THE PROCESS OF DIGITAL MIGRATION IN SOUTH AFRICA

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A buzz phrase lately in the South African broadcasting industry is ‘digital migration’. To some it sounds quiet extra-terrestrial, and probably intimidating. The purpose of this article is to demystify it, its meaning, as well as the implications it has. To define it in simple terms digital migration is a process of moving (migrating) from the use of analogue forms of broadcasting to digital ones[1]. There are various reasons for this migration.
One cannot speak of digital migration without at least considering issues of convergence, which is another buzz word. We will not go into detail on the issue of convergence, but will merely define it. Convergence, in this context, refers to the synergising of different technologies to make them function on one platform. An example of this would be the Sony Playstation 2, which not only functions as a game, but also as a CD / DVD Player, and an Internet connector as well. We are now also faced with the advent of Mobile TV.
The process of digital migration was kick started in 2000 when the International Telecommunications Union (“the ITU”) set the process of digital migration into motion[2].

South Africa is a member of the ITU. The process of digital migration is also a very pertinent backdrop to preparations for the 2010 Soccer World Cup. The Department of Communications (“the DOC”) has, put in place, a programme to improve the quality of ICT in general, and sees this as an “invisible success factor to the 2010 World Cup[3].
The migration from analogue to digital (“the switch”) will not be an event, but a process. The switch is scheduled for 01 November 2008[4]. It would also be a process that would have to take the needs of all people into account. In urban areas, for instance, it would not be much of a challenge compared to the rural areas. These concerns and many others were raised in the Submissions on the Draft 1 Digital Migration of Broadcasting Systems Policy Issues Paper[5] issued by the DOC on 26 November 2004.
There are, however, advantages to the process of digital migration.
The other reason for South Africa to embark on this digital migration process is because South Africa is an affiliate to the International Telecommunications Union (ITU) which has recently set an international deadline of June 2015 for Africa and Europe to have migrated to digital broadcasting. [6]

This international digital migration deadline means that all broadcasters who would still be transmitting their broadcasting signal using the analogue technology would no longer be protected

from harmful interference of their broadcasting services. This harmful interference of broadcasting services could result in picture distortions and degradation to black images on a receiving television screen.

Furthermore the use of analogue broadcasting limits the availability of the radio / broadcasting frequency spectrum. The migration from analogue to digital would, therefore, imply that even if broadcasters were content with things as they are, governments have a powerful incentive to encourage the transition to digital. Digital migration will, in the words of Mr Paris Mashile, chairperson of the Independent Communications Authority of South Africa ("ICASA"), "mitigate the age-old argument for the regulation of the frequency spectrum: that the frequency spectrum is a scarce and limited resource"[7].

One of the advantages of digital migration is that television viewers, especially those with high definition television sets, would receive much clearer and sharper pictures provided by digital migration without the interference that some residents of built up areas or hilly terrain sometimes experience. Digital migration also offers a wide screen format and multiple language offerings per channel. Aside from the enhanced quality, digital migration allows for the transmission of a greater number of channels than traditional analogue. Further advantages of digital migration include, but are not limited to, freeing up the frequency spectrum, increased the amount of data that can be transmitted, the transmission and receiving of broadcasting data and signals on different platforms such as mobile phone television's DVB-h (Digital Video Broadcasting – handheld), and the consistency of data over longer distances.
On terrestrial networks, 6 or more services can multiplexed in the bandwidth provided for a single analogue service. One of the most obvious advantages of this is that South Africa's pluralistic society can benefit in that their different languages and cultures can be catered for. What seems to be the only concern is that people will be required to have set-top boxes in order to access these services. The many people who are not MultiChoice subscribers, and therefore do not have set-top boxes may be at a disadvantaged position. Unless of course, set-top boxes can be made to be affordable to many[8].

The abovementioned advantages do not mean that certain key issues should be overlooked. More than technical implications, digital migration will also have social implications. In the broadcasting value chain, we have the content provider, the broadcaster, and the receiver (the public). As we mentioned above, the issue of people who cannot afford the costly equipment that will be required, will have to be addressed.

This will be an exciting, yet challenging process. It is, therefore, imperative that all views be considered when implementation takes place.

The Digital Migration Working Group (DMWG) was established by the Minister of Communications in her 2005/2006 budget speech and it was given the responsibility to make recommendations to the Minister on the process of migration from analogue to digital terrestrial broadcasting services.[9] The DMWG was also tasked with developing South Africa's digital broadcasting strategy and establish timelines for the switchover from analogue to digital television and radio.
The DMWG came up with the following implementation phases of digital migration. The first phase, which has already started and will continue for the next two years involves replacing and upgrading network infrastructure.
The second phase deals with the migration of approximately 185 analogue sites to digital, this will take about 3 years, leaving both analogue and digital transmission methods running concurrently.
The third phase involves switching off the analogue signal, something which is expected to occur around 2015 and then adding further service to digital television such as high definition television channels, interactive services, multiple language options and electronic programming guides.[10]

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[1] www.doc.gov.za
[2] www.doc.gov.za
[3] www.doc.gov.za
[4] www.itweb.co.za
[5] ww.icasa.org.za/Manager/ClientFiles/Documents/Draft_Icasa_Response_to_DoC_on_Digital_M
[6] This was confirmed by ICASA's chairman Paris Mashile when he stated at the recent conference that " ..ICASA will do everything in its power to support the commitment made by the South African government to the International Telecoms Unions to ensure that by 2015" Itweb.co.za 6 February 2007 ICASA tunes into digital migration.
[7] See www.itweb.co.za/sections/telecoms/2007/0702061036.asp? S=Convergence & A
[8] See www.itweb.co.za/sections/telecoms/2007/0702061036.asp? S=Convergence & A
[9] The DMWG is constituted by the representatives from the Public and the Private Sectors within the broadcasting sector. See digitalmigration.org.za
[10] These phases were outlined in detail by Sentech's acting COO Frans Lindeque at conference held by the Business Zone on digital broadcasting in August 2006