community television need to be realistic in the development of the institutional framework for the station, and in the influence of the wider environment on the shape of the station.

The report ends with a number of general recommendations, and a specific recommendation that some pilot community television stations should be set up in the immediate future to document the parameters required for a successful innovative community television station.

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Acronyms

AMIC - Asian Media Information and Communication Centre
C-PEG – Commercial, Public access, Educational and Government content
CTV - Community Television
DFID - Department for International Development
FRU - South Africa's Film Resource Unit
GDTV - Greater Durban Television
ICASA - Independent Communications Authority of South Africa
ICT - Information and Communication Technologies
IICD - international institute for communication and development
MDG - Millennium Development Goals
TV – Television

2. Introduction

The starting premises of the research were:-

- Community radio is known to have strong developmental benefits +
- There is a strong trend towards television, even among the poor +
- There will be new opportunities for audiovisual media presented by digital convergence

These propositions together resulted in the question:

- **Will there be widespread deployment of such a thing as Community Television and if so, what might be its shape, what might be its essential features, and what role might it play in development**?

This research concerns pre-positioning knowledge to address development communication strategies, which in turn are important for addressing the UN Millennium Development Goals (MDGs).

It is difficult to predict the social impact of new technology. The development community has to run to keep up with the changes in Information and Communication Technologies (ICTs), and to determine the opportunities and dangers to the poor of new technology. This research was commissioned as an opportunity for "future thinking". Development research often takes more than 10 years to get from the initial study to the field. Meanwhile technology is changing on a monthly basis.

The opportunities presented by digital convergence for the creation and dissemination of local development media are rapidly changing. At the same time, there is a strong demand for enhancing development communication among the poor. This research presents a discussion of current trends, and seeks to position the development community to make maximum use of television and television technology changes for the benefit of the poor.

The proposal for the research placed an emphasis on local community-driven television.

2.1. The study objectives.

The Goal of the research is:- Extending ICT access to the poorest

The Purpose of the research is:- To explore the opportunities presented by digital convergence for locally produced and broadcast integrated television & radio for development education, development communication strategies and local content capture among the poor.

2.2. Who is this study for?

The local production and broadcast of messages that ensure useful content for the poor (especially that generated and managed in the South), might be incorporated into existing media organisations. This may include the ministry of radio and telecommunications or private enterprise that already operates national television/radio/printed matter. But it may also include other groups who can see the potential of the new cheaper mechanisms for mass communication (e.g. Ministry of Agriculture, Ministry of Health), local government (a town council that takes up the opportunities), civil society (development organisations, local community based organisations, advocacy groups), and possibly the private sector.

This scoping study is relevant to a variety of potential stakeholders. This subject area is a classic case of the possibility that those already working with media might be slow to adopt change preferring "business as usual", and the new opportunities may be taken up by entrepreneurial community organisations.

The target audiences are the networks represented by the collaborators in those countries specified, and a wider global network of organisations working with the collaborators.

The direct users of the scoping study will be policy and decision makers and international donors. Indirect beneficiaries will include the poor in the partner countries.

3. Methodology

The research was informed by:-
Literature Review (Batchelor & Wagner 2004) – a wide-ranging search for relevant related experiences, including:

- recent lessons learnt and experiences from community radio,
- experiences of community and local television in developed countries,
- regulation in broadcasting,
- gender and racial constraints in media,
- technology changes, particularly trends in internet and satellite use,
- the role of community telecentres or community multimedia centres,
- the changing role of digital video (particularly recent experience in participatory video for extension), and
- the changing role of libraries and other information sources.

Technical Review. **In addition to the above, two technical reviews were commissioned.** One was undertaken by Mr David Rushton, who is a leading pioneer in community television within the UK (Rushton 2004). The other was a broader look at the emerging technical options for low-cost broadcasting, undertaken by the core research team (Eastwick 2004).

This desk-based research was supported by a focus on four countries. In three of the countries a stakeholder consultation was undertaken culminating in a workshop to discuss the research. In one country, Honduras, no workshop was held, as stated in the proposal.

The workshops were attended by a wide range of stakeholders. This included professionals in television and radio broadcasting, those with experience of community television and radio, film libraries, independent film makers, government policy makers, regulators, civil society (in particular agencies that have explored participatory video and/or extension agencies that produce video as a part of their work, but including agencies exploring the use of new technology in education), academics (in communication and extension services) and the private sector (suppliers of communication services and equipment).

The countries were chosen to give a range of experience:-

Honduras – thought to have extensive community radio experience and some community television experience
South Africa – thought to have community radio experience and some very limited community television experience
Tanzania – thought to have a regional television network, a strong independent film makers network but both with limited developmental connections
Ghana – thought to have experience of community radio, thought to have no experience of community television.

The country reports and the workshop outputs inform the following findings and overall conclusions.

4. Community needs and community media

According to DevMedia 2003, communication programming has, very simplistically, tended to fulfil 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.

"However, the Rockefeller Foundation argues that these traditional approaches to communication are generally insufficient in addressing the reality of the development problems that exist, as 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."* DevMedia 2003**

The position paper goes on to say that a community radio review highlighted some of the key issues regarding **community media.** In order for community media to be effective, it should:-

- make people agents of their own change
- support dialogue and debate on key issues of concern
- sensitively place information into the dialogue and debate
- focus on social norms, social policies, culture and a supportive social-cultural environment.
- negotiate the best way forward, in a partnership between the community and the station
- get the people most effected by issues of concern playing a central role in local development rather than acting as technical experts for outside agencies.

Again from a review of community radio (The Community Media Association 2002), we can say that best practice in **Community** Broadcasting , (in contrast to mainstream) tends to :

- Encourage participation in all aspects of the station – including both broadcasting and management functions;
- 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
- Get most of the programme material from local rather than national and international sources;
- Be governed by people with strong connections to the community and the production of radio;
- Have a number of sources of income and not be concerned with making a large profit for shareholders;
- Encourage paid and voluntary staff to work alongside each other on equal terms.

A number of major significance changes and issues can be directly related to the presence and work of the community Radio Station in the Pastoralists Maasailand and other Community Broadcasting facilities:

o Education in Maasai land has improved greatly in the last three years. Enrolment of children of school going age has increased two folds (36% to 48%).

o Gender equality has improved that now men and women can participate together in community meetings and pastoral women are being voted into different leadership positions.

o The Maasai pastoral people are now agreeing to sell their livestock and engaging in marketing and businesses due to the Radio programmes on Food and Nutritional security.

o The Pastoralists participated fully and effectively in the last 2002 National Census due to the Orkonerei Radio facilitative encouragement and public awareness considering that the Maasai peoples do not want to be counted and we are sure that now we have almost correct figures of the Maasai numbers in Northern Tanzania.

o Breakout of Human and livestock's diseases are now reported early enough to enable quicker attendance from responsible parties. e.g. the last month Cholera is breakout in Orkesumet village etc.

o Pastoralists participated effectively in the second poverty reduction strategy Review which took place in the early months of 2004.

Among the challenges that are facing this project are key policy issues:-

o The use of local languages e.g. Maa, which is not allowed by the Tanzania government. The government of Tanzania couldn't allow local languages to be used in broadcasting because it believes that it may create tribalism among the society. To us this is a great barrier because our peoples do not understand and speak Kiswahili fully (illiteracy is 88%). We believe that speaking our mother languages is our basic human rights and this right shouldn't never be breached or abused because of the fear of Tribalism.

o Higher licensing fees is one of the major critical issues to our Community Radio Station because we don't charge higher airing fees as the commercial Stations and we don't have any other separate incomes to enable as to pay such high fees and we purely serve our Pastoral communities.

o High fuel costs the generator consume about 40 litres of diesel per day. This limits our Broadcasting time to ten hours only, and now it is even going down to seven hours a day because of the rocketing prices of diesel due to oil prices worldwide

o Local government leaders are reluctant and fearful to provide information through the Radio Station claiming that they don't have permission from the higher authorities.

Case Study Tanzania. Development Associates Ltd 2004b

The experience of community radio emphasises the participation and ownership of the community. There has been a strong role for local radio (private and NGO) and Pro-poor public programming. It is more than likely that there could be reflections from the different types of radio stations in the evolution of television. The private sector, if given the chance, may start a local television station – owned privately but presenting local content in local language. Similarly there is likely to be a measure of pro-poor programming as a public service on the many forms of media that may emerge. For this study, we have taken the lessons learned from radio that document the various contributions of radio to development. It can be a medium to present helpful messages, to support the debate of local issues, to strengthen local language and culture, to create dialogue by interactive discussion. In order to limit the discussion on what "Community Television" might look like, we have taken the lessons learned cited above and will assume that community television is owned by the community. We therefore note that while local radio and public pro-poor broadcasting both have their place:-

Experience from community radio suggests that a local broadcast (or narrowcast) which is run by the people for the people can create the best dialogue that adds to development processes and empowers people. Audio visual media that can be produced through participation of the community, and that creates a supportive social cultural environment would be a strong contributor to development processes.

Community television's poor track record in Europe

Since this is UK funded research it may be important to specifically address the scepticism that British people will have about the subject. The book Creating Local television by Rushton (Rushton 1997), details the regulatory saga of Britain. The result of the saga, is that Britain has never really had much more than a handful of short-term restricted services licences (RSLs) which have mostly had poor frequencies, and cable companies offering a local channel that has had extremely low audiences. Similarly,

British people have seen a sample of US public broadcasting that has been so bad that it features as a snippet in humorous mainstream programmes. With the exception of the handful of RSLs the impression of the majority of British people is that community based television is so dire that no one will watch it and it has no value.

In contrast to the UK, Germany has a significantly better track record, and local stations in the USA do actually form part of a comprehensive service. The main argument for community television can be found in the following quote:-
"*Community Broadcasting is a vital counterbalance to the growing concentration of media worldwide. It makes the tools of communication and the means of information and expression readily accessible to people from all walks of life*." (Rushton 1997)

In the context of developing countries, where the needs of the poor for key information, and the need for creating and maintaining community among language groups is high, community media would seem to have a key role to play.

5. Current needs and use

One of the challenges for this study is the breadth of application of the subject matter. Given the DFID focus on poverty, and the countries included in the study, the general benchmark here is rural Africa. If some particular form or shape of community television could be found to be relevant to rural Africa, and it was an affordable and realistic option, it is likely that community television could be applied to other locations of the poor such as rural Asia and South America, and impoverished urban areas.

In this section we look briefly at some of the information and communication needs of the poor, in order to inform the future thinking.

During this research, Gamos was also conducting a study on Livelihoods and Telecommunications (DFID R8347). The R8347 research involved focus group discussions on the information needs of communities, followed up by a statistical analysis of a household questionnaire based on the focus group discussions[1]. The findings of R8347 are due to be published in June 2005. In an attempt to add value to this scoping document, the data for R8347 was interrogated for trends in television use and its relation to other information sources.

- Frequency of use
- Types of information
- Information sources and relative importance

R8347 was conducted in Mozambique, Tanzania and India. As discussed above, rural Africa as the most challenging location and is taken as the benchmark. However the responses from India demonstrate clearly where a rural population and urban poor living in a country with a relatively stronger infrastructure than Africa might spend their money. The

[1]Note that these samples were not designed to be representative of national rural populations – they were designed to capture a variety of types of phone user (and were different from country to country), so figures must not be assumed to be representative of national populations – nevertheless they clearly illustrate trends and priorities of the poor.

responses of India suggest what priorities African households may have in the coming few years.

Some data is also presented from household surveys in Botswana, Ghana, and Uganda that were part of a previous KaR research project into Telecom use.

5.1.Ownership and viewing

Table 1 Frequencies of ownership based on other DFID funded research

	R8347		R8069		R8146	R8347
Household item	Mozambique	Tanzania	Botswana	Uganda	South Africa*	India
Electricity supply	37.8	15%	29.8	N/a	83%	97%
TV	31.7	9.7%	23.7	29.8	63%	66%
radio	72.8	85%	82.4	94.6	53%	25%

* sample from urban township.

The surveys of rural and low income communities show surprisingly high ownership of television among the poor in Africa. The highest ownership is in South Africa where the sample was drawn from an urban township. The data was interrogated for links between television ownership and access to electricity.

Table 2 Correlation coefficients: with household ownership of TV (R8347)

	Mozambique	Tanzania
	household Television	
Household Grid Electricity (EDM)	**.645(**)**	**.671(**)**
Composite economic index	**.675(**)**	**.453(**)**
TOTAL INCOME (calculated)	**.307(**)**	**.261(**)**
PER CAPITA INCOME (adult units)	**.254(**)**	**.239(**)**

Samples can be divided into groupings according to economic status, and correlations show where relationships exist *within* each economic group:

Table 3 Correlation coefficients: with wealth ranking

	Mozambique				Tanzania			
	Poorest	Poor	Medium	Rich	Poorest	Poor	Medium	Rich
Household Grid Electricity (EDM)		**.344(**)**	**.454(**)**	**.346(**)**		**.370(**)**	**.690(**)**	**.686(**)**
Composite economic index		**.271(**)**		**.339(**)**				**.622(**)**
TOTAL INCOME (calculated)		**-.308(**)**	**-.291(**)**					**.231(*)**
PER CAPITA INCOME (adult units)		**-.283(**)**	**-.285(**)**					

These results indicate that **TV ownership is more closely linked to electrification** than to wealth. This is emphasised by the Mozambique data which shows that amongst poor and medium wealth groups, there is an inverse relationship with financial income, reflecting the fact that many of the highest earning households (within each group) do not have

access to electricity. Radio can be run on batteries, and hence the ownership of radio where people have no electricity.

As said above, due to the sampling method the above figures do should not be taken as representative of the whole country. However, even the India census information from 2001 states the following:-

			Percentage of Rural Households Having Availability of Assets						
	Rural Households as a percentage of Total Number of Households	Banking Services	Radio, Transistor	Television	Telephone	Bicycle	Scooter, Motor Cycle, Moped	Car, Jeep, Van	None of the specified assets
Gujarat	61.0%	29.9%	24.6%	21.6%	5.5%	29.3%	11.8%	1.8%	49.5%

Source: Census of India, 2001

For television while State wide the ownership of television and radio were approximately equal, in the districts of **Kheda and Mehsana had higher TV ownership than radio as suggested by the research data.** This may be due to quality of programming and availability of radio signals.

Question – IF television becomes more battery orientated (low power screens, connected to black box phones), will its use be less dependent on electricity roll out?

However, although ownership may be higher than expected by still low in Africa, the responses to the question about use is even higher.

Table 4 Proportion of samples making regular use of ICTs (R8347)

Household item	Mozambique	Tanzania
TV	58%	46%
Radio	92%	96%
Mobile phones	56%	61%
Email / internet	1.5%	2%

However, most of the people who watch TV do so only infrequently, as can be seen in Table 5.

Table 5 Frequency of use of TV (R8347)

		Percent of sample
	Tanzania	Mozambique
Not used	54.1	39.4
less than once a month	15.7	11.4
more than once a month	8.3	7.9
1 or more times a week	13.2	12.4
1 or more times a day	8.4	26.3
Total	99.7	97.4

The data seems to confirm that as the poor get wealthier and have access to basic infrastructure such as electricity and a good national broadcast signal, they migrate to television even with the current limits on programming (limited local language, local culture).

5.2.Priority information needs & TV as a medium

Is this use of television vital for the community information needs? In R8069, the survey included comment on various sources or means of finding information – about important subjects. Table 6 demonstrates that TV is seen as a source of information although lower ranking in importance than face to face communication, and radio. This is not surprising given the relative ratios of television to radio. What is perhaps slightly surprising is that television as a source is used by as many people (if not slightly more) than newspapers. This may reflect literacy rates.

Table 6 Effective means of finding out information (about phones as an example application) (R8069)

Channel	*Botswana*	*Ghana*	*Uganda*
Word of mouth	51.9	46.3	55.6
Local leaders	56.3	35.5	19.8
Radio	86.0	94.7	78.8
TV	37.8	65.3	26.0
Newspaper	44.1	47.3	41.3

The idea of the role of various ICTs to communicate information was further developed in the follow-up research (R8347), in which respondents were asked to rank the importance of types of information pertinent to rural livelihoods. It can be seen from Table 7 and Table 8 that there is a great deal of similarity in the types of information regarded as most important in both countries. Note that priority information needs tend to relate to social matters.

Table 7 goes on to show the proportions of the sample who regard particular channels as their principal means of communicating each type of information.

Table 7 Types of information communicated using priority channels (Tanzania)

Proportion of whole sample for whom channel is main means of communicating information type	Importance (mean) range -2 to +2	Face to face (%)	Radio (%)	Phone (%)	TV (%)
Urgent e.g. emergencies, deaths - Means	1.88	26	7	55	0
News about sick relatives - Means	1.82	29	1	53	0
How to prevent and treat illness within the family - Means	1.58	51	26	0	1
Information about friends and family members - Means	1.56	29	0	35	0
Weather information - Means	1.42	11	78	0	5
Market information - Means	1.42	71	19	6	1
Crop management - Means	1.31	66	13	0	0

News (local and international) - Means	1.27	3	80	0	7
Government and legal requirements (e.g. taxes, regulations) - Means	1.22	16	43	0	2
Education opportunities (schools and further education) - Means	1.21	34	8	3	1
Availability and costs of inputs to purchase - Means	1.21	78	13	5	0
Information on new products e.g. pesticides, seeds - Means	1.11	55	28	1	2
Social and religious events e.g. marriages - Means	1.11	41	0	10	0
Livestock management & health - Means	1.09	55	13	0	0
Availability of credit and subsidies - Means	1.03	40	12	1	0
Business skills - Means	1.02	56	4	1	0
Information on clients and debtors e.g. ability to pay - Means	1.02	79	1	2	0
Information on other producers (collaborators, competitors) - Means	0.75	69	3	1	0
Job opportunities - Means	0.65	25	10	0	0
Remittances - Means	0.55	12	0	14	0
Romance - Means	0.51	65	0	5	0
Insurance - Means	0.47	18	25	0	1
Entertainment - Means	0.34	46	6	1	2
Gossip (intrigue) - Means	-0.92	53	0	0	0

Shaded cells indicate top five types of information for each channel.

Table 8 Types of information communicated using priority channels (Mozambique)

Proportion of whole sample for whom channel is main means of communicating information type	Importance (mean) range -2 to +2	Face to face (%)	Radio (%)	Phone (%)	TV (%)
Urgent e.g. emergencies, deaths, sickness - Means	1.53	15	9	56	1
News about relatives - Means	1.47	16	4	56	1
How to prevent and treat illness within the family - Means	1.22	53	23	2	3
News (local and international) - Means	1.16	10	62	1	13
News about friends - Means	1.08	40	4	34	1
Weather information - Means	1.06	10	53	1	21
Social and religious events e.g. marriages - Means	0.99	46	3	14	1
Job opportunities - Means	0.56	35	25	1	4
Remittances - Means	0.46	30	5	15	1
Education opportunities (schools and further education) - Means	0.45	48	12	1	8
Crop management - Means	0.45	45	16	1	3
Availability and costs of inputs to purchase - Means	0.45	64	10	2	2
Market prices (for selling) - Means	0.43	71	7	2	2
Marketing information e.g. new markets - Means	0.42	52	13	1	5
new products & activities e.g. pesticides, seeds - Means	0.34	46	16	0	3
Livestock management & health - Means	0.33	40	15	1	4
Transport and driver schedules - Means	0.32	63	8	0	1
Government and legal requirements (e.g. taxes, regulations) - Means	0.3	38	22	1	3
Entertainment - Means	0.23	50	9	9	5
Information on clients and debtors e.g. ability to pay - Means	0.12	39	11	2	3
Business skills - Means	0.11	43	16	0	3
Availability of credit, and subsidies, pensions, vulnerability assistance	0.1	37	13	1	2
Romance - Means	0.01	54	1	12	1
Information on other producers (collaborators, competitors) - Means	0	39	11	0	6
Gossip - Means	-1.12	52	2	4	1

Shaded cells indicate top five types of information for each channel.

