



Ten Tips for Managing the Migration to Digital Television

A brief guide for African station managers

By Meredith Beal



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Introduction

Since the inception of television broadcasting, stations have used an analogue network to carry their signals. With the advent of digital broadcasting, innovations have emerged to allow greater efficiency in the use of a country's electromagnetic spectrum, creating opportunities to free up spectrum for other purposes such as wireless and public safety uses. Analogue to digital migration is the process of transferring the analogue services to digital platforms and then switching off the analogue services. Analogue to digital migration is applicable to both radio and television broadcasting. However, television broadcasting is the focus of the first global deadlines to retire analogue services.

All countries with the exception of a couple of territories are scheduled to complete the migration from analogue to digital television broadcasting by June 17, 2015, according to a 2006 agreement brokered by the International Telecommunication Union, the United Nations agency that allocates radio spectrum and satellite orbits. Many countries have chosen earlier target deadlines to allow more time before the global switchover.

As of October 2012, the only African nation that had completed the analogue to digital television (DTV) migration was Mauritius. The country initiated its migration process in 2005 with a "soft launch" of its first digital services offering six free-to-air channels. But public demand for set-top converter boxes (STBs) was low because of weak content and lack of public awareness. Another major obstacle was that the original STBs imported from China were not compatible with the services being broadcast. Two digital channels were launched in 2008 to speed up consumer purchases of digital TV sets and the appropriate STBs.

According to Mauritius' Information and Communication Technology Authority, most of the bandwidth freed up as a result of the migration will be used to expand mobile services. Authorities also plan to use the extra spectrum to expand Internet access to remote areas. Since 2005, Internet penetration in Mauritius has nearly doubled with about 24.8 percent of the population with access, according to the International Telecommunications Union.

The countries in the East African Community – Kenya, Uganda, Tanzania, Rwanda and Burundi – have agreed on a deadline of December 2012. Countries in southern Africa have a deadline of December 2013, with most of the remaining African nations due to complete analogue to digital migration for television by June 2015.

There were approximately 86 million television households in Africa in 2009, according to Dataxis Intelligence and the Television Bureau of Advertising (TVB). By 2015 the number is expected to grow to almost 124 million. There is a significant gap between many countries with low penetration rates (less than 20 percent) and countries that exceed 90 percent, like Mauritius, Algeria, Egypt and several others. The pending migration offers opportunities to market television more broadly and TVB estimates are that the continent will reach a penetration of 50 percent by 2015.

The Benefits of Migration

Television stations and their viewers will reap broad benefits from the migration to digital broadcasting.

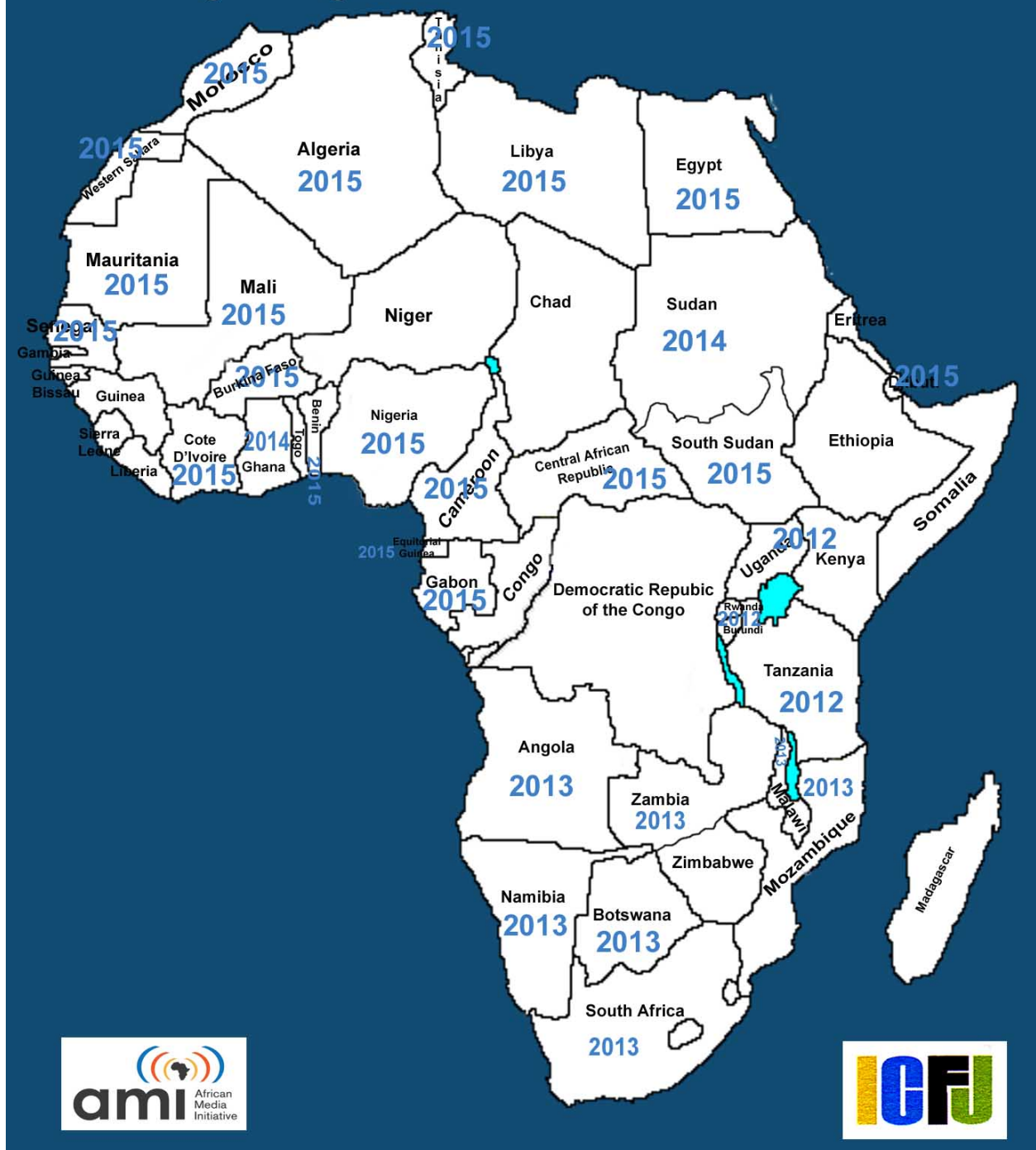
These include:

