

## ■ ASSESSING THE VIABILITY OF DIGITAL RADIO IN AFRICA

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### **Introduction:**

Majority of people in Africa (including Tanzania) live in the rural areas shielded from the amenities of modernity with no electricity, poor transport and communication infrastructure, etc. Most of these rural areas do not have easy access to information and live with many development challenges. Due to urbanisation, much of the social and communication amenities are located in urban areas with none or very little penetration into the rural.

The common experience is a high concentration of the ICTs (radios, television, internet and newspapers) in cities and /or urban areas. Internet access in rural areas is still a dream and where there is some access, this is coupled with slow internet speeds and low bandwidths. Broadband 3G internet connectivity is not available in most rural areas who seem to have only 2G, lending it difficult to fully exploit and enjoy the opportunities expected of modern ICTs.

Even though internet connectivity has improved with mobile providers adding data to their services, the cost of internet bundles is still very expensive. VSAT deployment has been the norm for remote/ rural access as the only alternative for a couple of years but the affordability and cost of bandwidths has become very prohibitive lending many VSAT installation to be abandoned or operate below capacity.

Attempts to roll out fibre optic to rural areas is on-going but has not yet benefitted the people at the “bottom of the pyramid” and still information access remains a challenge.

Rural communities therefore have in some way been denied the benefits of modern ICTs to access and share information. The lack of easy access, technical know-how and cost have been the major challenges.

### **The role of Radio in facilitating information access:**

When it comes to information access and dissemination, Radio is up to now the most convenient and efficient means in rural Africa which is deprived of the amenities provided by modern information, communication technologies.

It is also so far the cheapest and most affordable means of information access compared to other available ICTS (internet, Television, Computers).

The emergence and licencing of FM radio stations came as a saviour solution to the above challenges. The easy of deployment of the FM technology and cost of equipment meant that communities that could not access information via normal high tech means, could now at least receive information. The further licencing of mobile telephony increased rural population access to and sharing of information resources.

Technology experts have worked to develop, manufacture and customize/resize FM transistor radios to suit users with varying economic abilities (low-power, battery-powered, solar-powered or even crank) by taking into consideration the lack of power in rural areas. The integration of various ICTS with FM radio technology (e.g. in mobile phones) has increased the potential for interactivity and feedback.

### **Digitalizing radio transmission/ reception:**

Although the advantages for digitalisation are now well understood, the cost of the technology (capital expenditure in digital transmitters and receivers) might be the major constraints to the effective deployment of digital radios.

#### **(i) Digital radio Transmission**

- a) Unless otherwise, digitalizing radio transmission would necessitate adapting to the existing multiplex operators all located in Dar es salaam or investing in own infrastructure which would be very expensive. The technology requires that content producers send content to the multiplex broadcasters. The existing ICT infrastructure does not favour radio stations located away from the capital (as fibre optic is not widespread all over the country)
- b) Community radios especially have a special focus on their local communities. Digitalizing targets a much wider and global community contrary to the intentions of the community media.
- c) The cost of digital radio receivers is likely to be very high that very few can afford it (the high cost and unavailability of set top boxes for digital TV points to an even worse situation for digital radio receivers).
- d) We do not have digital expertise on the continent and so all equipment would be out-sourced. If we had the expertise and developed the

technologies ourselves, that would not be a problem. But with everything having to be imported, sustainability of digital radio is at stake.

CASE STUDY FROM BROADCAST WAREHOUSE, UK  
([www.broadcastwarehouse.com](http://www.broadcastwarehouse.com)):

Mr. Brendan Lofty a Tx manufacture expert has this to say:

“ Hi, Joseph, I really don't think they will do it because of the costs involved. You would need and expect millions of people to buy new digital radios, at between \$50-\$150 which is crazy.

The costs involved for transmitters are crazy, it will either be DAB or DAB+ and the coverage is terrible with many sites needed. The price indication for a 1kW DAB/DAB+ transmitter costs on its own US\$58,000.00, While a 20kW digital transmitter would cost US\$807,000.00

I know in Uganda they have postponed digital radio for some time, unfortunately its politicians all involved in this. The BBC just at the end of 2013 has a 300W DAB transmitter from Harrix in USA which cost £100,000 !!

The politicians need to see if they will buy millions of people these new radios, even here in the UK the take up in over 10 years is still less than 20% listening on DAB. Here is a recent UK report <http://radiotoday.co.uk/2013/09/report-not-much-interest-in-buying-dab/> “

## (ii) CONTENT DEVELOPMENT:

Whereas digital migration to a large part looks at equipment, when it comes to radio, the need for generation and packaging of local content becomes the major issue. Huge efforts have to be invested in building the capacity for local content generation.

New policies guiding the development of digital radio would have to be formulated but most importantly, digital development would have to be coupled with audience sensitization (awareness) creation.

(iii) LICENSING:

A new licensing framework has to be in place to guide the migration to digital radio. It might work to have regional/ decentralized multiplex radio broadcasters as opposed to national multiplex(es) as it is the case with digital TV.

**CONCLUSION:**

Notwithstanding the fears and nostalgia around migration to digital radio, the demands for modern technology requires that the audience accepts to change to cope with the technology. The cost of the technology is likely to remain high for a couple of years but it might be hard to resist change.

However, it would be prudent to leave to market forces to play their part instead of imposing the fast migration. It is therefore imperative for the players in the field to plan for this leap into digital age.

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About the author:

I have a BA in Philosophy and a BSc in Agriculture. I am an Ashoka Fellow and have also other awards: UN SEED AWARD WINNER 2011, USDA Cochran Fellowship 2007.

I am the founder and director of FADECO Community Radio in Tanzania and the Chairman of the Community Media Network of Tanzania (COMNETA).