Note that figures presented in Table 6 are higher than those in Table 7 and Table 8 because they are compiled from multiple responses (people could tick as many boxes as appropriate), whereas figures from Tanzania and Mozambique represent the most commonly used channel (people could only tick one box). Nevertheless, these figures confirm that TV currently plays a significant role in information communication to rural areas, particularly weather and news.

Once again, looking at India we find a different picture, but one that illustrates changes that might occur over the next few years in Africa.

Table 9: Most commonly used means of accessing the different types of information (random sample)

	Face to face	Phone	Radio	TV	Importance
	%	%	%	%	Mean (-2 to +2)
Business	57.1	10		2.3	0.55
Social	23.2	70.5	0.2	0.6	1.19
Emergency	10.5	85.2	0.3	1.2	1.4
Political	29.2	4.8	0.5	6.4	0.16
Education	66	4.4	0.3	4.8	0.84
Weather	14.2	0.9	2.7	30	0.54
News	7.8	1.9	2.5	37.3	0.92

We see that television has completely usurped the role of radio in all but social information. While it has not replaced face to face and the telephone for social and emergency uses, it is the major source for the weather and news. Below we shall discuss programming on television and will note that at the moment television cannot respond to local issues and is limited in what it can discuss – it is best known for news and weather, hence the responses above. What if it were to present local issues, local business news, local market data?

Currently television plays a small role in the information map of a communities (in Africa). However, at the moment the information presented on television is very limited - most locally relevant types of information such as "news about friends" just isn't available on the television. Community television would have a more local focus and could (and should address) some of these more local information needs.

5.3.Changes in last 2 years

Respondents in the R8347 surveys were asked how the frequency with which they consult each medium has changed over the last two years. Results in Table 10 and Table 11 appear to indicate that, overall, people are making greater use of most sources of information. Most striking is the strong increase in use of radio. Increase in use of TV has been modest by comparison.

Table 10 Changes in use of media (Mozambique)

Medium	N	Mean (range –2 to +2)
Radio - changed	673	1.11
TV - changed	637	0.6
Government services - changed	638	0.4
Local leaders - changed	662	0.35
District staff - changed	660	0.33
Newspapers - changed	604	0.32
Neighbours - changed	681	0.06
Networks - changed	608	-0.06
Traders who sell inputs for agr. and livestock - changed	612	-0.07
Manufacturers - changed	597	-0.4

Table 11 Changes in use of media (Tanzania)

Medium	N	Mean (range –2 to +2)
Radio	698	1.1
Civil society organizations (NGO's, CBO's)	517	0.37
Newspapers	555	0.34
Local leaders	731	0.33
District staff	675	0.32
TV	392	0.29
Government services	657	0.26
Manufacturers	606	0.13
Private associations eg. AKSCG, TFA	554	0.13
Neighbours	732	0.02
Traders who sell inputs for agr. and livestock	678	-0.05

This data confirms that radio remains strong in its position as a source of information. And indeed its use is increasing.

And once again the India data paints a slightly different picture, based on stronger use of television and perhaps illustrating where Africa might go in a few years time. When we consider the high use in India and enquire about its change over the last two years, television ranks the highest.

Table 12: Frequency of consultation over past 2 years by source -Random and Business sample for Gujarat India (R8347)

Sources of information consulted	Random	Business	
n	641	104	
Range of frequency means (1 to 6)	Mean	Mean	MW Sig.
Consult TV changed?	0.09	0.13	
Consult newspapers changed?	0.08	0.14	
Consulted traders?	-0.1	-0.09	
Frequency consulted with Government services	-0.11	-0.12	
Consulted (NGOs)?	-0.11	-0.13	
Consulted radio changed?	-0.24	-0.48	0.034

- P = < 0.05

The R8357 draft report states for India:- "*The significance of television in this context is worth emphasising. The importance of broadcast radio in disseminating information in many developing countries is well known, and is reflected in the findings of the Mozambique and Tanzania samples for this study. In the Gujarat sample, however, radio was relatively unimportant; indeed, as noted in section B above, many interviewees did not own or have access to a radio. This reflects the very high level of television ownership in Gujarat. It may also be partly due to lack of local radio stations offering specifically local information which differs from that available on television.*" Souter et al 2005

However, given the content of televisions, their current price levels and their dependence on electricity supply, this is not surprising. IF televisions come down in price, have local content (equivalent to community radio and public pro-poor broadcast radio), and were easy to carry (reliant on battery) how might the situation change?

Concluding this section we may note among other things that:-

- **Ownership in Africa is already higher than anticipated, and confirms the assumption that television is an important medium to the poor.**
- **Ownership of television seems to be closely related to access to electricity (but this might change as low power and battery operated sets become common)**
- **Ownership in India is very high indicating that as the poor get better access to media options, it is indeed likely that television (audiovisual media) will replace traditional radio (audio only)**
- **There is a measurable trend to increased use of television**

5.4.Current viewing (and listening) habits

Apart from the above, what do we know about the current viewing habits of the poor? This section is of course limited by the lack of currently-available research on non-mass broadcasting, and therefore the following are a few incomplete observations.

5.4.1.Listening in Ghana

In addition to the above information needs analysis conducted for this research, the following is an extract from a study that was conducted between December 20, 1999 and February 3, 2000 sponsored by the Royal Danish Embassy (Danish Embassy 2001). A total of 1200 respondents, 200 for each of six broadcast stations, were sampled for the study and the responses thus obtained were collated and analyzed to draw descriptive conclusions regarding:

a. Respondents' media use habits; and
b. The demographic and socio-economic status variables that underpin those habits.

Findings:-

- *Radio was the commonest medium among the rural populations studied; whilst only about four in every 20 persons (20.8) said that they bought newspapers, and just a little more than five in 20 (20.6%) owned TV sets, as many as 80.2% (or about 16 out or every 20) of them indicated that they owned radio sets. While all 1200 respondents listened to the radio, close to 70% of them did not read newspapers; and more than one-third of them (actually 37.6%) did not watch television.*

In order to gauge the relative popularity of the stations studied, vis-a vis the spectrum of alternative stations whose signals, we asked listeners about their favourite station - or the station they listened to most.

- *On average, 60% of the respondents always preferred the station which originated within their locality.*
- *In nearly 40% of the cases, such indicators of community orientation as the location of the station, the language of broadcast and programme identity were the overriding motivation for listeners' preference for the local station.*
- *On the whole, more than 70% of the rural listeners favoured programmes in local vernacular, compared to less than 10% of them who preferred programmes in the English language.*
- *Close to two-thirds of the respondents (i.e. 64.5%) said that they listened to the local stations 'primarily for the news/current affairs, and educational programmes.' This was compared to only 17% who indicated that they 'listened mostly for the music and entertainment, and whish[ed] there were less of the other programmes.'*
- *On the whole, rural stations attracted their largest audience patronage in the mornings (87.6%), and the least following in the afternoons (63.6%).*

There is a strong willingness to listen to radio for news and educational programmes. This willingness to listen should carry over into a willingness to watch for community television.

5.4.2.Children and television serials

Given the need for educating and empowering the next generation, it is interesting to find that an analysis done by the Asian Media Information and Communication Centre (AMIC 2000), *"Growing up with TV," stresses the fact that in India, the total number of children's programmes in all channels is not even 5 per cent. Before embarking on the actual study with a sample size of 1137 children, AMIC did a random study among parents to find out their children's favourite medium and television topped with 56.5%. Even in homes where a PC was available, 40 per cent of the parents said TV was their children's favourite medium.*

The sample of 1137 adolescents was divided into low income (below 5,000 rupees (Rs.) a month), middle income (Rs. 5,000 to 10,000 per month) and high-income (above Rs. 10,000) groups. When the researchers checked the frequency of TV viewing among this sample, only 89 children were low frequency viewers (roughly one-and-a-half to three hours per day) and a large majority (692) were high frequency viewers (over 3 hours per day). What is important to note is that in the data there is a significant difference in channel and programme preferences between the three income groups. As expected, language and lifestyles play a major role in channel preferences, but serials stood out as the most popular content in all the channels.

As Dr. Karthikeyan, an eminent psychologist from Chennai puts it, "The narrative style will always be the most entertaining as story telling has always been an integral part of our culture. And today in nuclear families, the TV serials have in a way substituted for the stories grandparents used to tell their grandchildren".

We note that this comment about serials stands in contrast to the current use of television in Africa, but as both Africa and India value story telling and an oral culture, perhaps the value of serials and story telling revealed by the research is indicative of what should be included in Community Television programming.

Community or local television should be in local language and support local cultural processes.

5.4.3.Television is good for you?

"A study was carried out in a slum area of South Calcutta to assess the impact of a current mass education programme against AIDS. Two hundred and six residents, mainly of lower middle class, aged 18-60 years, of both sexes, were selected at random. They were interviewed to know their perception and sources of information about AIDS. Two-thirds of them had their own TV and radio, which they watched/heard for about three and half hours each day. Another 28% watched TV at other locations for about one and half hours a day. About 46% were daily readers and 20% occasional readers of newspapers. 59% knew about persons vulnerable to get AIDS, but most of them associated it with promiscuity only. Avoiding sex was the main means known to them for preventing AIDS. The role of the condom was known to only 2.5% residents. The source of their knowledge was mainly TV, either alone or with other mass media (67%)." Poddar et al 1996

While the results of this study indicate that Television was a viable means of mass communication, the knowledge about condoms indicates that a significant part of the message had not got through. Is this a failure of the medium or the message on the medium?

Television has the advantage of visual images as well as the narrative. It offers the potential combination of image and audio to educate. In national broadcasts, messages can get lost in the mass of other programming, and can lose their local relevance by being generic in format. Community television should have the potential to communicate more directly with its limited audience and thereby tailor the message more effectively.

5.4.4. What's on in Ghana?

Table 12 presents the frequency analysis of the types of programmes broadcast on GBC-TV. *The "other" subcategory - an amalgam of weather forecasts, ads, announcements, program parades, programme summaries, and test patterns- accounted for more than a third (38.9 percent) of the broadcasts. A new feature for news presentation was introduced on GBC-TV in June 1990. The 7PM newscast was been divided into two segments: local and international news. And the two segments, anchored by two different readers, are divided with a two minute commercial break.* Asante, C 1996 from Sakyi Dawson 2004f

Table 13 Distribution of GBC-TV Programmes by Types of Broadcast

PROGRAM CATEGORY	*FREQUENCY*	*PERCENT*
Information	11	8.4
Entertainment/Culture	13	9.9
Youth	10	7.6
Other Entertainment	7	5.3
Community	5	3.8
News	17	13.0
Religion	9	6.9
Education	8	6.1
Others	51	38.9
Total	131	100%

This shows how little direct educational content there is and that it is difficult for a national station to address community development needs. These figures are fairly typical of broadcasts in Africa at the moment, and they show that there is plenty of room for alternative broadcasting to fill local information needs.

5.4.5. Why Television Stations don't Broadcast More Development News?

"*The goals of development journalism are to promote grassroots, non-violent, socially responsible, ecologically sensitive, personally empowering, democratic, dialogical and humanistic forms of communication.*

"Ghana as a developing country has myriad problems of development not least of all are poverty, poor education and health, inadequate agricultural practices, lack of adequate infrastructure, poor social services, a lack of political maturity and accountability, conflicts, gender inequality, etc.

"At the same time the country has had a poor history of political mobilization around these issues and that is why the idea of using the mass media to mobilize around poverty development issues has always been considered attractive. The media have the potential for reaching huge audiences. Thus journalists must assume an educational role.

"But before you can do that you need first and foremost to be informed about the issues yourself. You need to be knowledgeable and be in a position to understand what development means, how people are affected by government development politics and assess the merits and demerits of development policies.

"Secondly, you need to reach the people most affected by development processes and to understand what their issues are. The rural area makes up by far the greatest portion of Africa, and is the least developed. To make development journalism meaningful we need to focus on the need and aspirations of the rural poor.
"The reality however is that this constituency is unattractive to journalists. Journalists report the rural area from the safety and comfort of the town, making periodic forays into the rural area to cover specific events at which top politicians or governments or government officials are the main attraction. Urban mass media content in developing countries reflects and appeals to the needs and interests of the urban elite and especially of the government. Yet, the most basic and challenging aspects of the development problem is centered on the portion of the population that is least directly reached by urban mass media – those in our rural areas.

"Development journalism has had a reputation as a euphemism for government propaganda and journalists who claim to practice development journalism are seen as having been co-opted to promote state programs and policies, in the name of mobilizing economic growth.

"The prevailing news culture in Ghana generates two types of news generally – even-driven (coverage of speech events by prominent officials, or a negative happening, accident, murder, theft etc.) or scandal-driven, consisting of political exposes accompanied by copious opinionating. Seldom are feature, documentary and analytical treatments given to issues that are neither particularly controversial or overtly political. There appears to be no incentives for innovative reportage; thus, for example, when Ghanaian-born UN Secretary General Kofi Annan was awarded a Noble Prize last year the story was treated as a singular news event and generated only a few straight news reports of the fact as supplied by officialdom. A GBC reporter blamed poor coverage on the fact that they had been waiting for the government to react to the news by issuing a statement or an announcement before they could provide their own independent coverage. While BBC broadcast a special in-depth documentary on Kofi Annan to pre-empt the award, GBC did not, leaving Ghanaians to contend, once again, with a Western perspective on a subject that was in the Ghanaian purview." Gadzekpo 2002b

Current broadcasting has very little development content. The "distance" between national journalists and documentary makers and the local community is often too far for meaningful dialogue and participatory programming. Community or local television could offer a "nearness" that would encourage development orientated programming.

5.4.6.Social responsibility

The emerging picture is that community media needs to be embedded in the community and for it to be valuable in poverty reduction, it needs to be a mechanism for dialogue, not a means of broadcasting a single approved message. This is an important assumption in the scoping document. The country workshops and stakeholder interviews show a sharp divide between current film makers and television broadcasting professionals, and their community radio counterparts.

Visual broadcasting is currently seen as having a high level of social responsibility. Ms. Margaret I. Amoakohene of the University of Ghana (Legon), a lecturer in communication studies, presented a clear analysis of social responsibility in broadcasting and the changing environment (Sakyi Dawson 2004a). From the subsequent discussion it became clear that while newspapers can be allied to a political party, and radio can broadcast popular opinion, television is (mainly) seen as a neutral socially responsible bearer of truth. While participants acknowledged that television didn't always live up to the demands of "social responsibility theory", nevertheless consumers currently "trusted" and believed the television more than other forms of media.

IF community television were to develop, with a similar ethos to community radio - i.e., staffed by volunteers, a place of dialogue not pre-checked programming, even including political lobbying - then the attitudes and positions of the current crop of television professionals might need to change.

Returning to our data from R8347, the respondents were asked to rate the degree of confidence they have in each of the media they were offered as a means of access or sharing information. Mean responses are presented in Table 14 and Table 15, and show that people have a high regard for broadcast media (radio, TV, and newspapers).

Table 14 Confidence in sources of information (Tanzania)

Medium	N	mean
Radio - confidence	698	4.52
TV - confidence	391	4.28
Government services - confidence	657	3.86
Newspapers - confidence	557	3.81
District staff - confidence	675	3.78
Local leaders - confidence	732	3.72
Civil society organizations (NGO's, CBO's) - confidence	518	3.6
Private associations eg. AKSCG, TFA - confidence	555	3.42
Manufacturers - confidence	608	3.25
Neighbours - confidence	734	2.99
Traders who sell inputs for agr. and livestock - confidence	679	2.77

Table 15 Confidence in sources of information (Mozambique)

Medium	N	mean
Radio - confidence	683	4.32
TV - confidence	668	3.96
Newspapers - confidence	669	3.72
Local leaders - confidence	685	3.62
Government services - confidence	685	3.56
District staff - confidence	685	3.54
Neighbours - confidence	686	3.19
Traders who sell inputs for agr. and livestock - confidence	685	3.07
Networks - confidence	682	3.07
Manufacturers - confidence	679	2.85

In the Tanzanian sample, neighbours were more highly regarded amongst poorer groups and conversely, TV was regarded as more reliable amongst better off groups. Nevertheless, the poorest still had greatest confidence in radio, TV and newspapers.

In the Mozambican sample, people in higher status groups had greater confidence in TV than those in lower status groups (education and wealth), and in the poorest groups people had more confidence in local leaders than TV. Note that this is not true of radio, which is universally regarded as the more reliable source of information.

A local station with familiar faces could well become the most trusted of all media in the communty.

Concluding this section we may note among other things that:-

- **Progamming available on national television is limited, and there would seem to be immense opportunities for community and local broadcasting**
- **Already in India television has become the major source of national and international news and weather**
- **Children can learn from television, in ways that could protect the culture and strengthen families.**
- **Not all educational programming communicates effectively – the likelihood is that community programming will be a mix of good and bad**
- **There is considerable trust given to the information coming from the television, and this could reinforce the role of a community television as a means of dialogue about development issues.**

6. Technical discussion

Having established that there is a demand for audiovisual media, the following section explores the technical findings regarding the existing and upcoming technical options for broadcasting (or narrowcast) audiovisual media. It looks at current and emerging technologies which might form the basis of a local broadcast (or narrowcast). The technical output discusses the various options (Eastwick 2004). Table 16 presents the options in brief:-

Technical option	**Description**	**Cost of a "local solution"**	**Approx coverage**	**Current availability**	**Notes regarding "local solution"**	**Cost or implication for receiving**	**Pro's**	**Con's**
Terrestrial Analogue TV	mature technology, normally high powered and expensive	2W UHF transmitter system can be built for less than $2500 US Dollars	a range of up to 6Km in an open area	Available but the rest of the world is moving over to all digital systems for television transmission	Frequencies are regulated, and often not available. Cost of Broadcasting license generally wont make a small station viable	None – regular television	An established technology with many receivers	Doesnt take advantage of digital convergence, and is subject to tight often restrictive regulation
Adding Teletext to Analogue TV	Added to the above, Teletext text allows simple text based information to be transmitted along side analogue TV signals.	small system based around a PC can be purchased for about €2200	As above	Available but if the local language group uses a non Roman script then it might be difficult to find a teletext package to support this.	teletext information can be retrieved by the viewers at a time to suite them	?Higher priced televisions only?	As above, but loses the advantage of "many receivers" - higher priced television required	As above
Terrestrial Digital TV	possible to transmit more programming in a given spectrum allocation. Current terrestrial digital television in the UK operates in the UHF television band between 470 and 854 Mhz.	Digital Modulator and a Digital television transmitter will be required, this will cost in the region of €20K for a transmitter with a 10 W output operating in the 470 - 860 MHz band.	Difficult to say, assume up to 10KM depends on terrain but digital does require a higher signal strength than analogue to give acceptable performance.	Upcoming technology for the West.	Not very practical at the moment for a local television solution.	The signals can be received on an existing analogue television with the addition of a set-top box that in the UK is retailing for about £50.	An upcoming technology for national broadcasts.	Has the difficulties of regulation, licenses, and requires the receiver to spend extra money to interpret the signal.