- **More Efficient Use of Spectrum**
Because digital signals take up much less bandwidth than analogue signals, up to 10 television channels can be carried using the same bandwidth that would normally carry only one channel using analogue.
- **More Efficient Infrastructure**
This allows for a single broadcast infrastructure instead of independent parallel networks, reducing the cost for all broadcasters as well as reducing environmental impact.
- **Better Quality TV**
Digital broadcasting offers a superior viewing experience with a sharper, brighter picture; reduced “ghosting” and interference; better audio signal; and improved sound quality (similar to the difference between an old VHS video cassette and a DVD). It also allows the introduction of new services such as high definition television, which offers an even clearer picture and wider viewing area.
- **The Digital Dividend**
This refers to frequencies that are freed up after the migration from analogue broadcasting. More efficient use of broadcasting spectrum allows repurposing of frequencies for other uses such as broadband and a variety of new wireless services.
- **New Business Opportunities**
Digital migration opens up a host of economic opportunities for the information and communication technology ICT sector and the local content and creative industries. It also enables new business models by separating signal distribution providers from content producers.

This document provides tips for television station managers and engineers involved in planning and implementing digital migration for their stations. It identifies several important considerations to take into account before, during and after the migration. The tips are based on the experience of television stations and regulatory bodies in the United States and other countries that already have completed the migration.



Digital Migration Deadlines in Africa



The dates identified in this illustration are based on deadlines defined by regulatory bodies in the various countries at the time of publication and are subject to change.

1 Communicate with your viewers to raise public awareness about migration

It is not possible to over-communicate with your viewers in raising their awareness about the migration and what they need to do. Use every venue available to the station (on-air public service announcements, news stories, web stories, billboards, public transportation advertising, social media such as Facebook and Twitter, speaking tours, etc.). Get the word out to your viewers so that there are no surprises.

Make sure you communicate the benefits to the public – your viewers.

Coordinate with regulatory authorities as they conduct their awareness campaigns. Often regulators conduct “road shows” where they bring equipment to demonstrate the superior quality of the viewing experience and ease of connecting set-top converter boxes. Having station personnel on hand to answer viewer questions is a great opportunity to connect with audiences and to market the station.

Get to know where the crowds are and tune in to the culture you are speaking to. Libraries, schools, churches and sporting events are great venues. Some stations have used event scoreboards with messages like, “Are you ready for digital?”

Some stations that may not have sufficient human resources to facilitate a campaign instead engage a marketing or public relations firm to coordinate the station’s viewer awareness campaign.

Clearly identify the three options viewers generally have to continue to receive television programming:

- Keep their current television set and obtain a set-top converter box.
- Buy a new television set that is digital ready.
- Subscribe to a pay TV service with a cable or satellite provider.

Sometimes because of the variety of advertising messages relayed by various stakeholders, consumers are confused and think that they *must* subscribe to a pay service. If you are a free-to-air broadcaster, make sure consumers know that their choice of buying a converter box or new television set is a one-time expense and that their television is still free.



One example of a compelling public service announcement appeared in Kenya's public awareness campaign conducted by the Communications Commission of Kenya. It associated the DTV migration with the legendary wildebeest migration that takes place in Kenya and Tanzania every year.

Images courtesy of Communications Commission of Kenya



It pictures old black-and-white television sets marching across the desert to a great river where the TV sets jump in to cross and emerge as colour digital sets.

2 Plan for a Dual Broadcasting Period

Simultaneous broadcasting in both analogue and digital for some time period is imperative. You need to ensure viewers maintain access to television programming while you're testing the quality and coverage of the digital transmission.