Technical option	**Description**	**Cost of a "local solution"**	**Approx coverage**	**Current availability**	**Notes regarding "local solution"**	**Cost or implication for receiving**	**Pro's**	**Con's**
Satellite TV	providing high quality coverage over a wide area,	quite expensive to rent air time.	suitable for a community TV station if the community being served was not a confined to a small geographic area.	Available at a price!	Perhaps a nomadic community spread over a wide area	satellite dishes need to be aligned in the correct direction to allow signals to be received.	Good for general educational broadcasts.	Currently expensive for equipment to receive and monthly subscription This is at the discretion of the broadcaster, there is no requirement for monthly fee to receive downlink if the signal is sent unscrambled
Cable TV	Mainly in urban areas, not common in developing countries, but sometimes available	Only if there is significant urban demand would it be installed, in which case a local community channel is very cheap to add	Only to the extent of the cabling.	Can be found in Ghana and Honduras but mainly as reseller of Satellite Broadcasts	As a subscription based service, unlikely to serve the poor	Needs set top box, as well as TV, and often on a monthly subscription	Very cheap to add a community broadcast to an existing network.	As above, receivers need extra equipment, and often restricted to urban areas to get suitable density of users.

Technical option	**Description**	**Cost of a "local solution"**	**Approx coverage**	**Current availability**	**Notes regarding "local solution"**	**Cost or implication for receiving**	**Pro's**	**Con's**
Terrestrial Licence Free TV Analogue (2.4) Systems	By international agreement there are a number of bands available for use without a license. This includes a band at 2.4 GHz and 2 bands at 5GHz	Using consumer products originally designed to allow home owners the ability to transmit cable and satellite television programs from the main receiver to secondary televisions around the house a broadcast network can be constructed quickly and for a low cost.	Using directional antennas ranges of up to 5KM can be achieved with an ERP of 10mW.	This system has been used by the UK based Institute of Local Television in a number of field trials around the UK. The system uses video senders to broadcast television on the 2.4 GHz band.	Useful if the community already has a UHF terrestrial television service as the local station can be deployed by adding set top boxes.	A 2.4GHz receiver needs to be installed on each television that wishes to receive this station. There is no limit to the number of televisions that can simultaneously view the signal. For locations on the fringe of the coverage area directional antennas aligned to the transmitter will be required.	Potentially good for local broadcasting. No license required in most countries, can be very local.	Has to be very local, range limited. Possibly interference in long run from a WIFI roll out. Currently experimental .
5GHz Video Senders	These devices are designed to distribute video signals around the home.	The Belkin Pure AV remote TV is available in the US and retails at $500.	Dependant on terrain and building construction. But possible local broadcast of 5Km if low powered with directional antennae	The Digital Television Group in the UK has commissioned a study looking at using the license free 5GHz Spectrum to allow the deployment of Video Senders using digital encoding, the standards will be based on the DVB-T specifications allowing higher quality relaying of signals around the home.	Similar to deploying the analogue digisend system.	It is likely that the Tv set will require a SACRT or AV connections. This would limit the addition of such a set to box to more expensive TVs	Less prone to interference when compared to the 2GHz Digisend devices. Simple setup as you add to existing TV.	Currently these set top boxes are new and expensive. The ability to transmit to multiple receivers is not available. This technology may not take off due to other digital devices becoming available.

Technical option	**Description**	**Cost of a "local solution"**	**Approx coverage**	**Current availability**	**Notes regarding "local solution"**	**Cost or implication for receiving**	**Pro's**	**Con's**
Digital Radio	Digital radio offers the opportunity to send text and images along with the audio, a kind of halfway house between TV and Radio.	Little public information on pricing available.	Dependant on transmitter	Still in its infancy, current sets only allow a very limited text service to be delivered along with audio.	Currently the additional benefits of a digital radio set will not be sufficient to justify the additional cost to the poor when compared with the current FM sets that can be purchased for just a few dollars.	Require a new radio	improved audio quality.	Uses licensed frequencies for transmission. Requires new receivers significantly more expensive than current receivers.
Digital (2.4) Systems Point to Point	Standards have been developed to allow the wireless networking of computers using unlicensed frequencies in both the 2.4GHz and 5GHz bands.	Uses off the shelf consumer products primarily designed to build local networks of computers within homes and businesses.	A new standard WiMax (802.16) is emerging that will be designed to offer wireless broadband service with cell radius of up to 5 Km. Ranges of up to 1 mile can be achieved with good quality antennas, using a parabolic reflector has increased line of site ranges to over 10 miles.	IP wireless networks devices are becoming available to allow audio and video to be shared from a PC with the home HiFi or Television. These devices operate in both the 2.4 GHz and 5GHz bands.	Using Wireless LAN technology to set up a community broadcasting system offers us opportunities to offer IP telephone, email and other services over that same network. It is a system that can grow as the users get more familiar with the technology and the service offered to each user can be tailored to their needs.	These devices use the LAN to distribute Audio and Video using TCP/IP. Streaming broadcast quality video requires a high data rate connection so we would need an very high bandwidth network if we were to set-up our system this way. this is not going to be practical for the type of network we envisage.	Off the shelf components. Easy to upgrade to add other services. Helps break down the digital divide.	Greater complexity in receiving equipment. Technology is changing fast and this has the risk of early obsolescence.

Technical option	**Description**	**Cost of a "local solution"**	**Approx coverage**	**Current availability**	**Notes regarding "local solution"**	**Cost or implication for receiving**	**Pro's**	**Con's**
Digital (2.4) Systems Multicast	An alternative to the above is to send material as a multicast using UDP/IP.This technique is commonly used on company intranets where many users are viewing a common video conference call. The open source software program VideoLAN makes it easy to put Multicast streams on to a network.	Uses off the shelf consumer products primarily designed to build local networks of computers within homes and businesses.	As above	Research carried out at the University Collage London looked at the possibilities of using WiFi (802.11) standards to multicast a single Mpeg2 encoded digital TV stream.	Using Wireless LAN technology to set up a community broadcasting system offers us opportunities to offer IP telephone, email and other services over that same network. It is a system that can grow as the users get more familiar with the technology and the service offered to each user can be tailored to their needs.	One area that needs further investigation is to confirm the current multimedia players are capable of viewing a multicast (UDP) stream.	Requires less bandwidth than a point to point system Otherwise as above.	Cannot offer a Video on demand. Otherwise as above.
IP-TV	This is really a set of standards and proprietary software that allows television programs to be delivered over a network connection.	Requires either a cable or wireless lan distribution network.	Depends on distribution network, can use cable or wireless networks. Due to the high bandwidth requirements it is most likely to be deployed on Cable and ADSL lines.	Microsoft are developing software to allow television programs to be delivered over the Internet.	Not a transmission technology requires a network.	Mutimedia receivers and network connections will be required	Uses open standards	

Technical option	**Description**	**Cost of a "local solution"**	**Approx coverage**	**Current availability**	**Notes regarding "local solution"**	**Cost or implication for receiving**	**Pro's**	**Con's**
Forward and Store Technologies	Forward and store systems are used where the bandwidth available is not sufficient to support real time access. A data stream can be sent to a computer at a low data rate, stored and viewed once the download has completed. This program could be rebroadcast on a local television network to local receivers.	This is an additional service added to a IP based system, if we have a low bandwidth or wish to use quite times to send content to users with suitable digital storage facilities.	Determined by network	This is simple to add to a computer networked solution,	This is not a transport mechanism	Requires computer and network connection	Can deliver high quality video on low bandwidth systems. Can be used to distribute programming form a central location to regional rebroadcasters using medium quality data links.	Greater complexity, more suitable to heath care and educational establishments rather than home users.
Other Emerging Technologies	Dubbed Instinct, (IP-based Networks, Services and Terminals for Converging Systems), the project is being led by West London's Brunel University. They aim to deliver high quality video to mobile phones at an affordable cost.		Requires a mobile phone network to be deployed locally to deliver content	Still in early development		Requires video enabled mobile phone to be available.		

6.1.Technical Overview

Based on the technical review we can say the following:-

There are a number of new opportunities arising as the proposal assumptions presumed. The technical lie of the land is changing rapidly. The 2.4GHz and 5GHz spectrum which are currently unlicensed by international agreement can be used to broadcast analogue or digital audiovisual media. They are most likely to be exploited for the internet and IP based data transfer. There is considerable debate about the impact wireless technologies will have on remote rural areas. Whether wireless broadband internet rolls out in rural areas or not, the options remain to use various emerging wireless technologies as a basis for a local television broadcast (or narrowcast).

Many of the options dovetail with wireless broadband and may be facilitated by digital expansion to rural areas, or may be the means to facilitate digital expansion. As discussed above it is difficult to predict the coming two or three years of wireless expansion. There are a growing number of experiments (eg the FMFI programme of IDRC) and commercial offerings (one2one Uganda) that are exploring roll out of wireless broadband.

Each of the opportunities currently has advantages and disadvantages when compared to regular terrestrial analogue television. Each different technical option has implications in terms of power consumption and equipment costs. The receiver equipment is in our opinion going to be one of the most critical factors in the technical choices. A system that requires receivers to be linked to a full personal computer (PC) is unlikely to have a mass market in poor rural areas. TV use is growing and there is already a distribution of analogue television receivers among the rural poor. If a local broadcast system were on an analogue UHF system, there would be no particular extra cost for the receiver. There are options that sit in the middle of the two extremes -- such as a "digisend" receiver, costing $20 retail (possibly made available in bulk at less than $10), that would allow people to add a digital-reception black box to their existing equipment for minimal cost.

Most of the newer options require purchase of reception devices by the user. These tend to be within a reasonable price range, but may be limited by the need for a supply chain. Although we have said above that the cost of the extra devices may be within reach of users, there is the other question of supply chain. Whoever sets up an alternative transmission system would probably have to organise a supply chain for the extra black box receptor.

The newer options open the way for general data transfer. Since digital convergence continues apace and many of the black box devices are likely to have multiple purposes, it is likely that a local television (some form of visual service) would sit alongside access global data (the internet – albeit not necessarily in a real-time environment). However this raises all the questions commonly asked about which content and information services are relevant to the poor (e.g., see G8 DOTForce discussions and Final Report)

Returning for a moment to the R8347 household surveys, the draft analysis states:- *The high reliance on and confidence in traditional information sources – such as radio, television, newspapers and official representatives implies that these channels will remain the most important means of imparting information to the community as a whole and of influencing social behaviour (for example on agricultural or health matters). The Internet may, however, have substantial value in improving the quality of information provided through these intermediaries (such as community leaders and local commercial or community radio stations).*

There is also an important lesson here for researchers. Most Internet diffusion studies have focused on actual users of Internet facilities, for example analysing the social-economic characteristics of cybercafé users. These must be complemented by studies looking at Internet use from the perspective of the potential user community as a whole. Further research is critically needed into the reasons why Internet use in this wider population is so low, and into the potential for building new technology techniques into established and effective information flows. Souter et al 2005

Some of the options are relatively low cost and could presumably be implemented by an institution with relatively few resources, but there is the important variable of running cost . If we are exploring a local community based station then obviously the cost of equipment and its running cost would be critical to the viability of the station's existence.

Some of the new options are currently under-regulated, allowing opportunities for entrepreneurial communities to set up a system. As mentioned above the 2.4GHz and 5GHz spectrums are currently under-regulated. It is possible that a local television broadcast could be allowed under existing regulation, or with minimal changes to policies, in these frequencies.

Many of the systems could be a mixture of text, visual and audio services, and need not include full screen moving pictures, and therefore could be interpreted as "non-representational" programming from a regulatory point of view. A mainly audio programme, with a picture (delivered to a phone or a "radio with screen") could give users an enhanced radio experience.

7. Regulatory frameworks

The last point of the previous sections brings us into the discussion of regulatory environments. As with all communication infrastructures, the regulatory environment would need to be enabling if community television services were to grow.

In 2001, a citizen of Kenya set up a small private television service in one area of Nairobi. The broadcasts were of a political nature and the station soon came to the attention of the authorities, who immediately shut it down. Nation 2004

Terrestrial mass free-to-air broadcasting is tightly regulated in most countries and it is expensive to get a license. Ideally, there need to be specific provisions for community television licenses. During the period of this research, the regulatory environment for community television changed favourably in South Africa, with introduction of a new full-time-licencing regime for community TV. The participants in the October 2004 South African workshop for this study had an opportunity to hear from, and engage with, one of the key players at the regulator ICASA just as the finishing touches were being put on the regulatory framework (released end November 2004). This journey towards an enabling regime for community TV in South Africa had taken more than 10 years to complete, a measure of the complexity of catering for community broadcasters while at the same time preserving the frequencies and business models of national public and commercial broadcasters.

In Tanzania, the research workshop was an opportunity for the regulator to consult on community radio license fees. Soon after the workshop the fees were reduced, creating a more enabling environment for the growth of community radio.

In Senegal, the results of this research were verbally presented to the Vice Director of Radio Television Senegal. Senegal has a monopolistic State television service, and the vice director had been appointed by the President to "trouble shoot" the transition from a single television station to a more liberal regulatory environment. On hearing the results of this research project the vice director expressed astonishment that the technology had changed the landscape considerably and stated that he would favourably consider the implications of low power television. He stated that “The ball game has changed considerably hasnt it, and we need to adjust policy to keep up with it”. He has requested the final approved reports and stated he wishes to dialogue with the collaborators of this research.

An enabling regulatory environment will need to include new forms of licensing to accommodate new technologies, licensing that accommodates community group action and fee structures that enable rather than prohibit. This will be a constant challenge for decision makers.

7.1.South Africa’s new community TV dispensation

In its *Community TV Position Paper (ICASA 2004)*, released 30 November 2004 in Johannesburg, the Independent Communications Authority of South Africa (ICASA) called for 4-year licences to be awarded to non-profit groups.

Among other things, the applicant groups will have to provide clear proof of local support and guarantee broadcasting of at least 55-percent South African content

ICASA says it will issue a call for CTV licence applications in the 2005-06 financial year. Applications are likely from groups in Durban and Cape Town, and perhaps also from the Johannesburg/Pretoria (Gauteng) area.

The regulator has to now go through a frequency re-categorisation exercise, to free up some TV frequencies for community use. Due to the presence of eTV, two M-NET channels, three SABC national channels and the planned SABC regional channels (SABC 4 and 5) – as well as the set-aside of frequencies for migration to digital television in the future – there is a shortage of available terrestrial TV broadcast spectrum in cities such as Johannesburg, Pretoria, Cape Town, Durban and Port Elizabeth.

To address this problem, the ICASA *Position Paper* proposes a re-categorisation of spare commercial television frequencies in Johannesburg, Durban and Port Elizabeth – and a spare public television frequency in Durban North – over to community use. In Cape Town, where there are no spare commercial or public TV frequencies for re-allocation to community use, ICASA has decided that community TV licensees will have to make use of a frequency set aside for digital TV, and with licences of a maximum of 12 months in duration (unlike the four-year licences that will be possible in other cities).

The *Position Paper* is a major leap forward for South Africa's community TV movement. South African community radios have had a 4-year licensing framework since 1997; so it has been a 7-year wait for the expected full-time community TV dispensation. Up until now, community-based TV and video groups have only been allowed to produce occasional one-month "special event licence" broadcasts. Two of these broadcasts took place in 2004-05, staged by the Greater Durban Television (GDTV) collective. GDTV will almost certainly be applying for a full-time licence under the new dispensation.

With its *Community TV Position Paper* of 2004, ICASA has now fulfilled the requirements of South Africa's 1993 Independent Broadcasting Authority (IBA) Act, which mandates three tiers of broadcasting in the country – public, commercial, and community. (In 2000, the IBA merged with the telecommunications regulator SATRA to form the ICASA of today.)

- Are community radio or television stations permitted in Honduras?
Yes, definitely, as long as they're in line with the National Telecommunications Commission (CONATEL), they're complying with regulations, have the proper permits, and pay the annual fees for the right to use a frequency. Of course when radio stations and towers are being installed you always have to make sure that forest reserves aren't being harmed and that people's property isn't being affected. Figueroa de Pacheco L 2004a

Community Television policy and regulation can be incorporated in existing legislation and position papers as evidenced by the South African and Honduras experience.

7.2.Learning from Community radio regulation

There is considerable room for improvement in most regulatory environments for community radio. DFID is undertaking a programme, CATIA, which includes active lobbying for creating a more enabling environment for community radio. Some barriers are as simple as too high a licence fee. During the period of this research study, Tanzania

announced that it would reduce the cost of community radio licences. As in South Africa the research proved timely, and the Tanzanian regulator used the research stakeholder workshop to undertake a consultation on community radio licences, shortly afterwards announcing a significant change in fee levels.

These two examples of the ongoing need for advocacy and dialogue regarding the enabling environment for community broadcasting suggests that advocacy activities on community television should start now in many countries in order to achieve the required changes in a timely manner.

7.3.Regulation of newer technologies

Of the newer opportunities many rely on internationally agreed unlicensed frequencies (2.4GHz and 5GHz). These are often regulated by limiting the allowable power of the transmitter and thereby limiting the range of the device. In the shorter term these frequency bands hold opportunities for relatively unregulated remote broadcasts of audiovisuals. It is very likely that there will be strict guidelines as to how these frequencies should be used. However, chaotic use of the 2.4GHz and 5GHz spectrums could cause conflicts between users.

Regarding regulation, the frequencies around 2.4GHz and 5GHz are by international agreement unlicensed. Often regulations are in place regarding power of output or "crossing a public highway". In South Africa, where users of the 2.4GHz spectrum are not suppose to cross a public road, this regulation has been "sidestepped". By installing a mesh network of WiFi on tribal land, the whole surrounding land is owned by the community and the transmission does not cross a state owned highway. Such approaches might be used to "sidestep" out of date regulations regarding community broadcasting.

At the same time, a television signal broadcast has its own set of rules and regulations. Non-real-time services -- i.e., streaming video to cache, to be played at a later time -- would not be considered as television broadcasting under most current regulations. But how long does that delay have to be to remain outside the definition of broadcasting? The next day or a few seconds? Streaming of video as IP packages over the internet is effectively unregulated. Could a local station broadcast such packages with a few seconds delay and thereby sidestep " television" regulations? (Criminal activities and borderline activities such as pornography should of course attract the attention of authorities)

There will be ever increasing challenges for the policy makers and regulators. New technologies offer ways of side stepping existing regulation. Yet if regulation is made too tight it may stifle innovation and wealth creation. Community television could be made available under a combination of existing rules and new innovative approaches.

7.4.Consumer licensing

In many countries the state/public broadcaster of television is supported by a consumer license fee.

For example Ghana:- To generate revenue, the Television Licensing Decree (October 1996) was passed, requiring consumers to obtain a license before installing a TV set in their homes. Dealers, hirers and repairs of TV sets were also required to obtain a dealers license.

A license is not required for a computer. Will a mobile telephone require a consumer license if it is enabled to receive national broadcasts? Will it need a license if it receives only a local broadcast, or a narrowcast within a limited geographical area? If it has a time delay, what licenses will be required?

Two key issues are whether a country's state/public-owned television broadcaster is funded by license fees, and whether there is a mechanism for funding of regulatory activities in the country. For the latter it is likely the shift will be towards the sellers of the black box rather than consumer (although the cost of that contribution to government whether within VAT or operator fees still has to be passed on to the consumer).

7.5.Regulation Conclusion

The conclusion for this section is that decision makers are going to have to face an ever growing complexity of options, and there needs to be open and transparent discussion of what an enabling environment should look like.

It is now accepted in the UK that the restricted services licence is not the best way forward for local terrestrial TV . As a result of plans to switchover from analogue to digital the regulator, Ofcom is exploring the regulatory framework for local TV. In countries where public service broadcasting (PSB) is accepted the argument can be deployed that local PSB enables local democratic debate to take place and develop. Some principles being debated suggest the scale of local service should be close to the area served by local news-centres, local administrations, educational centres and as an extension of PSB – a local TV service should be available to all, and for all to access.

In France the roll out of the national Digital Terrestial Television service will accommodate bandwidth for use by local DTT services, estimated at over 1000. In Spain local authorities have become involved in planning local digital TV services.

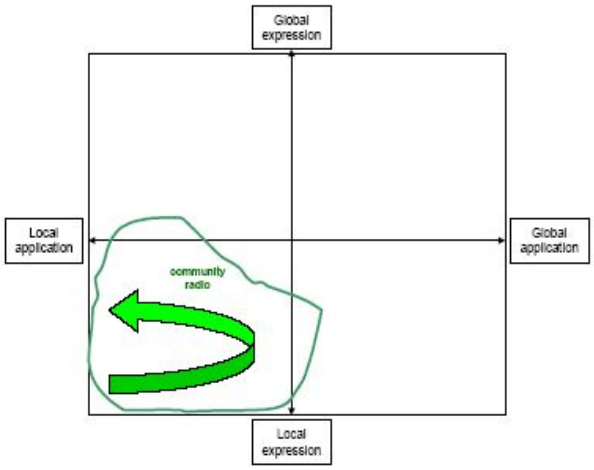
8. Programming and content

Having established the picture that it is technically possible to make a transmission (broadcast or narrowcast) in various ways, and that some different regulatory options exist, this section surveys the current scene on programme making. What might the consumers being viewing; would it be culturally relevant; and would it be developmental in content?

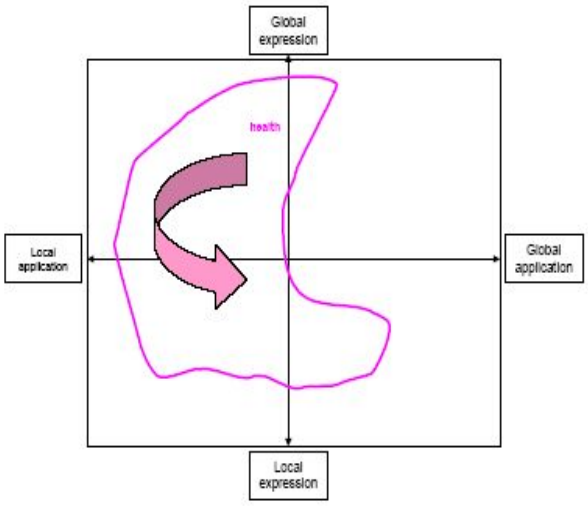
8.1.A broader understanding of content

A consultation in Tanzania (IICD 2002) developed a useful model for understanding the different types of content.

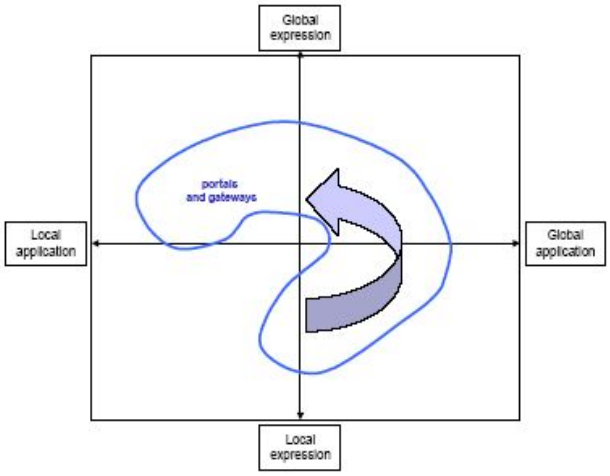
A **community radio grid**, drawing on case stories from South Africa, Nigeria, Sri Lanka, and Nepal, shows a domain in which locally expressed content dominates. While some content comes in from external sources, the community itself and especially the volunteer workers are the key informants and communicators. The overall direction of flow is to the west; outside audiences – to the east – are not seen as important consumers of the local content. Here, language is not a major issue as most communication and content exchange is within a community that largely speaks the same language.



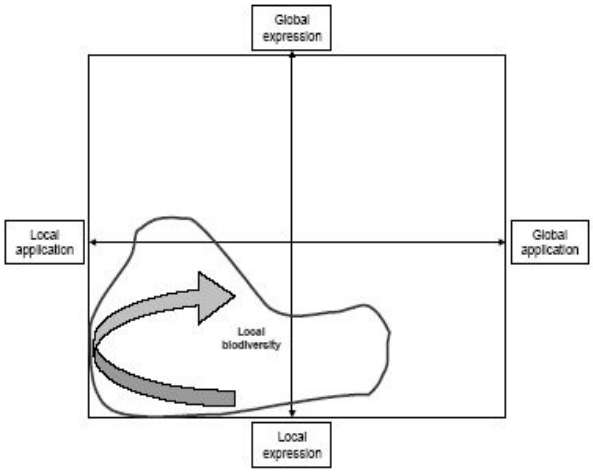
The **health grid**, drawing on case stories from Ghana, Kenya, Uganda, Nigeria, Bangladesh, Cambodia, Mexico, Tanzania, and South Africa, shows a domain in which reliable generic health messages are adapted into local content by local intermediaries and health information providers. The interface with traditional content of, for example, local healers is weak and healthcare workers largely look to external content for their information needs. The flow is from north to south and then east as new local content emerges from local research and other transformation processes to be fed across to global audiences.



The **portals and gateways grid**, drawing on various African case stories as well as the activities of groups like UNESCO, OneWorld, the Worldspace Foundation, Sangonet, and the World Bank, shows a domain in which local eContent is mobilised and aggregated at different levels so it can be downloaded for local use. The difference between this domain and the health domain lies in the explicit search for 'local' content that is is suitable for wider dissemination. The flow is from south to east towards global applications, then north and west where it forms part of the 'global' content available for local adaptation.



The **local biodiversity grid**, drawing on case stories from Kenya, Nepal, Malaysia, and China, again shows a domain in which local expression dominates. However, unlike the community radio projects, these efforts deliberately also look beyond the immediate community for audiences. Preserving traditional knowledge is important. But, at the same time, this knowledge is critical to the sustainability of local and national livelihoods. Hence, the community biodiversity centres and 'indigenous knowledge newsletters' also record, guard and disseminate this content so that national and world science as well as other communities may benefit. Thus the flow is from west to east.



The report (IICD 2002) notes the following:-
"There is no single driver underpinning the creation of local content, especially in digital formats. Out of a very complex situation, five 'spheres' may be identified, each with its own reasoning and concerns.

"A 'geo-political-economic' sphere sees local content as a matter of national image and economic development. Concerned by, for instance, the negative image of Africa on the world media, local content is needed to convey accurate and positive images. The result should be increased foreign investment, tourist arrivals and perhaps greater self-confidence and influence in global forums. Mixed up with this is a desire to develop competitive local media and ICT industries or sectors that can stimulate local jobs and provide local livelihoods. It means developing content, perhaps local content, for regional as well as global markets and audiences. The public sector is concerned with the first; the private sector is expected to drive the second, perhaps with public support.

"A 'geo-heritage' sphere sees local content as an expression or a record of local cultural, social, and natural heritage. The urge is to conserve and preserve it for future generations, and perhaps as a way to provide local livelihoods. Here, the actors are almost all public or voluntary – museums, archives, galleries, research organisations, academia, NGO's and the like. Educational content is important alongside the concern for preservation.

"A 'public-social' sphere is most concerned with local content as a tool for development – to empower individuals, to improve livelihoods, to provide opportunities, to cope with disaster and poverty, and to govern effectively. Local content is developed for use by the public sector so it can achieve its objectives; other development actors such as NGOs also foster content in areas like health, human and social rights, and governance. Here the content is almost all in the public domain, provided as a public good that anyone can draw on.

"A 'commercial' sphere is most concerned with local content as a way to sell services and products, for profit, to local or foreign markets. Mainly private sector, a large part of this content is 'infotainment' that seeks to inform and entertain and, to some extent, to educate. Despite local content quotas in the media, much of this content is imported. A smaller content area is based around local business and commercial trends and conditions, prices, etc. that are of interest to local and foreign markets. In some sectors, like tourism, this local knowledge is the 'added value' offered by local companies.

"Finally, in the 'individual' sphere, the focus is on communication among people, sharing ideas, information on opportunities, advice and gossip with each other. (and news of special events, e.g. births deaths and weddings)

The consultation in Tanzania in 2002 (IICD 2002) led to the following conclusions:-

- **Local content is the expression of the locally owned and adapted knowledge of a community – where the community is defined by its location, culture, language, or area of interest.**
- **The donor community should invest resources in a wide spectrum of local initiatives that create or communicate genuine local content. The value of local knowledge needs to be pushed, the creativity of local communities and institutions needs to be mobilised, and local capacities need to be built up.**
- **The development community should work with existing eContent, networking producers and intermediaries to exchange and deliver development-oriented content**
- **There should be mechanisms to provide incentives for financing for local content.**

Given the complexity of the above analysis, what trends in content production can be seen that might support the information needs of the people?

8.2.Content creation – entertainment

While American media dominates the globe, it is easy to forget the rise of "Bollywood" in India. With its roots in film making in the 1900's, the rise of Indian cinema paralleled and supported the independence of India, and has gone on to produce 27,000 feature films and thousands of documented short films. Given that Hollywood produces approximately 100 films a year while Bollywood produces about 7000, it is a comment on the flow of information around the globe that Hollywood dominates so much.

While this research is intended as forward looking for all developing countries (Asia, Latin America and Africa) Africa seems to offer the greatest challenge when probing the socio-economic realities of these ideas. **Given the overwhelming needs of Africa in terms of infrastructure and basic needs can we really expect local content creation even for entertainment?**

Remarkably there has been a relatively long tradition of African filmmaking. Both Tanzania and South Africa had film festivals during the period of this research, and part of the consultations were held during these festivals. South Africa is said to have produced about around 100 films a year – shorts, features, documentaries -- from the 1980's onwards.

With the advent of the digital camcorder new industries have arisen. The Nigerian film industry ("Nollywood") has grown tremendously over the last ten years, now producing between 400-700 films per year, many costing only $10-15000 to make. It is now, according to conservative estimates, a $45 million a year industry.

These films address the 'geo-political-economic' sphere, creating a commercially viable local industry, an export in some cases, and an opportunity to convey African images. There is debate as to how many of these films present a positive image of Africa, but nevertheless the films prove that there is capacity for creating local content.

There is a certain baseline of talent to be found in many countries. With the advent of new technologies that make it easier to produce and express creativity, human capacity can be cultivated to deliver entertaining content. Where a film industry already exists, there is a cadre of people who could provide training services for communities and develop an apprenticeship approach to developing human capacity for a community television sector.

8.3.National content – broadcasting quotas?

National content for broadcasters is important. To illustrate from South Africa:-
"Section 53(1)(a) of the IBA Act defines South African television content as television programming (excluding transmissions of sports events, advertisements, teletext and continuity announcements) which is produced:
(i) by a broadcasting licensee; or
(ii) by a person who is a citizen of and permanently resident in the Republic; or
(iii) by a juristic person the majority of the directors, shareholders or members of whom are citizens of and permanently resident in the Republic; or

(iv) in a co-production in which persons referred to in subparagraph (i), (ii), (iii) or (iv) have at least a fifty percent financial interest; or
(v) by persons referred to in subparagraph (i), (ii), (iii) or (iv), in circumstances where the prescribed number of the key personnel who are involved in the production of the television programme, are citizens of and permanently resident in the Republic; or
(vi) by persons referred to in subparagraph (i), (ii), (iii) or (iv), in circumstances where the prescribed percentage of the production costs are incurred in the Republic." (ICASA, 2004)

ICASA believes such content is important because:- "*South African television content is vital to ensuring that South African television reflects and develops South Africa's local, regional, and national identities, cultures and characters. South African content regulations also assist in the promotion and development of the South African television production industry. The inclusion of South African programming in the schedules of community television broadcasting services is both a social necessity and an economic opportunity for South Africa. South African drama creates a sense of pride and it also creates a competitive edge that relates to the unique cultural heritage and identity of South Africa. The potential economic benefits from the production of South African programmes for the television industry are considerable. The production of local drama will develop the local production industry and also create jobs for script writers, actors and producers.*" (ICASA, 2004)

The ICASA *Community TV Position Paper* of November 2004 calls for community TV stations to meet the same local South African content ratio – 55 percent – as that set for the two national public-service broadcast channels, SABC 1 and 2. (ICASA regulations call for commercial stations – i.e., SABC 3 and eTV – to carry a minimum of 35 percent South African content. eTV's current licence contains its performance promise of 45 percent local content.)

Though SABC 1 and 2 do meet their local-content quotas, there is concern in some quarters that too much of the local content programming consists of low-budget game shows and derivative children's and teen programmes. It's only in the areas of drama (with series such as Soul City, Gaz'lam, Tsha-Tsha), night-time soapies (e.g., Generations, Isidingo, Muvhango, 7 De Laan) and some current affairs slots (e.g., Special Assignment) that the SABC can be said to be devoting largish budgets towards delivering South African content.

Meanwhile, the news programming on SABC and eTV is quite Johannesburg/Cape Town/Durban-focussed, and primarily concerned with "the national agenda," as opposed to provincial or local news flows. There are definite gaps to be filled in local/regional news and current affairs provision.

Two "local content" issues - Vernacular Languages and sport
In South Africa, apart from the evening news bulletins on SABC 1 and 2 and some drama, the national TV channels offer little in the way of non-English content. The planned SABC RTV channels are supposed to fill this gap by carrying programming in the other 10 official South African languages, but these services (SABC 4 and 5) are still not licenced or funded.

South African community TV broadcasters have a chance to positively position themselves as strongly multilingual broadcasters. The ICASA *Community TV Position Paper* calls on community TV broadcasters "to broadcast in languages used in the relevant communities." For stations in urban areas such as Durban, Cape Town and Johannesburg – areas with large immigrant and refugee populations – the potential languages of use can go beyond the 11 official languages to include Arabic, Kiswahili, Portuguese and French and other African vernacular languages such as Shona and Wolof.

GHANA - GBC-TV programming includes news and commentary, musical and variety shows, drama, feature films, sports and educational programming. Some of the specific programmes are; *Showcase*, a local drama presented in the indigenous language; *Science World*, a series designed to explain scientific innovation and inventions and their effects on everyday lives; and *Hobby Time*, a programmed designed to teach children how to make handcrafts. Others are; Our Health, a programme meant to educate the general public on the health needs of the individual as well as the community; *Builders of Today*, a magazine programme for youth; and *Living Arts*, a cultural magazine that features contemporary arts and artists. The most popular entertainment programs are in the indigenous languages – although English is the main language of broadcast.

Table 17 Distribution of GBC-TV Programs by Language

LANGUAGE	*FREQUENCY*	*PERCENT*
English	62	47.3
Akan	3	2.3
Ga	1	0.8
Ewe	1	0.8
Nzema	1	0.8
Dagbani	1	0.8
Mixed	11	8.4
Unspecified	51	38.9
Total	131	100%

Asante, C 1996

It should be noted that there is considerable debate over the use of local languages. It has been shown that teaching children in the local language during the first three years at school significantly improves their performance. Likewise, health videos made in Ghana have found that local language and local culture make the messages much more acceptable to the people and have resulted in behavioural change. On the other hand countries such as Tanzania have declared that all broadcast material should be in the national language – to reduce tribalism and bring the country together. It is not the place here for any resolution to these debates, except to propose that community television in local language and local culture should occur.

TANZANIA - Policy framework (Language): Broadcasting policy limits broadcasts to Kiswahili. However, local languages would promote better infiltration of information and ownership. A more favorable environment has to be created to allow broadcasts in the use of local languages.

"As with community radio it is going to be important that programming is made available in local languages. This can be challenging in its own right. During the course of our research conducting interviews with broadcasters in Ghana expressed the problems they have. Stations face problems recruiting personnel for the various local languages- Akan, Ga, Dagbani, Ewe, Nzema etc. Another problem is the issue of pronunciations of certain words which indigenes of a particular community may pronounce differently from what the non-indigenes pronounce. For instance the people of Apam pronounce the word 'Apaa' while non-indigenes (Ghanaian) would say 'Apam'. Fantes would say 'Ohen' while the other Akan people would say Ohene. The problem is whether we should use the indigenes pronunciation or the pronunciation used by the majority of Ghanaians. In most cases however, they use pronunciation of majority of the people instead of the indigenes. But the issue is when one is concerned with community development broadcasting it would be appropriate to use the indigenes' pronunciation. That would however mean that the station might not be providing services to benefit its maximum potential listeners at a particular time. "
Development Associates Ltd 2004c

Another local content issue is sport. Local or community television can gain significant audiences if they broadcast local sports. Football matches are inevitably going to be popular, and yet according the South Africa broadcasting rules, these do not count as South African "national content" for the purposes of measuring quota compliance. ICASA has presumably excluded sport from the quotas because it would be tempting for broadcasters to forgo the expense of creating national drama or educational programmes and rather light inexpensive sport programming to fill their quotas. At a community television level, sport can play a very important role.

There are definite gaps to be filled in local/regional news and current affairs provision. There is also a demand for local content in local language set in the local culture and social setting. Community or Local television in a language group or broadcasting to a limited geographical situation would address this demand.

8.4.Developmental content

The 'public-social' sphere looks for content that will educate and empower people. Some of the above-mentioned local content on televisions, and even independent filmmaking, does just that.

However, socially responsible broadcasting can be more explicit. While in the UK explicitly educational programmes supporting higher level learning are broadcast late at night (on the assumption that people can timeshift the programme via their video recorders), in Ghana, schools content takes prime time evening viewing.

In South Africa the combination of internet (for background resources) and DStv (satellite broadcasting) has taken educational content to the next level.

Mindset Network, a new R225-million multimedia satellite television network, has been presented as an 85th birthday "gift" to Nelson Mandela. Mindset will tackle South Africa's

key educational and healthcare challenges - issues that are close to Mandela's heart. The first channel of the Mindset Network, Activate, is currently broadcasting on channel 82 of DStv, targeting grade 10, 11 and 12 learners and educators and focusing on maths, science and English. "While South Africa has many dedicated teachers, there is a desperate shortage of those that teach maths and science. So much so that almost 30% of learners are taught maths by teachers with no qualifications in maths and almost 40% of learners are taught science by teachers with no qualifications in science" (Armstrong 2004)

This broadcast can be viewed throughout Southern Africa on the DStv network, and could have relevance to other countries. http://www.mindset.co.za/

South Africa has also been a leader in Africa of edutainment, the combination of social issues in entertainment programmes. The TV edutainment soap opera Soul City is widely cited as having positively affected the behaviour of youth.

Image vs. Sound
Some of the people interviewed for this study said that the absence of images makes radio a better cultivator of imagination and critical thinking and allows listeners to move about and take care of other duties while learning at the same time. But others said television's ability to transmit both sound and images made it the more impactful medium.

"Studies have demonstrated that when you hear something, you can remember 70% of what you heard within a day, but only 10% 30 days later; whereas when you see something, you can remember 70% a day later, and 50-60% 30 days later."
—Father Jesús Mora, Vicar of Communications, Catholic Church of Honduras

Figueroa de Pacheco L 2004g

Educational or generalised development content could be shared through a network of connected community or local televisions. However, the localness of the television station would almost inevitably encourage debate about development issues pertinent to that locality, and educational resources could be tailored to specific developmental needs.