Do some "test" shut-offs of your signal. Nothing gets more people calling in for information than shutting off their signal. Some countries have conducted a coordinated "soft test." Stations in a particular market would coordinate with one another or in conjunction with a regulatory body to select a time when they would all shut down their analogue signals and replace them with a message that says, "If you're seeing this message your television is not ready for the digital migration."

3

Identify gaps in signal coverage

Provide an online coverage map on the station's website to show viewers where the expected coverage area is, so that they can help identify potential gaps in coverage ahead of time. Unlike analogue transmission, where there is a bit of room on either side of the target frequency which appears as snowy reception, with digital signals, viewers either have it or they don't. It will appear as a blue or black screen if the signal is not received precisely.

Television station engineers should work with regulatory authorities to identify gaps in coverage after the migration. Pre-migration engineering studies and projected coverage maps are based on statistical models of signal propagation and actual signal patterns may differ post-migration.

4

Help viewers with set-top converter boxes

Set-top converter boxes are devices that convert the analogue signal to a digital signal, allowing viewers to keep their current television sets. Work with set-top box manufacturers to ensure that affordable, approved devices are available to your viewers. If the migration switchover takes place and significant numbers of your viewers are unprepared, that could have an impact on the size of your audience, advertising revenue and brand loyalty.

Make sure that there are converter devices available for those who want to continue using their analogue television sets. Negotiate with vendors to meet the demands of the consumers, and do so in a cost-effective manner. You also may want to keep a number of devices available at the station to service your customers.



Image courtesy of Communications Commission of Kenya

5 Set up a telephone hotline for your viewers

The station should staff a hotline to answer questions months before the migration switchover date and should keep it up after the migration until the flow of calls diminishes significantly. No matter how much you and other stakeholders have promoted awareness, there always will be some who wait until the last minute or even later. Make sure the call center has enough lines and is well staffed at switchover time. It can be quite frustrating if viewers can't get through.



Image courtesy of AFL-CIO

6 Conduct audience research

Survey your audience in order to determine readiness for the migration. You may want to divide the responses into three categories:

- Fully Ready – Consumers who have every TV set in their house digital capable, either because they have a digital television set or subscribe to a pay TV service (cable or satellite).
- Partially Ready – One TV set that is ready and one or more in the household that are not.
- Not Ready at All – This is an urgent priority group, because one of the main concerns for the transition is for citizens to be able to access emergency information aired on television.

7 Invest in the proper equipment

If the television station also will be a signal distributor there will be need for substantial capital investment in equipment. Careful consideration should be given to which DTB standards are to be adopted. In some cases, the regulatory body may not give signal distributors a choice. Some countries have adopted the DTB standard and started down the road of migration only to decide later, due to innovations that developed after starting the process, to change to the DTB-2 standard. This has sometimes resulted in manufacturers importing equipment into the country that no longer worked or that may be much more costly than newer equipment based on the newer standard.

Leasing equipment rather than purchasing it outright is also an option for those challenged with the high cost of investment in purchasing new digital transmission equipment. There are a number of companies focused on assisting stations with DTV migration-related equipment acquisition.

8 Invest in training

If the television station also will be a signal distributor, investment in staff training will be necessary. Identify the training needs as far in advance as possible and make provisions to train several people for the same roles.

There are a number of organisations that provide technical training in the field of digital television transmission and service. If the station has an in-house engineering department, then the training can be planned collaboratively between human resources management and engineering management.

If the station outsources its engineering function, diligence is necessary to determine the state of readiness on the part of the engineering company or technical services vendor. Engage these consultants early in the process and request certification that they are qualified to do the job. Not planning this step well can be costly down the line.



Image courtesy of Meredith Beal

9 Provide technical support for viewers

In addition to maintaining a call center to handle questions from viewers, consider making technical teams available for on-location customer support to assist viewers with the setup of the converter boxes. This is particularly helpful for elderly citizens and the disabled. This can be a great way to build brand allegiance and good will in the community.

Create “How To” videos showing how to set up the converter boxes. Post these on the station’s website, Facebook page and YouTube channel.

10 Do what you do best

If the television station will continue to be a content provider and not a signal distributor, then there will be savings from a reduction of transmission costs. There also will be an opportunity to take advantage of superior technology for storage and processing of content.



Image courtesy of Justin Simmons

By not having to spend funds to support the infrastructure, equipment costs and maintenance of signal distribution activities, this frees up resources to focus on what you do best – content. This will allow you to focus on the quality of your content and redirect funds to things like market and audience research, as well as increasing development budgets and exploring other programming opportunities.



About the Author

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About the African Media Initiative

AMI supports the development of a media sector that is professionally proficient, financially sustainable, technologically adaptable, and socially responsible so that it can best serve the public interest. For more information, visit www.africanmediainitiative.org

About the International Center for Journalists

The International Center for Journalists, a non-profit, professional organisation, promotes quality journalism worldwide in the belief that independent, vigorous media are crucial in improving the human condition. It administers the Knight International Journalism Fellowships. For more information, visit www.icfj.org