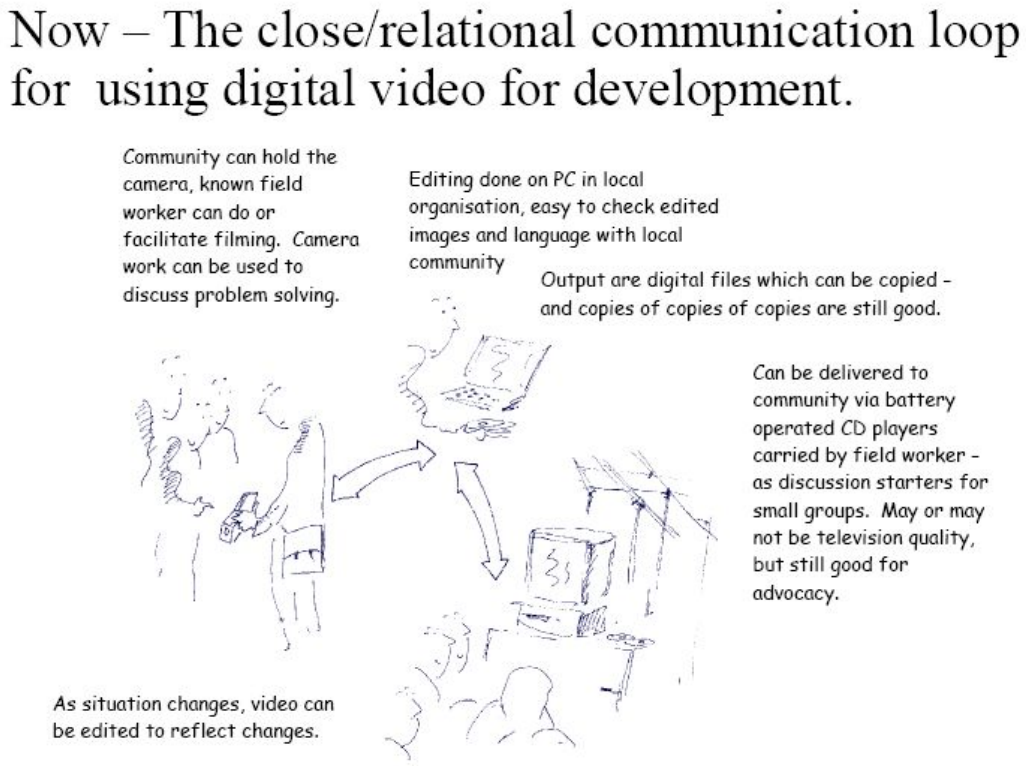
8.5. Video content

In addition to these broadcasting activities, there is a growing experience in developmental narrowcasting. Video is increasingly being used by the development community for activities such as farmer-to-farmer extension, health training, health awareness, project reporting and advocacy.

While video has been used in the development sphere for many years, its relevance has been magnified in recent times by the sudden drop in the cost of tape stock, recording devices and editing systems. While a professionally made training video cost over $20,000 just ten years ago, now for $2000 an organisation can have the equipment it needs to make a video, and every staff member (or extension worker) can, at a cost of $50, have a portable digital player to do one-on-one or small-group screenings. The value of this shift in technology can be summarised in the following cartoons.

Illustrating the LEAPFROG that Video has made and why it is **now** an important tool for health and livelihoods education and empowerment.

Using videos for development in the recent past! A significant distance to communicate.



There are a number of initiatives that are encouraging embedded video production of development content in civil society and government departments. As these initiatives encourage a critical mass of locally relevant material, this will be able to feed into the flow of audio visual content.

Community or local television could make explicit links with local government department and civil society organisations in the area. They could work together to produce content that enhanced the developmental goals for that area.

8.6.Libraries of content

If a local or community television is to broadcast for more than a few hours a day, it will need access to a library of content. The content will need to fulfil the aims of the television station and be cost effective to use. Many countries have film libraries, although this resource is in danger of being lost.

South Africa's Film Resource Unit (FRU) began as an underground distributor of African audio visual and socially relevant documentary material during the struggle against apartheid. FRU has a multi-pronged, holistic distribution strategy to reach a wide variety of audiences in South Africa:

- Mobile Video Units reach the remotest communities in the rural areas
- 16 mm film projectionist training programmes target unemployed township based youth and other film entrepreneurs in many township communities.

- A township video distribution operator scheme is to reach informal audiences in urban areas through spaza shops, shebeens and community based organisations.
- An associate video resource centre scheme is targeted at small towns in South Africa and is geared towards training NGO's and other resource centres in the promotion and use of FRU video materials.
- An innovative video distribution system reaches the formal sector such as corporations, institutions, universities, and schools all over South Africa.
- holiday film schools for secondary students help to stimulate and nurture visual literacy skills through African film.
- film club initiative in universities throughout the country not only familiarises young intellectuals with African films and creates a forum for debate on the social issues presented through these films, but it also contributes to a growing academic discourse on African film.
- broadcast initiative reaches wider audiences of persons with access to television. FRU services most television stations in Africa and is billed as the co-founder of the Cape Town based Film & Television Market – Sithengi.
- FRU supplies all major local and international festivals and is involved in the conceptualisation and organisation of township film screening events.

However, the valuable resource of the FRU is actually in danger from changes in technology. Many of the films are only to be found on tape or film, and digitisation of the library is an urgent need. This is not only true for FRU but also for most of Africa's film libraries.

Assuming successful digitisation of a nation's film and video resources, the next challenge for community television would be cost-effective, convenient accessing of these products. The internet is proving to be a viable mechanism for local radios to share content. While the internet in Africa at this point in time is not viable for sharing video content, the dual trends of higher compression for video files and greater bandwidth for Africa will lead to it being a realistic possibility within ten years. In the West, sharing of content is beginning to happen over the internet. In terms of specific developmental content, www.oneworld.tv has pioneered the sharing of developing world content on the global internet. There are an increasing number of opportunities for sharing and harvesting content, e.g., http://www.insightshare.org/Video/video.htm. While much of this content is Western-dominated and suffers from the same irrelevance to the rural poor as 99.99% of the internet, nevertheless some of the content could be useful to community television.

A network for sharing audio visual material is already developing. The UNESCO site http://creativecontent.unesco.org already allows access to content that could be adapted for local television use.

In terms of the above trend of sharing content, we need to learn from the recent experiences of two programmes in particular. Catia (www.catia.ws) has been working to share radio programmes across the internet – which is reported to be working well. However it has also through the Open Knowledge Network been working towards sharing local multi media resources from Access Points, through Knowledge hubs, trans-nationally and across continents. This has come up against a number of key issues. These include – specialised software production has been difficult to achieve, there has been little sharing

of content across continents, local capture of content has not been made financially self-sustaining and there has been a greater need than anticipated to develop people's awareness that content is valuable and their capacity to create content in forms that can be shared. These issues can inform the discussion in the next section.

Various networks for sharing content are already developing. While this content would not satisfy the majority demand for local content, it could provide filler material that would assist a community television to stay on air for longer.

9. Institutional shape

So far we have:-

- **proven demand for audio visual services,**
- **shown that there are a growing number of technical options for delivery of audio visual content,**
- **acknowledged that there are complex regulatory environments, which provide opportunities for some of the technical options, and**
- **shown that there is some, and growing, capacity for creating audio visual content.**

Given the above, what might be the shape of the institutions that host or promote community television?

9.1.Local, community or community of interest

There was considerable debate in the workshops about the difference between local, community television and community of interest television.

One could argue that specialist satellite stations such as MTV or News 24, are intended for "communities of interest". Since we do not yet know what the black box can and cannot do, it is possible that a station or broadcast for a specific community of interest could be quite effective. We have already discussed educational broadcasting in South Africa via satellite - http://www.mindset.co.za/ This is specifically for schools and the supporting website should stimulate dialogue between teachers leading to professional development.

In South Africa, the distinctiveness of what the regulator ICASA means by community television is found in considering the following:

ownership;
funding;
board membership;
management;
programming; and
consistent public identification with a particular political entity..

However, this does not limit the definition of community. The relevant SA legislation and policies allow for a community to be defined "geographically," or as a "community of interest." ICASA, and its predecessor the IBA have always made it clear that

geographically-defined communities are favoured. In the case of community radio, a majority of the 80-odd stations are geographically-defined, with a minority formed around a community of interest. Most of the community of interest stations have a religious (Christian, Muslim) or cultural (Chinese community, Greek community) orientation. The existing Durban, Cape Town and Gauteng community TV consortia are clearly aiming at a geographically-defined communities, with the objective of developing TV production operations that draw on the full range of individuals and organisations in the viewing areas.

9.2.Sustainability

Can a model be developed that is financially sustainable? Community radio continues to wrestle with this question. In the stakeholder discussions for this study in South Africa in 2004, financial sustainability was seen to be a key issue. This discussion informs the wider debate of what community television in Africa might look like.

In a 1997 paper commissioned by South Africa's Open Window Network (OWN), entitled 'Community Television Broadcasting in South Africa: Theoretical Overview and Business Plan,' (http://www.mediastream.co.za/community-tv/html/ctv_business_plan.html), South African community TV worker Mike Aldridge outlines what he calls the "C-PEG" model – an adaptation of the PEG model popularised in the United States. The PEG model calls for a mix of Public access, Educational and Government content. In C-PEG, a Commercial dimension is added, with the idea that a non-profit, community-owned/controlled TV station or production house could combine Commercial, Public access, Educational and Government programming to achieve diversity, and thus sustainability, in both content and income generation (Aldridge, 1997).

This C-PEG model would seem to fit well with the South African policy and regulatory context, given that ICASA's November 2004 *Community TV Position Paper* allows for community TV stations to carry advertising. At the same time, the *Position Paper* rules out the possibility, for the time being, of public or commercial TV at the local level – thus giving community TV broadcasters potentially revenue stream: advertising from firms that only want to target a specific city or town. Greater Durban Television (GDTV) has started to tap into the local business community, getting in-kind support from furniture, taxi and software firms for its 2004-05 one-month special event broadcasts, but GDTV still has a long way to go in this area.

The Durban Community Video Access Centre (CVAC) of the mid- to late-1990s showed the possibilities of income generation from educational and government sources. CVAC workers were able to generate funding from NGOs and government departments for their productions. Today in South Africa, several statutory (MDDA, NFVF) and state (DoC, DAC) bodies can all be expected to support innovative programming ventures by community TV and video groups once they reach a critical mass of support and organisation.

Community TV operations may also want to try to follow one of the key revenue-generation models pursued by South African community radios – broadcasting live feeds of provincial and municipal budget speeches and legislature/council openings and meetings

(this would be “G” in the C-PEG model.) Live broadcasts of council proceedings are a staple of public-access cable channels in North America." (Armstrong 2004)

We have also noted from the Honduras experience that NGO funded stations are possible. However, like most NGO activity there is a danger that the project is of a short duration unless it is adopted and owned by the community. Given the reduction in start up costs for a television station, it is possible that short duration TV run by an NGO for say a 5 year project would be appropriate in some circumstances (eg a targetted programme on AIDs, Democracy, Gender, etc).

9.3.Financing community television

The proposal for this research highlighted the need for financial data surrounding newer technical options. Cost details can be found in the supporting documents. Two aspects are important:-

Actual cost data is almost irrelevant since the price of technology changes weekly. Ballpark cost data can be given, and in many cases the cost of the core technology is likely to remain the same (the technology tends to get a higher specification for the same price). What can be confirmed is that while a broadcasting station was thought to be in the hundreds of thousands mark, there are now options both analogue and digital that for a few thousand dollars one can broadcast to a radius of 20Km, and with imagination for a few hundred dollars one could broadcast for a radius of a few kilometres (ie a small town).

However, the total cost of setting up a station and running it depends very much on the institutional framework. Compare the two following quotes from the case studies:-

Table 18 **Tanzania:- Real Costs for Establishment of Orkonerei FM Radio Station 1993-2003**

No.	Activity/Investment	Cost (U$$)
1.	Community mobilization	12,000
2.	Staff training (4): Station Manager, Radio Journalist, Information Officer, Documentalist	30,000
3.	Land/ Ground	Community contribution
4.	On-Air Studio	46,000
5.	Production Studio Equipment	32,000
6.	Production Studio House	16,000
7.	On-Air Studio House	6,000
8.	On-Air Studio Container	14,000
9.	Power supply (Generator 40KVA)	9,200
10.	Power supply house	5,200
11.	Transmission equipment including mast	102,000
12.	Operational costs and licensing fees (2001-03)	54,000
Total Costs		**326,400**

(Development Associates Ltd 2004c)

- How much does it currently cost to operate a radio or television station?
Radio is fairly low in cost. The radio station I work with has 2 operators, 2 newscasters/announcers, and a computer. It costs about US$1350.00/month with a total of 8 people on staff. TV needs a lot more personnel.
Figueroa de Pacheco L 2004a

The range of costs for both cases is between $1300 to $3200 a month – and these are radio stations, with an expectation that a TV station would require more personnel. If this is the only institutional structure that works for running a broadcasting station, then the fact that a $102,000 transmitter could be replaced with a $5000 low power transmitter, changes the monthly average by a third, but still leaves a community TV to find over $1000 a month in running costs.

Finally for this section, we consider a few miscellaneous determinants for the institutional shape of the community television.

9.4.Community television - purpose

In South Africa, much emphasis by community television activists has been on getting the community involved in the production of the content As the Steps, Youth Alive, Durban CVAC and Cape Town CVET models -- as well as the Film Resource Unit's work with MPCCs -- have shown, there can be much more to community TV than broadcasting over the airwaves. All these projects have employed a strong community access/empowerment dimension, through community screenings and community production skills development. In the Greater Durban Television (GDTV) broadcasts of 2004-2005, a very strong emphasis was placed on letting the community produce what they wanted to produce. GDTV saw success in its ability to hand over much of the production work to young black South Africans with little or no training. Success was not primarily measured in terms of the viewing figures or viewer satisfaction, but in terms of giving the disenfranchised a voice and supporting democracy.

9.4.1.Open access - or defining our service

Borrowing from Professor Nick Jankowski's definition (Rushton 2004) an open access channel can be broadly defined as offering:-

- access to production equipment, training and resources;
- access to management and decision making;
- access to transmission and airtime and;
- access to broadcasting policy.

Outside Germany few countries combine these elements to form this ideal type. Instead variations of open access appear on community, public or local and commercial services - with a varying input into management which rarely influences directly government policy. In spite of convergence, access to broadcasting policy is largely the preserve of existing stakeholders. With open access in its purest form the 'broadcaster' is not liable for transmitting unlawful utterances, obscenity, racism etc because legal responsibility resides entirely with the programme maker or producer. This approach should be positively endorsed, as it has been in the reconstruction of post-war Germany, as a

sophisticated way of enabling an open society to emerge while alerting civil interests to any resurgent political interests likely to damage the democratic fabric. While to all intents and purposes the open channels might appear anarchic free-for-alls they demonstrate a political maturity not found in less or unregulated broadcasting environments.

That said though, in homes where open access is available there is heavy competition for viewing from 30 or so channels. A strong argument of these channels is that they primarily provide an outlet for freedom of expression and are not concerned with viewing figures. Perversely, freedom of expression finds itself talking into a vacuum since the widespread view is that in multi-channel households families settle on eight or so channels of which perhaps half of these are the most regularly watched.

The German open access model's great virtue is that it provides a positive space for contribution and argument but (perhaps more important) while being 'open' puts on display the 'open society of democratic principle'. In nations without a diverse press opening up broadcasting to PSB and especially a devolved or localised PSB or open access is one way of simultaneously encouraging and demonstrating the democratic quality of public debate and the importance attached to this by civil society.

For the longer term success and financial sustainability of a community station, viewing figures may well be critical to gaining advertisers and for creating a critical mass that keeps the station on air as a valuable community resource. Community television would likely present local news and encourage content that is within the lower left quadrant of the IICD model. Such content is highly valued by rural people, according to community radio experience and the research consultation.

"The flows of local content may be limited by flow of entertainment, but community radio suggests that local issues, local language, local knowledge is valuable. However, community radio experience also suggests that it has included flows from the upper left quadrant. That is making international and national news and views relevant to a community. This involves interpretation and culturalisation." Figueroa de Pacheco L 2004g

Regarding the spheres identified above, community television is likely to be able to speak to and have a role in each of the 5 spheres. We also note that community television could conceivably be a mechanism for supporting the lower right quadrant – encouraging protection of local knowledge (stored video, and distributed video).

Child Media is a ChildPro sub-program that teaches children how to use radio, television, theater, visual art, and other creative means to communicate ideas that are important to them, express and defend their rights, and teach others in the community. Plan currently supports Child Media or other child-run radio projects in 20 different countries.

Plan started a Child Media program in San Luis in 2001. At that time, just five students from the school were chosen to participate in a week-long training session in basic video and audio recording. The students were trained by professionals from Radio Netherlands at a conference center in the town of Siguatepeque.

The children script, record, and broadcast two separate radio programs and two separate television shows each week. In San Luis, their radio show El jardín de los derechos de los niños ("The Garden of Children's Rights") is broadcast from 5:00 to 6:00 p.m. every Friday evening on Radio Luz y Vida ("Light and Life Radio"), a religious station run by an Evangelical Christian mission in San Luis. A television show of the same name is broadcast Wednesdays and Fridays on Channel 12 Cristovisión, a local Catholic television station in San Luis.

At the outset of the program, in 2001, Plan bought a large, professional-quality video camera and several large audio-cassette recorders. The Santa Barbara employees did not know how much these had cost because the purchase was handled by Plan's Tegucigalpa office. This equipment proved to be too heavy and unwieldy for small children to use, so the Santa Barbara office purchased small digital video cameras (one for the San Luis group and one for the El Ocote group, at about L8,500, or US$460, each) and a number of smaller audio-cassette recorders at L800/US$43 each. In San Luis, the children have also occasionally used a video camera owned by Channel 12 Cristovisión.

The audio-cassette recorders are used to record interviews that are later inserted along with live-broadcast radio content. The small digital video cameras are used to film background shots and interviews in the children's home communities, and the large video camera is used to tape panel discussions held at Plan International's offices in Santa Barbara. Plan International lacks any sort of editing equipment for either audio or video, so production and editing are completely artesanal ("done by hand").

Plan has also paid several times for TV and radio professionals to do training sessions with the Child Media participants; a week-long session including both radio and TV trainings costs about L12,000 (US$650). The children have been trained by professionals from Radio Netherlands, and more recently by Carlos Chinchilla, a cameraman for a television station in the town of Entrada de Copán.

The unusual self-confidence of these children is immediately evident upon meeting them: They look visitors in the eye and shake their hands firmly, and when asked about their experiences they reply in confident tones and complete sentences with little stuttering or hesitation and shoot back questions of their own. "Now they're not passive…they're more proactive than passive," says Marroquín.

Both the children and their adult leaders attribute this confidence to lots of time spent in front of a camera, behind a microphone, and on stage. Several of the children mentioned how at first they preferred filming and recording because they felt very nervous about interviewing and announcing—but now, after encouragement from their peers and lots of practice, they feel very confident appearing on TV or radio.
Plan International's Child Media Project Santa Barbara and San Luis, Honduras
Figueroa de Pacheco L 2004h

9.5.Community television - resistance

It became evident during the stakeholder consultation that community television will face a significant resistance from the current crop of television professionals. Television is seen by some as a communication medium that should be the domain of professionals and not amateurs.

In Ghana this was captured in the conclusions of the final workshop (Sakyi Dawson O 2004a):
In considering what steps to be taken in future the following points needed to be addressed;

- *If we access all these new technology there is the need to find a way to ensure that the information we receive via the media is credible.*
- *There is the need to package the information explicitly for the target audience to get a full understanding of the message one intends to put across.*
- *How much editorial control are we going to have in terms of;*
    - *Responsibility*
    - *Credibility*
    - *context*

To ensure that the problems that the above points pose are answered the group proposed two alternative ways of training labour to carry out extension communication. The two training alternatives are:

1. A professional broadcaster learns the subject area (health/ agric) in which he/she is to communicate about and once the broadcaster has already received training in communication there is the surety that he/she would not violate the ethics of the media profession.

OR

2. Health/Agric. extension professionals are taken and trained in media communication after which they would be equipped with both the technical knowledge and broadcasting ethics as well for effective communication through the mass media.

While the report states that the latter was proposed by the workshop, in reality the room was split. Those currently involved in television production strongly favoured the former. While the fuller answer hinges on the purpose of the community station's purpose, it is nevertheless worth acknowledging the resistance of the professionals as this may influence whether community television develops in some countries.

10.So what shape for community television?

The research purpose was to "explore the opportunities presented by digital convergence for locally produced and broadcast integrated television and radio for development education, development communication strategies and local content capture among the poor."

The horizon of the research was 10 years.

Why do we need a community Television?
Participants of the Tanzania workshop responded as follows:

- In order to have a collective voice in development.
- To have a well informed and sensitized community
- To complete the work of public radios
- Educate us on things we need to know at a particular time
- To empower local communities
- To bring out the best from the community
- To implement bottom-up approaches in development
- In order to have a sense of belongingness
- To serve the interests of communities
- For interactions between different people of the community

Development Associates Ltd 2004a

Five key elements inform the scoping study for community television:-

- **Community information needs and trends in information and communication systems at a community level**
- **Changes in technology – digital convergence**
- **Regulatory environment – enabling or otherwise**
- **Understanding content and the role of local content**
- **Institutional shape of community media**

10.1.Community information needs and trends in information and communication systems at a community level

It is clear that there is a demand for information and communication services among the poor.

While radio holds the dominant position now, there is a trend towards television. This rising consumption has been fuelled by the very presence of the broadcasts themselves (i.e., where there is no signal then still television ownership remains very low). Where there is a strong signal then already communities have strong ownership of televisions (often 50% of households in lower income groups, on all continents).
Even where ownership of television is low, there are various communal and neighbourly ways and means of watching television, and often more than 60% of lower income people occasionally watch television.

How might community television help this sort of initiative of education to promote development? Could this be achieved?
I believe this was indeed achieved with the radio, and it could just as well be done with television; the only thing is that television if more expensive since it requires more expensive equipment. In the case of radio in that time it cost 500 lempiras and didn't require a very big team, but in the case of television you need a filming team, an editing team, and professional voices, and obviously radio is easier in that for television you need a film set and a studio for producing as the programs. It's more complicated, but ***clearly it's necessary because the habits both of those Hondurans who live in the interior of the country and those who live in the capital from being inclined to the radio to being more inclined to the television*** *and even to the Internet.*

I would say that what would have to be done would be a multimedia effort in which television was combined with a Web page and email-based news, and this could be the future for contributing to the development of rural communication.
Dr. Juan Ramón Durán,
Professor, School of Journalism, Autonomous National University of Honduras
Figueroa de Pacheco L 2004b

There is likely to be a growth in television ownership if the price drops significantly or digital convergence means that a visual device becomes incorporated into other devices (such as phones or video players).

Currently in Latin America, radio has had a broader range/scope for the development of poor and isolated communities. Do you think television could have this scope?
It's much cheaper to buy a radio, and the other limitation is the lack of electricity in more remote regions. For a TV to operate without electricity, you'd have to purchase a battery which costs nearly $100. There are currently 3 local channels in Santa Rosa, which is an open air channel broadcast through closed circuit or cable TV.
The percentage of TV viewers is lower due to costs. A radio can cost from US$4.00 – 5.00, whereas a black and white TV set can cost US$ 55.00, and a color TV can cost from $160 – $500, a price which a poor family can't afford.
Eliu Martínez
Journalist working with Sultana Radio and Channel 28 (local cable TV, Sta. Rosa de Copán, located in western Honduras)
Figueroa de Pacheco L 2004b

The above quote shows how over the next ten years it will be easy for decision makers to be out of date with the changes in technology. The costs quoted - $160 minimum for a colour TV, may be true for Honduras however, global prices for televisions (Colour) have dropped to less than $100, in China large screen TV sets are being sold at a price of 700 yuan ($85), and second hand televisions can be found at less than $20 in a country such as Cambodia. Similarly, that televisions currently have significant power demands for the user – new screen technology has changed this and low powered television receivers are available, and are likely to require even less power in the future.

10.2.Changes in technology – digital convergence

The overall discussion has shown that technology is not the main issue in considering the future of community television.

There are emerging opportunities to build services on the back of new wireless devices in the 2.4GHz and 5Ghz spectrums. These currently have under regulated environments that may enable people to be innovative and entrepreneurial. The cost of transmission has come down to the level where a community-based organisation (CBO) could set up a broadcast to a limited locality. More important than the technology and its costs, however, will be the organisational and managerial capacities of the CBO and the regulatory environment.

It is clear that the new technologies will probably incorporate some form of storage so that people will be able to regulate and choose what they view and when they view it.

The conclusion of the technology section was that there are a number of options that are present -- even with existing technology -- that could provide the basis for a community television station. The technology *per se* will not dictate the shape of a community television broadcast (or narrowcast).

However, what we can say is that:-

The community station will have to compete in an environment with multiple channels of information. The black box that presents the audio visual content of a community station is more than likely to also have access to multiple stations. If the box is a television then the other channels may be national broadcasts. Or the channels may be via satellite. There is a high probability that within 10 years, the decoders for satellites may be within affordable reach for low income households and almost certainly for any community viewing platform such as multi purpose community centres or communally owned community televisions.

The community station will be able to broadcast on more than one medium at a time. It is more than likely that if a community station has the technology to produce and broadcast audio visual material, it will also broadcast audio-only material, or audio material linked to non representational images. It is also possible that it will share stored digital media with other stations and therefore this also represents another form of broadcast.

The community station will be linked to the world and share and receive. Given that the most likely technological solution involves digital storage of audio visual media, then almost by default the community station will be able to share its media with other stations. It will also likely be connected in some way to the World Wide Web and could access material from other communal sources.

Technically - local feedback to the station will only get better. The proliferation of mobile phones has already revolutionised radio in Africa in terms of instant feedback to programmes. Community television can be expected to make use of participation technology such as phones, particularly text messaging, and even the wireless internet will give people opportunities to respond. However, the actual feedback will of course partly depend on the freedom within the society to open debate.

10.3.Regulatory environment – enabling or otherwise

As quoted below, the workshop in Tanzania saw that there is still some way to go before the regulatory environment is enabling for community media. Lobbying for community radio continues, and it will be important to broaden the discussions to include low power television services.

Recommendations on conditions needed for community radio/TV to thrive Tanzania Workshop.
1.Enabling policy for accessing and disseminating information has to be put in place to support the development of community Radio (Policy frame work).
Use of local languages in community broadcasting should be encouraged (Freedom to use local languages).
2.Availability of quality and quantity resources
Financial (sustainable)
Manpower (skilled and motivated)
Equipment and tools
Should be for not profit sharing: The radio could make profits but which is not for sharing but rather for plowing back into development and improvement of the services
3.Coverage should be limited but based on defined geographical area. Preferably, the area for community radio/TV should be limited to districts. Special consideration could be given for expanded coverage at individuals cost. Ownership should always be by the community.
4.To improve sustainability, the Central Government as well as Local Governments should play an important role in financing and maintaining community media. Co-operation and linkages in areas of expertise should be encouraged, especially in areas where expertise is limited.
5.Cost sharing mechanisms between the government and the private sector should be encouraged. Also explore fund raising and income generating activities.
6.Continuous capacity building to communities (especially vulnerable groups) to promote awareness and involvement of communities in production of local materials and broadcasting.
7.Government intervention in improving the infrastructure such as electricity and roads at community levels.
8.Low cost of licenses for community radio /TV and tax exemption on community television equipment: - It was agreed that since information communication to rural communities on development issues is an educational service that the government should have been providing, it should be treated as an educational issue. Therefore just as educational materials are exempted from taxes, items imported into the country to be used in broadcasting development information to rural communities should also be exempted from taxes and Tax exemption on equipment for community radio/TV.
9.Promote Regional Cooperation on exchanging and promotion of programmes
Development Associates Ltd 2004a

Recent research from Research ICT Africa (RIA) suggests that the lack of regulation in Algeria for ICTs has actually enabled that country to move forward. In a comparison of policy environment and access to ICTs, it noted that the lack of a policy environment in Algeria led to the development of relatively small-scale private-sector initiatives that have lowered the cost of access to ICTs – and that the forthcoming tightening of the policy environment may well reduce access. However, the study also identified that Uganda, which has had a seemingly positive enabling environment for ICTs (in comparison with many of its neighbours) had not achieved significantly better access or lower costs possibly due to overriding poverty factors.

In Spain the development of local television has taken place in an 'a-legal' framework: neither legal or illegal a floating set of small-scale services have grown up and remain unlikely to be prosecuted if they avoid interfering with other larger (state recognised) broadcasters. The federal government have devolved responsibility for TV regulation to the regional administrations which in turn have not put in place any policy!

Therefore local wireless services inclusive of television and video should be discussed at a policy level and where possible the regulatory structure should be kept enabling either through inclusive regulation or through lack of regulation.

"I'll share something: communication is not exclusively for the journalists, it's a right of all the people, and therefore the people have the right to communication be it via telephone, celular, Internet, radio, television, or others."
—Carmen Galeas, director of Radio Paz, Choluteca

All telecommunications in Honduras are regulated by CONATEL (The National Telecommunications Commission), as described in the Framework Law for the Telecommunications Sector (1997). According to the law, "it is the obligation of an operator of a public telecommunications service to provide telecommunications services to underserved rural areas and marginalized urban areas in Honduras." The law goes on to state that the use of telecommunications is a "fundamental right of the human being," and that it "not only constitutes an economic activity, but also an important social function."

The law also states that radio and television broadcasters may be required to "transmit messages of the presidents of the three Powers of the State [the three government branches], and in response to cases of national emergency or cases of national, cultural, or civic interest."

Moreover, it commits the Honduran government to "creating mechanisms" for bringing telecommunications to rural and marginalized areas (with the hope that these will later be taken over by private interests).

But while in theory Honduran law strongly supports accessibility to and promotion of social and educational messages by the communications media, in practice it's done little to further these ideals. The law does not specify a number of hours that media must dedicate to educational programming, nor does it establish incentives for broadcasting educational programming or penalties for failing to do so. Not one of the people interviewed for this study mentioned an instance in which the government had undertaken a project to bring telecommunications to rural areas."
Figueroa de Pacheco L 2004g

10.4.Understanding content and the role of local content

Promotion of television in itself will not be particularly useful. However, like radio and other communication media (print, internet, etc), it has enormous potential for promoting development. It can give voice to the voiceless, support culture, promote good

governance, enhance livelihoods by strategic market data, be educational and reduce vulnerabilities. However it can also be the opposite of all of these.

The rather concerning thing happening with television and with radio is that the majority of the owners of the media are politicians or politically biased, and they've gained power over a large quantity of frequencies.
Dr. Juan Ramón Durán,
Professor, School of Journalism, Autonomous National University of Honduras

Profit is the dominating principle in the Honduran media. According to most sources, the majority of both television and radio broadcasters in Honduras, at least large-scale broadcasters, are primarily interested in making money, and hardly any view educational or pro-development programming as a viable way to do so.
"As such, the mass media have greater interests which don't exactly have to do with the development of the nation… for the communications media, personal interest outweighs collective interest, and that's the crucial point that keeps the mass media from taking this step to use communications to promote development."
—Ana Elsy Mendoza, coordinator, UNDP Program for Training Journalists

Even for stations interested in broadcasting educational and pro-development material, advertising revenues are a serious obstacle: most advertisers are sceptical of the number of people they think will pay attention to an educational program, and thus are unlikely to buy airtime around such a program or underwrite it. Thus if a station wants to run an educational program, it must either convince advertisers the show will have an audience or swallow a decrease in revenues.

"I think they are limited by the fact that they're commercial enterprises—they sell advertisements, and the content of these advertisements is determined by what the surveys say the population wants to hear. And so from this emerges the principal that cultural programming…doesn't pay."
—Rolando Sarmiento, director of HRN (Honduras National Radio)
Figueroa de Pacheco L 2004g

10.5.Listening or viewing behaviour?

We have said above under technology that there is the option that many devices may be able to carry visual images, but not high quality television broadcasts (with moving images). It is quite likely that the black box could carry predominantly an audio stream with a simple picture or few lines of text to support what is being said – essentially evolved mobile phones. The advantage of this would be that the user experiences a predominantly radio-type experience, but has the option to refer to the picture for extra information.

There are likely to be group audiences. Listening to the radio at work is still common within Western societies. Audio allows a person to undertake manual labour, even office work without being distracted. Listening to the radio while planting fields is common in Asia. The option of stored pictures that could be referred to at the listeners' convenience could enhance educational radio. Moving representational images are engaging and can

hold the attention of the viewer more than radio. At the moment TV broadcasts in Africa are often confined to the evening to discourage viewing during the working day. Such "parental" control is likely to be lost, and a form of stored media that enables the viewer to replay recent broadcasts when they want is very likely.

However, if consumers are given greater control over a multi-channel environment which also has an element of time-shifting, will they watch educational programming? It is here that the shape of the community broadcasting station becomes very important. If the station is engaged with the community and is really covering local issues and local developmental concerns then experience with community radio suggests that people will tune in and the station can become a focal point for empowerment and voice.

Locally produced television also has the advantage of being able to address the specific manifestations of social problems in the community, rather than being consigned to generalized comments that people have probably heard before.

"I think that there's more awareness in the local media because they've always lived there, and collectively they share in the public and private spaces of the society, and so they care about it and try to improve it, and they understand the importance of the media in making new proposals for the development of the community…The advantage is that the population knows more about the reality of their own community."
—Carlos Felipe Castillo, owner of Channel 9 Teledanlí
Figueroa de Pacheco L 2004j

10.6.Institutional shape of community media

The different institutional shapes of a local or community television can already be found in radio. Public service broadcasting for a local television could be the vehicle for educational content or local news. Private stations could have a mix of re-transmission of national programmes, commercial entertainment and local news. Community stations owned and operated by the local community will likely have a clear mandate for their community, and thus be able to be a positive force within their community.

In South Africa, community TV stations licenced under the new (announced November 2004) dispensation will be able to learn from the institutional practices of the more than 80 community radios already in existence in the country. These radios have been following essentially the same institutional structure that South African community TV is now being asked to adopt. The key elements of most community radios are follows:

- Community-elected Board of Trustees
- Management hired by Board (Station Manager, Programme Manager, Technical Manager)
- Staff (mostly non-remunerated volunteers and a few minimally-remunerated workers)
- Rest of the community (participating via Annual General Meetings, as guests on shows, via phone-ins, and via directly physically visiting the station premises to give inputs and complaints)

Key institutional challenges at many of South Africa's community radio stations have typically been:

- the relationship between the Board and management
- the relationship between management/paid staff and volunteers

Board/governance capacity-building has been identified as a need at many community radios. The Board has to have the right mix of skills, experience and community legitimacy, and will ideally include people with legal, accounting, teaching, religious and NGO backgrounds. Station management and outgoing Boards have a role to play in getting strong community turnout at the station's Annual General Meetings, and in publicising the duties Board members need to fulfil (and thus the skills the Board members need to have)

The value of a community media centre is not only in the production of content and organisation of content for local viewing but – perhaps as important – the capacity to make an audio visual contribution for exporting to other communities, communities of interest (noticeably via the internet) but as well for transmission in other geographical communities where there are shared economic and political concerns. Community media has been seen as a smaller scale of regional or national media when in fact the opportunities of digital distribution encourage local-to-local networks which over time can combine not only programming, elements of programmes (news) but also find sponsorship and as appropriate commercial support.

10.7.The MTV model

A possible model service type is suggested for a young (at heart) audience. In a local television service running in Dundee for just over a year a server was used to transmit pre-loaded music videos and other local programmes. In effect this was a televised video juke-box, with requests from viewers changing the schedule by phone. The audience were predominantly 14-35 years of age with an emphasis on late teens and early twenties. This 'MTV-like' channel was immensely popular.

Whether a music channel is an appropriate vehicle for development messages is another issue, but there's no doubt that music - with its potent mix of local, national and 'global' contents - does compete successfully for attention with national and regional TV channels among this particular age group. (This channel was second in viewing figures to BBC1 for the under 35s).

Such a service has several advantages in its construction and funding.

Such a music video service:-

- provides short attention span programmes that are not language critical
- uses content that is regularly available and provides high-quality programming
- can be national, global, regional or highly local in character - and all of these in one channel
- is tolerant to repetition - highly visual, relate to other cultural interests - can engage viewers in contributing their own content
- makes possible a video juke-box approach to transmission free of studios etc
- can be run from a server with a schedule downloaded by phone

- allows a server to sit at the transmitter site transmitting to a small or large area - it doesn't have to be networked, a different server at different locations
- has a schedule that can be over-written by viewer requests (where mobiles are in use)
- allows simple on-screen messages to be overlaid onto the videos - these can be updated and controlled by phone
- allows the cost of programming to be controllable -- the fee schedule for music rights and videos are supplied by record companies – and offers a strong incentive for local music videos to be made and screened
- caters to short-form video (3-4 minutes) that can include messages, programmes, news, cartoons, and shorter commercial-length messages etc - all cycled throughout the day - to catch peak viewing for different groups (some additional cartoons for young parents with kids etc)
- offers 'browser' television service - operating in a multi-channel environment it is the channel viewers will turn to by default, to fill the troughs in attention-grabbing material found on other channels.

Dominance of 'Western' music videos is not a necessary feature. In a service in which the viewers can control the content by dial-up selection their choice will include local tastes - which would probably mean (from the Dundee experience) a mix of local and regional as well as global influences - and replacement videos can over time better reflect this local collective taste.

The server can be configured to include a switch so that it can cut-into a relayed satellite feed - making it possible to run a very local service as an opt-out providing re-transmission of an existing satellite feed (or a new pan country music satellite service offering generic messages etc) with the opt-out catering to the needs of very local audiences.

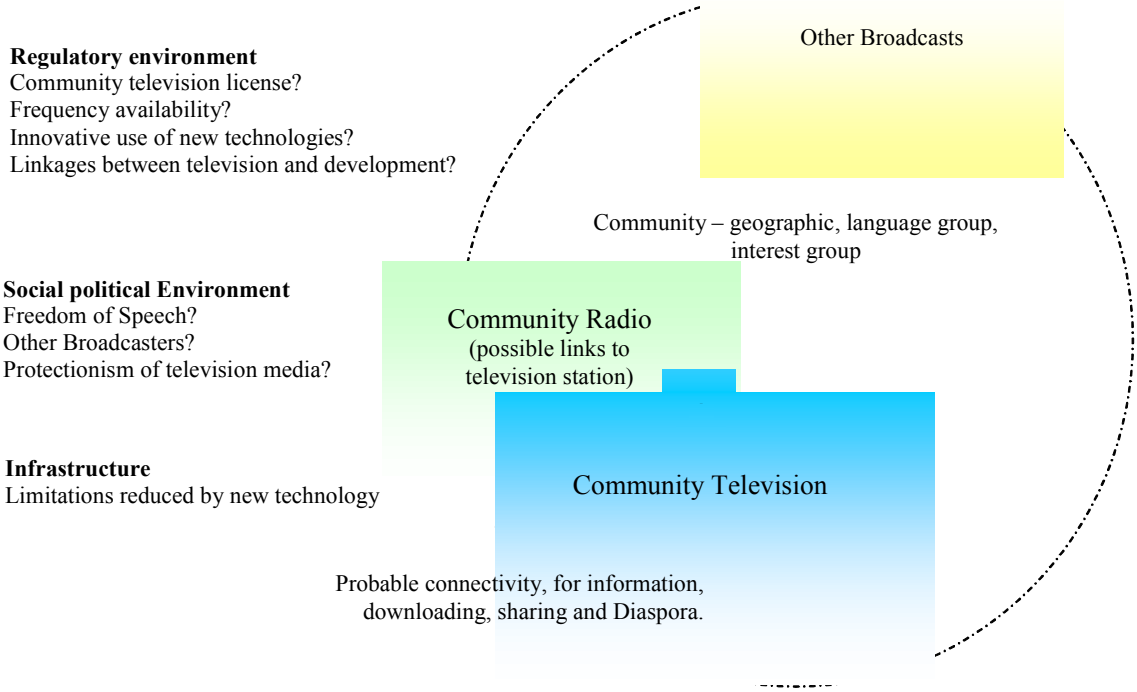
MTV Set to Start Africa Version
MTV Networks Europe is to launch a localised version of its urban music service, MTV Base, in Africa.
The advertiser-supported channel will be broadcast via satellite to 48 countries in sub-Saharan Africa from February, next year, via operators, including MultiChoice's DStv.

The 24-hour, English language music TV channel will reflect the tastes and interests of African youth. It will combine African and international music videos with local content, complemented by MTV's UK and US long-form programming such as "Cribs" and "Making The Video".
MTV Base will also provide a platform for a variety of African music genres, including Kwaito, Hip-Life, Mbalax and Zouk. These will be featured alongside diverse international urban artists, such as Alicia Keys, Jay-Z, Sean Paul, IAM, Passi and Saian Supa Crew.
The channel will also premiere local HIV/Aids awareness and prevention messages.
The Nation (Nairobi), October 26, 2004, Posted to the web October 26, 2004, Nairobi

Note: the initial couple of months of MTV Base programming have not been very encouraging in terms of African content. Random sampling of the station by one of the

Project Team members for this study has found a preponderance of American R&B and hip-hop.

11.Conclusions



11.1.The lie of the land

There is no doubt that radio has become the most widely used medium for communicating development messages among rural communities, and is increasingly becoming interactive as community radio brings the production closer to the community and the telephone opens up new possibilities for a dialogue. Despite this fact the need to use television to communicate messages among rural and urban communities to complement what the radios cannot do has become a necessity that is long overdue.

***Language** – in heavily-multilingual countries, the national and regional TV broadcasters are hard-pressed to adequately serve the minority linguistic communities. This is a clear niche for community televisions to fill, by ensuring a wide variety of languages are used in each day's schedule. (Armstrong 2005)*

The scoping study has clearly shown that the landscape for broadcasting is changing. Local or community media centres will be very different as digital distribution technologies evolve. Central to our definition of community media will be the institutional means by which professional or community producers make programming for an identifiable audience – a geographical community, language group or community of

interest. Indeed the form or shape of community media will not be dependent on any one emerging technology but will be depend more on the institutional framework.

11.2.The Challenges

The establishment of community television stations would bring with it a lot of challenges and problems that would need to be addressed. Among these will be sustainable funding, how to involve the local communities to ensure the maximum participation of both men and women in the creation of local content and employing a mix of skilled and volunteer personnel who together are highly knowledgeable of local issues and can present development issues with quality interaction with rural people. These are the challenges of human capacity and finance, and these challenges cannot be side stepped by technology.

Four factors strongly influence whether community televisions will be established.

- **Regulation**. Low power UHF broadcast equipment has been around for a long time, and yet there are few community stations using them. The regulations in most countries do not allow such a broadcast, and we have seen that where such broadcasts are allowed that there has been a shortage of frequencies. The potential is there for digital technologies to offer low power broadcasts, affordable to small institutions. However, will the regulation be adapted to allow such broadcasts, and/or will the rules governing digital broadcasting and narrowcasting allow people to sidestep restrictive policies?

The South African model, though not yet implemented (just announced in November 2004) would seem to hold promise: community groups are essentially being given a potential monopoly on local TV broadcasting. The regulator ICASA has decided not, for the time being, to allow for local commercial or public broadcasting.

- **The wider social political environment.** Television has been seen by many governments as a forum for political control. The uptake of community television will depend to a large extent on each countries stance on freedom of speech.

- **The finance required**. While the technology is making broadcasting cheaper, and a broadcast station covering a radius of tens of kilometres could be as low as a few thousand dollars, the running costs – salaries, transport, overheads – are still likely to be major challenge for the community.

The C-PEG model outlined earlier in this report (Commercial, Public access, Education, Government) seems to hold potential for raising finance.

- **Human capacity.** While there seems to be a latent creativity in many communities, as evidenced by the growth of Nigerian and other film industries, nevertheless the capacity to managed an institution, undertake open and transparent accounting, organise production and broadcasting, and realise the creativity into interactive public interest programming is often not found in communities without significant training and capacity building.

The above factors are far more influential on whether community televisions will be established than the technology. Nevertheless on the technical side we can see innovations that are overcoming some of the other barriers to community television and might ease some of the challenges above.

11.3.Digital technology and its impact

- **On the technical side**, the scoping study has shown that programming will more than likely be produced and stored digitally, regardless of the state of evolution of the current transmission system.

These digital transmissions could overcome some of the problems of poor infrastructure in the rural areas. They often require low power, both for transmission and reception. The research surveys show that currently television are owned mainly where the household has access to grid electricity –it is not correlated with wealth per se. We know that poor people prioritise televisions in terms of household purchases, and the constraint is electrical power. As digital technologies consume less power, and can be run by batteries, it is likely that more households will own audio visual equipment – assuming there is something interesting to watch on them. (And there is also the potential that low powered technologies could be powered by solar, fuel cell or even wind up chargers).

We have also established that digital broadcasting (or narrowcasting) would likely mean that the station would be digitally connected to the outside world. This introduces a number of positive factors –

- Access to information on the global web, to answer specific needs of the community,
- Downloading video from libraries and archives
- Uploading programming for sharing with the wider global community
- Gaining the interest of the Diaspora (who may well contribute to the funding).

In terms of finance we have established that broadcasting stations could be started with limited finance – it remains that running costs would still be a challenge for very poor communities to fund. For some communities the connectivity may answer this challenge, by drawing in the Diaspora who listening and viewing radio and television in their local language may be inclined to sponsor the station. Finance may also depend on local advertising – digital broadcasts could not only have "advert" i.e. interruptions to programming, but could have text on screen during programming, or have interactivity that connected the viewer to the supplier.

Local businesses without the financing or the need to advertise on a regional or national channel can be expected to advertise on a community TV, and the station can provide free ad production services to the business owner, building production skills and helping the business person to become a local celebrity with her/his regular slots on "specials" at her/his supermarket, hardware store, funeral service, vehicle dealership etc. (Armstrong 2005)

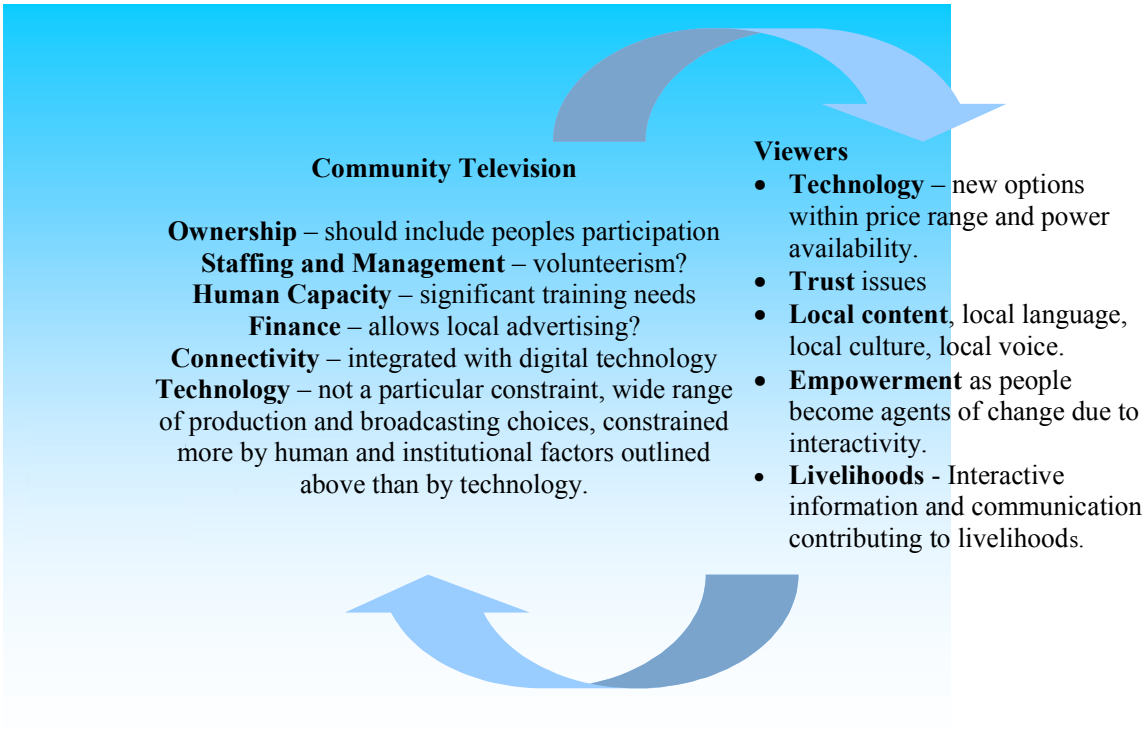
There is constant debate about the role of digital technology in terms of political freedom of speech. Some would argue that the internet as a forum where almost anything goes,

has eroded the value of information. Others would argue it can be used to address issues of injustice that are currently being gagged by governments who do not want open and transparent government. In the roll out of egovernance and the increasing move towards good government, most governments would welcome new approaches for dialogue with their constituents and community televisions could be an appropriate forum.

While digital technologies have made production or programming easier, the challenge of human capacity remains a significant challenge. Management, organisation, open and transparent accounting, programming creativity – is more or less the same whether one is using analogue or digital broadcasting equipment.

Amidst these problems however is the consolation that it is much cheaper now, than before to establish a community television station. With a critical analysis of the situation, hard work, determination and good planning, this seemingly difficult task could be achieved for the development of rural areas in the developing countries. (Development Associates Ltd 2004c)

The net conclusion is that community television could play a huge role in empowering local communities. While community radio has such a role now, it is possible that television viewing could over the next ten years erode the role of radio. Uptake of low power televisions could leave communities with national or multi channel broadcasts that are entertaining but do very little to stimulate dialogue about development, empower people as agents of change, protect local language and local culture. Community television could play a strong role in stimulating development dialogue, supporting local economies, be a vehicle for decentralised government egovernance and share local content in local language and local culture – a local voice.



11.4.The future?

The table below summarises the current position and possible future for each key factor.

Issue/Factor	Current status	Potential future response
Regulation		
Community television licences	Currently most developing countries do not have legislation in place regarding community television licenses. South Africa had a special licence and changed to 4 year community licences during the lifetime of this research.	Likely that the increasing convergence of radio and television technology will encourage policy changes - where community radio is allowed, the wording will likely include "audio and visual transmissions". However, also new technologies may offer ways around current legislation - unlicensed spectrums.
Frequencies	Currently there are few frequencies available for television broadcasting, and in places like South Africa community broadcasts are constrained by access to those frequencies	The new digital technologies are likely to offer new opportunities especially in the unlicensed frequency ranges.
Innovative use of new technologies	The spread of mobile technology in Africa has been constrained by current legislation. There is increasing activity to enable policy makers and regulators to understand changes in technology and regulate accordingly.	Likely that the increasing capacity of policy makers (and regulators) will enable governments to find ways of releasing the innovative use of technology without threatening their own power.
Linkages between television and development	Currently there is very little link between development activities and television broadcasts. There are examples of information (e.g. health, HIV), and there are some examples of soap operas dealing with key issues. The predominance of reporting is semi political - showing the visit of political leaders to a development project.	Experience with community radio suggests that it is likely that local or community television will explicitly discuss development programmes and work with development activists.
Environment		
Infrastructure	Currently televisions tend to be associated with electricity provision	The decreasing cost of portable battery operated devices, the lower power consumption of screens and the lifetime of batteries is likely to make them more accessible in rural non grid connected areas
Freedom of Speech	Dependent on country by country basis	Some commentators suggest that increasing connectivity increases political freedom of speech - debatable. Local or community television will likely be seen as a threat to restrictive governments.
Other Broadcasters	Growing availability of Satellite, cable and national commercial channels. Professionally produced programming increasingly available in cheap receivers.	Increasingly cheap receivers may threaten local or community broad or narrow casts, hooking people into a wide choice of global, national or regional content.

Issue/Factor	Current status	Potential future response
Protectionism of television media	In many situations now, professionals within the television media constantly lobby for a set of unwritten standards, that results in a protectionism of the current status quo of television media	Video has become available to amateurs, and it is likely that in the same way community radio is open to volunteers and a certain amateurism, so too the new shapes of local and community television may break through this relatively closed industry.
Institution framework		
Ownership	Community radio, pro-poor broadcasting, public broadcasting on radio have explored different models for station ownership.	While the debate continues as to the best ownership model in radio, the changes in television technology will offer, and be constrained by, the same challenges of ownership as radio
Management Staffing	Fledgling experiments in community television favour a volunteerism model, to ensure widespread production by the community.	As radio has adopted various models including volunteerism and paid staffing, so too community television will likely explore different staffing models
Human Capacity	One of the biggest constraints on radio is the capacity of staff to present interesting journalism and meet the needs of the people. Often it is the creativity of the people that is the constraint rather than the technical expertise. Experience of Nigerian film industry suggests there is a viable latent talent waiting for opportunities to use visual media.	Television will present even more a challenge regarding creative human capacity. Urban experiences suggest the young can easily be trained and their creativity will rise to the challenge. However, rural stations may face an absence of human capacity that will need to be specifically addressed by training.
Finance	In some countries community radio is not expected to offer advertising services to raise finance. Often radios are constrained in their journalism by the absence of running expenses - travel budgets to go and interview local people	A wide range of business models will be applied to community and local television. The CPEG model is proposed in the report. Local business advertising could be valuable both as an income stream and for the local economy.
Connectivity	Community radios are beginning to find benefit in being connected to the wider world through the internet - both to find information, download audio programmes and share their own content	Most innovative community or digitally based television stations will probably start with reasonably connectivity, allowing access to information, downloading of video and sharing their own content.
Technology	Analogue options for local television stations have been available – low powered UHF broadcasters, and analogue 2.4GHz senders. However, already the digital options both for satellite and national broadcasting, and for local broadcasting are available but untried in low income communities.	Digital convergence will bring more options for local broad and narrow casting. Technology itself is not a particular constraint, it is constrained more by human and institutional factors than by technology.

Issue/Factor	Current status	Potential future response
Users (viewers)		
Technology	Radio remains the preferred choice of low income households in Africa at the moment. However in Asia and Latin America there is a definate move toward television, and in some places ownership of televisions is higher than ownership of radio.	People like television and with increasing opportunities for low powered devices most households in all continents will move towards television. Digital convergence and particularly a convergence with mobile phone technology will bring an ever increasing range of affordable audio visual devices hat require low power or battery operation.
Trust	Currently a very high level of trust for television - more among the rich than the poor.	Social responsibility in television currently tends to be quite high in principle if not always in practice. Community or local television likely to go the same way as the internet - under regulated for content and sometimes providing inaccurate information.
Local Content	Currently national television tends not to deliver local information - although where available people tend to use television for the weather forecast. Radio can be a medium for local announcements (weddings funerals) and for local commentary on local issues.	Community or Local television may be the vehicle of local content. Local language, local culture, local issues could all be strengthened by local content. Technology now easy to use and amateurism could allow people to present ideas that are important to them.
Empowerment	Community radio has been established as a medium that encourages participation and empowerment. People become their own agents of change and radio facilitates the local discussion.	It is possible that community television will take a similar role in providing the forum for local debates, that in turn lead to participation and empowerment. However, this depends on the final shape of the station and its environment.
Livelihoods	Community and local radio can often be a source for vital information that supports livelihoods - market data, special events, advertising. Mobile technology has made a significant impact on this information flow, allowing people to find the exact information they require.	Local and Community television is likely to be digital, and have connectivity. It may be on the backbone of a full internet service, and its shape may well be integrated with a interactive information flow. - requests to the television, or a digital text service on the same carrier signal for the television.

12.Recommendations

We note that the Millennium Development Goals (MDGs) will only be achieved by creating efficiencies in service delivery, by open and transparent governance and by supporting and strengthening livelihoods of the poor. Information and communication plays an important role in each of these – it can assist the health service to target its resources effectively, it can be a point of interaction between a decentralised government and its population, and it can share market data, strengthen local businesses and increase social and economic capital.

There is a paradigm shift happening in visual media. Video has become affordable to institutions as a means of communication. Video is becoming increasingly used by households in developed nations as a store mechanism for memories. Mobile phones in the West already can display television and can store and forward video. In Africa indpendent film makers have created a viable film making industry. And the demand for television, even among low income households is constantly increasing.

Given the relatively positive changes in technology that have and will occur over the next ten years, what should be done now to facilitate this potential resource for development?

1. A favourable policy environment, together with a commitment from national, regional, district and village level policy makers to the concept of community Television and its benefits for national development.
It will take time for governments to realise that technology has opened new possibilities and to respond to the new opportunities. Decision makers need to be made aware of the changes and their possible implications. Out dated monopolistic television regulations need to be open to the possibilities of community media.

2.Special licensing and taxing systems should be put in place to help reduce costs and aid in sustaining the broadcasting stations
It is in the governments own interest in working in economic growth and poverty reduction for it to encourage community media (whether it be radio or television). Where possible licensing and taxation systems should be put in place to aid the stations rather than penalise them.

In general terms:-

3.Considerable awareness and capacity needs to be built among community users and/or beneficiaries and local producers on the benefits and operational modalities of community television for development. Governments and development partners should facilitate establishment of pilot projects in selected countries targeting schools and

organised community groups first as tool for learning and information communication. This will fuel the spread of the concept to larger communities.

Where community media is being established, various mechanisms should be used to ensure that human capacity is built. This will include:-

4.Community Governance – Support for community TV needs to ensure support for governance and steering committee structures that include a range of legal, financial, activist and broadcasting experience.

5.Knowledge empowerment on development issues for personnel to ensure quality interaction with the poor to help them identify problems and find solutions to them during the process of local content creation

6.Gender awareness necessarily associated with development communication such as power relations, decision making processes that tend to deny women access to information should be identified from the start and dealt with to avoid problem of persistent marginalisation of women and other vulnerable groups

7.Time must be spent in building the capacity of rural populations to enhance their full participation in the development and creation of local content
As opportunities arise to establish local and community TV channels various approaches can be considered to training and sharing skills development in programme making broadcasting/narrowcasting and policy. Community TV services from several countries could pool teaching experience and contribute towards a manual or 'how to guide' from their existing resources – better still a version in video. Where a country has an independent film industry, synergies should be sought after, to use local films on the community television and to train new producers from the community.

In practical terms the following recommendations should be implemented when establishing community media:-

8.The use of local languages in community broadcasting should be encouraged to help in easy understanding of messages and thus enhance the participation of local people.

9.Ensure that a community media station has connectivity to the internet. At some point a network of local public service and community TV channels will emerge – as Open Channels for Europe! has recently to support open access TV initiatives. Videazimut – a Canadian based NGO – once offered an international network for community TV and video but folded four or more years ago.

As this study has shown that there are many potential paths that the technology might go down, there needs to be more study:-

10.The impacts of mass media on communication of development information leading to poverty alleviation and improved livelihoods is scarce and scanty at present. As a follow up to this study, more in depth analysis of impacts in various communities need to be documented.

Finally- priority tasks

12. Since the shift to television from radio will occur, poverty alleviation communication strategies from government and agencies should consider television programming.

11.The original proposal for this scoping study suggested that a pilot project would be appropriate at the end of the study. This remains true. The study has clearly shown that institutional and human capacity factors far outweigh technology in their contribution to a successful pilot. The prime research should :-

- document the institutional factors that most affect the success or otherwise of a community television station
- explore and document the factors that are key for the creation of local content
- determine models for sustainability
- document the contribution of the community television to development

However, within this research and as one of the factors influencing the models, the pilot projects should include piloting various distribution technologies and stations should pursue a multiple-distribution strategy. This might include :

- small-footprint local UHF free-to-air distribution
- free carriage on any digital subscription TV platform available in the country
- "windows" on free-to-air national and regional public TV broadcasting services
- exploration of analogue and digital 2.4GHz technologies for video forward and store
- would-be community broadcasters can be supported by inexpensive DVD duplication and door-to-door distribution, either to help gather a community of TV producers together or to add viewers to small-scale TV networks.
- cellular SMS promotion of programming
- cellular SMS listener participation/feedback

It is important that pilot research should not create new stations as such, but work with existing institutions or planning networks to add new technologies and explore new models. In order to research this we propose three locations building on the support developed during this scoping study.

Specifically DFID (UK) should consider funding a pilot community television in these locations.

- South Africa now has the regulation in place for a low powered UHF station, and this research has encouraged community TV activists to form networks that are now working towards establishing community stations. South Africa would be ideal to pilot

a relatively traditional community television model and has the human capacity to undertake it – allowing exploration of technology.

- Tanzania now has regulation in place for community radio, and this research contributed to the change in policy. It has a vibrant independent film industry and has a regional network of television stations. Tanzania would be an ideal place to pilot alternative models of community and local ownership, whether there could be collaboration and co-operation with the national TV operators
- Ghana has little experience of community stations, however the North of the country is an area of deep need, and it would be possible to pilot an innovative community station on the back of an existing community radio funded by civil society.

This would give a range of institutional and environmental pilots. South Africa is a relatively developed infrastructure and has in place community television licensing. The problem that remains surrounds frequencies and the financial sustainability of a open access model. Tanzania could work with regional television stations, it has a more challenging environment although some regulation is in place there would need to be dialogue with the regulator to allow innovative community television stations. Ghana has an even more challenging environment although by working with an existing radio station a model of civil society engagement might be pursued.

Given the results of the pilot community television project above, then the subsequent priority task would be for agencies to create an awareness among governments and the development community not only to include television in development communication strategies, but to include a discussion of community television and its potential.

The programme would enable the emerging community television community to explore solutions to many of the issues itemised above. It would also provide an opportunity for development community to assess the potential role of TV in development interventions and generate useful experience of how agencies and communities can best exploit the inevitable adoption of TV among low income communities.

13.Appendix - Country findings.

As described in methodology section above, the countries were proposed for the following reasons:-

Honduras – thought to have extensive community radio experience and some community television experience

South Africa – thought to have community radio experience and some very limited community television experience

Tanzania – thought to have a regional television network, a strong independent film makers network but both with limited developmental connections

Ghana – thought to have experience of community radio, thought to have no experience of community television.

The country reports and the workshop outputs inform the following findings and overall conclusions. This section presents a few of the key findings from each country.

13.1.Honduras

Figueroa de Pacheco L 2004g

As anticipated in the proposal, Honduras was able to share some experiences about local and community television. No stakeholder workshop was held in Honduras and individual interviews were the main source for the findings. The following is the conclusion of the summary.

In Honduras, radio continues to have distinct advantages over television: Radio stations are much cheaper to set up than television stations, and radios are much cheaper than television sets. Furthermore, radio waves can penetrate to remote communities that television cannot reach.

However, the number of both television stations and viewers is growing rapidly, and thus the potential of television for promoting development in Honduras is also increasing. While some mass broadcasters, most notably the Catholic Church's Channel 48, have succeeded in providing educational and pro-development programming, more frequent instances of this type of programming at the local-broadcast level indicate that local broadcasting is both a more economically feasible and more effective medium for promoting development in Honduras.

Local television stations in Honduras offer programming directly related to the specific challenges of the community. Moreover, they involve the public not only as passive viewers but as active participants—as panellists on discussion programs, as interviewers and interviewees on news programs, as participants in public campaigns organized by the channels, and so on.

Funding is a large, if not insurmountable, challenge for educational and pro-development television stations and programs. Start-up funds are sometimes available from foreign NGOs, but such grants usually terminate at some point. The Honduran government does not offer discounts or subsidies to educational channels, nor does it require commercial stations to set aside a certain amount of time for educational programming. And most commercial broadcasters are either not interested in educational programming or charge high airspace fees for educational programming due to the perceived loss in advertising revenues it causes.

Some educational media are overcoming these obstacles by running profitable side-businesses or by negotiating with advertisers collectively.

Attracting the audience's interest also remains a challenge. Honduran advertisers' aversion to educational programming may be partly based on unfounded bias, but it is probably also based partly on a true assessment of the public's interest in this kind of programming. Broadcasters interviewed for this study estimate that relatively low percentages of their potential audiences watched their educational shows—the owner of Santa Barbara Vision, for example, estimates that 30% to 40% of his audience might be interested in watching the Child Media program he broadcasts; Father Jesús Mora of Catholic TV Channel 48 estimates that 10 – 20% of the population tunes in to *Telebásica*, an educational program that the channel broadcasts for eight hours every day.

Local channels again appear to have the advantage. Interviewees from Channel 9 Teledanlí and from Cristovisión ("ChristVision"), a local Catholic television broadcaster in the town San Luis, Santa Barbara, for example, both said their channels had responsive, dedicated audiences.

13.2.South Africa

Armstrong 2004
As assumed in the proposal, South Africa has some limited experience of community television. The timing of this study, in the latter half of 2004 and the first few weeks of 2005, was opportune in several respects.

June-July 2004 saw the staging of a one-month community TV broadcast – the first in the country for several years – by the Greater Durban Television (GDTV) group. The broadcast, done under a one-month ICASA "special event" licence, was timed to coincide with the Durban International Film Festival. Some of the drivers of this 2004 Durban broadcast were also part of team that, nine years earlier, had staged one of the pioneering community TV events in the country -- the first GDTV "Visual Voice" broadcast -- in 1995. The research team attended this special event, using it as an opportunity to explore the realities of a community television station.

The year 2004 also saw interesting activity on the community video front, with the Johannesburg-based Film Resource Unit (FRU) -- South Africa's NGO distributor of local and African films and documentaries -- teaming up with government-run Multipurpose Community Centres (MPCCs) to launch community-based video projects at four locations.

Meanwhile, in Cape Town, on the campus of the University of the Western Cape (UWC, the so-called "Bush University") a team of about 20 students spent much of their spare time in 2004 producing a weekly pre-packaged one-hour video package, called "Bush TV," screened every Thursday and Friday at six different student residences and in the student union building.

There were also some important stakeholder meetings in South Africa 2004:

- A series of meetings by emerging CTV & Video Consortia in three cities: Durban, Cape Town and Johannesburg
- A national SA Community TV & Video Strategy Workshop on Oct. 8, 2004, funded as part of this study, in early October at Wits University in Johannesburg
- A development video and TV workshop, convened by the NGO SACOD (Southern Africa Communications for Development) in Cape Town in the days before the annual Sithengi film and TV market
- Several meetings of local film and TV producers hoping to set up a South African wing of the global Independent World TV (IWT) initiative

The South African community TV movement also made its presence felt at the broadcast regulator ICASA's hearing in Cape Town in mid-October on the planned SABC Regional TV (RTV) channels, SABC 4 and 5. Karen Thorne of Cape Town's Arts & Media Access Centre (AMAC) was on hand at the hearing to voice concern over the prioritisation of public regional television when community TV – a third tier of broadcasting enshrined in the 1993 IBA Act – still didn't have a full-time licencing regime.

That licencing regime finally arrived on 30 November 2004 in Johannesburg, when ICASA released its *Position Paper on Community Television Broadcasting Services,* a document that sets out the manner in which community-based non-profit groupings will now be able to apply for full-time four-year licences or special-event licences of up to one year in duration – a vast improvement on the current dispensation, which only allows for special-event licences of up to one month. The *Position Paper* also sets out in detail the requirements community TV groups will need to meet – e.g., clear community support, non-profit but allowed to carry advertising – to get full-time licences or long special-event licences.

As South African community TV and video activists begin 2005, there was much reason for optimism. But in speaking to the key players in Cape Town, Durban and Johannesburg for this study, it becomes clear that there is still a fair bit of caution. There seems to be

a strong sense that the community TV movement needs to learn from some of the difficulties encountered in the community print and radio sectors during the first 10 years of South Africa's democratic media environment – difficulties around community participation and legitimacy, around skills development, around funding. Full-time community TV and video operations promise to be even more expensive and potentially fraught with even greater organisational difficulties than their radio and print cousins. But, at the same time, there is the realisation among all the potential players that, if they can get the formula(s) right, they are dealing with something very powerful. In a world hooked on visual stimulus, community TV and video workers have the potential to generate strong audience impact, and to develop skills of great use in securing employment in the broader media and communications sectors.

The Oct. 8, 2004 workshop funded as part of this study, entitled "From Special Event to Main Event? Community TV & Video in South Africa," brought together a wide range of South African community TV and video stakeholders from around the country. The workshop was organised and hosted by the Learning Information Networking Knowledge (LINK) Centre, Graduate School of Public & Development Management (P&DM), Wits University, Parktown Campus, Johannesburg. It proved to be a catalytic forum whereby community television activists who had been active five or 10 years ago, but who had reduced their activism to some extent in recent years, were able to re-convene and try to re-energise. The workshop resulted in a number of resolutions which have subsequently been acted on:-

Workshop Resolutions

1. Formalisation of CTV & Video consortia in Durban, Cape Town and Gauteng.
2. An SA CTV & Video National Advocacy Group,
3. An SA CTV & Video Research Group,
4. An e-mail Listserv and web site
5. Issuing of an SA CTV & Video *Statement* on behalf of the workshop
6. Input at ICASA SABC RTV Hearing on 18 Oct in Cape Town
7. Response to the ICASA Position Paper expected in the coming weeks
8. Research on case studies, baselines, technical options, financial options;
9. Test Transmissions in Durban, Cape Town, Gauteng
7. That the key upcoming "action moments" will be:

Inputs were made to the representative of the regulator ICASA at the workshop – and Greater Durban Television (GDTV) submitted a special event licence application.

ICASA's *Community TV Position Paper* was released about 7 weeks later, on 30 November, and it appeared to cater to some of the frequency-availability concerns raised at the 8 October workshop. Meanwhile, GDTV's special-event licence application was successful, and the group staged a broadcast over the December-January holiday period, in an event called the "Summer Sizzler."

13.3.Tanzania

Development Associates Ltd 2004c
The research was conducted in stages. It participated in the Zanzibar Film Festival where independent film producers can showcase their work.

Once again the stakeholder workshop proved very timely. The Tanzania Communications Regulatory Authority (TCRA) proved enthusiastic, and used the opportunity to undertake a consultation on community radio licensing. This is thought to be a significant contribution to the announcement shortly after the workshop of a change in policy, a reduction of license fees.

There are 34 operational radio station in Tanzania, of which, 31 are FM and the rest AM stations making radio still the most appropriate communications technology that is available to the majority of people particularly the disenfranchised rural communities, women and the youth. This is so because though at an increasing pace, there are 32 cable television operators, with only 16 of them at commune level, even though they are based at district headquarters.

Tanzania's only national radio, Radio Tanzania Dar es Salaam (RTD), is state-run and sometimes promotes awareness of development and social issues. Today, there are other independent stations that include Radio One, Radio Tumaini, and Coast Television Network.

Major television stations that include leading TV station – the Independent Television (ITV), owned by IPP Limited and the state-run Television Tanzania (TvT) make five television stations in Tanzania, including the independent ITV, DSM TV, CTN and CEN.

The growth of the broadcast media has been hindered by the lack of capital investment needed to set up TV and radio stations - public and private.

Community-based media which ensures media pluralism, diversity of content, and the local representation has not diffused well in the country except for the few community radios such as Orkonerei (Simanjiro), Kwizera (Ngara) and Sengerema (Mwanza) which display as models.

Except for the state-run Radio Tanzania Dar es Salaam which broadcasts development materials, most private radios are entertaining and air business advertisements, with 'hardly' any information regarding community development.

While it is relatively cheap to start a community radio; it is expensive to run it in terms of developing relevant local content which is costly (need skills, equipment, resources).

Costs for the air time, running studios on fuel power generators as there is no electricity in rural all add up to unaffordability of such ventures.

Stronger financial commitment by both public and private sectors to support broadcasting is inevitable and these can well be supported by the public-private partnerships; and revisiting high licensing fees and time for their licensing of community broadcasters. Use of skilled volunteers for running it is an option.

Combination of video and audio and use of other video and interactive media (mobile cinema, outdoor media, Internet) adds value to whatever the radio or television is broadcasting to communities.

Challenges and Constraints

Upon consultations with the stakeholders, the following were noted as factors constraining community broadcasting:

- Development of local content is a costly undertaking in terms of expensive equipment, inadequately skilled manpower, and insufficient resources;
- The high running costs of broadcasting (on the air hours), material collection (manpower and gadgets), processing of information (editing suit), servicing and maintenance of equipment;
- Compounded by the above, although there could be sufficient materials for broadcast on development, the channels for their dissemination, i.e. community radios are not there in place (only a couple, so far);
- Public dominance over radio broadcast. Must learn and practice the public-private partnerships in broadcasting;
- Deliberate efforts to further develop enough of the development programmes with the involvement of lead public sector and the private and local stakeholders such as ministries (health, agriculture, education) with the District Councils

Opportunities for Community Broadcasting

There are many prospects for the community broadcasting in the country that includes increasing numbers of applicants who may apply for establishment of community radios/TVs, enlightening possibilities for lowering tariffs and fees for community radios/TVs, and especially the support indicated by the government in the national ICT policy. Specifically, the prospects include:

- There is an increasing commitment by the private sector and NGOs in supporting establishment and supporting of community radio and TV;
- The use of mobile video vans by the agricultural extension department could be encouraged as is the case in the Agricultural Services Support Program (ASSP) that commences in July 2005;

- Public radio adjusting her programmes to include entertainment to lure listenership that has been on the decline;
- Development programmes made by the Farmers' Education and Publicity Unit (FEPU) of the Ministry of Agriculture is in position to hire them out to willing district councils, NGOs and any other development partners in collaboration;
- The Tanzania Communications Regulatory Authority (TCRA) is proposing to decrease the licensing fees for community radios and TVs to US$ 200-300 only down from over US$ 2500. This is likely to induce mushrooming of community radios/TVs.

From this study, the following can be concluded:

The current policy and regulation framework for broadcasting in Tanzania is conducive and welcoming thus giving opportunity for introduction and development of community radio and television. The current negotiations between the regulators and the broadcasters for reduction of licensing fees shows the commitment from the government side for wider accessibility to broadcasting for all;

The local radio is widespread reaching all communities. This deep radio penetration has created a good base and condition for information to get there although the challenge remains for the availability of sufficient relevant local content;

The Local Government Reforms have opened up opportunities such that radio and TV can be localized and the district councils could be financially supporting and owning them;

- The financing (in terms of equipment, buildings, etc.) of local radio radio/TV as well as the availability of skilled manpower at local levels are the biggest limitations

13.4.Ghana

Sakyi Dawson O 2004a
Ghana broadcast media stated that as at September 2002, the NCA had approved 119 radio and 18 TV stations although not all of them are operational. Apart from private community stations most radio and TV stations are in urban locations. The goals and objectives of public radio and TV stations are "National Development" oriented, that of the private commercial is "commercialization", and private community stations have community development as their objective. Though Ghana has significant radio and TV facilities their potential for supporting community development is limited by adequacy of skilled personnel and funding. The media has the general view that there are bright prospects for community radio but some form of support is needed to make it feasible in the country. The potential can be exploited with awareness creation among investors, evolving low cost training and education systems and innovative funding strategies such as directives to use a portion of the District Assembly's common fund to support community broadcasting by government.

Radio Ada (an example of "Community Radio") seeks to support the development aspirations and objectives of the Dangbe people by encouraging, promoting and contributing to informed dialogue and reflective action. Radio Ada operates in four main districts. Thus the Dangme East and West, Yilo and Manya Districts and rely on volunteers as its workers. The station broadcasts mainly in the local language (Dangme). The fact that the volunteers are full time workers in other organisations and work only for the station on part-time basis, coupled with the meager allowances they are paid make their services unreliable. Also the young media practitioners after gaining training and experience do leave to join other radio stations with higher remuneration. Radio Ada believes there is the need for district assemblies to recognize community radio stations as partners in development and help support the activities of community radio.

While Ghana does not have experience of community television, it does have experience of the use of video for development interventions. Regarding the communication needs of extension agents in Ghana, video is a means for transmitting significant, relevant and timely information for purposes of effecting desired change. As a means, it therefore requires the physical tools/equipment, and the skills, attitudes, creativity etc. of the communicator. In using video, one must ensure that local content is incorporated for effective communication. As an audio-visual communication tool video can be used to present complex issues more clearly compared to other media. It can be used to create good locally relevant information resources in local languages. Video can also be used to carry a consistent message to all receivers and it is most effective as an advocacy and campaigning tool. The use of videos faces challenges such as the level of availability and ease of maintaining due to the cost and size of cameras and editing equipment, specialist skills and knowledge required for operating equipment. The main factors to consider when using video are infrastructure, skills requirement and costs.

Similarly there is a growing use of digital media in educating the public on health issues by Health Foundation of Ghana (HFG). The various types of ICT's used by HFG in health delivery are Internet, Video, Radio, and Digital Media. The challenges faced in using ICTs in health delivery include low level of access to ICT's by Health Personnel and this is virtually non-existent in rural Ghana. Among the advantages in using digital media is the fact that digital media is an audio-visual aid and it is a powerful tool for Health Education at every level (training, schools, and communities).

At the workshop, there was some debate over the role of professional media people in production of audio visual material. The core of the debate was :-
There are two alternative ways of training labour to carry out extension communication. The two training alternatives are:
A professional broadcaster learns the subject area (health/ agric) in which he/she is to communicate about and once the broadcaster has already received training in communication there is the surety that he/she would not violate the ethics of the media profession.

OR
Health/Agric. extension professionals are taken and trained in media communication after which they would be equipped with both the technical knowledge and broadcasting ethics as well for effective communication through the mass media.

In discussion, participants of the workshop agreed that there is a need to look beyond mass communication to what can be done with mass communication to enhance community development. The group proposed that courses in media communication should be incorporated into the syllabi of Health and Agric. extension training institutions so that the students come out with the requisite knowledge to carry out communication effectively.

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15.Postscript

Destiny Mobile TV on 3G UK Phones

10th May, 2005 (see below for all today's 3G news)
Europe :TV Commerce Holdings (AIM:TVC), the fast-growing media and entertainment company, announces that it has entered into a joint venture with Requestec, the digital messaging software group, whereby 3 mobile phone users will be able to view Your Destiny TV (SKY 694) live on their phones.

Already having access to over 7.5 million homes via Sky Digital Satellite, the new agreement using 3, the UK's fastest growing network with over three million customers, provides Your Destiny TV with a much wider potential audience.

To access the channel, users simply dial 85588 and press the video call button on their phone. The live television broadcast can then be viewed and heard on any 3 compatible handset. No additional software or complicated setup is required. Thanks to 3's advanced technology, the audio/visuals are of near broadcast quality.

Comment – while 3G is not available in Africa, the current trend in mobile telephony suggests that within ten years it will be. Mobile phones may well be the option for viewing a community television station!