



A New Era of Digital Television Broadcast in Mauritius

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digital broadcasting, quality, Internet, viewers

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ABSTRACT *Since the early days of television in Mauritius, it is now fifty years since the Mauritian population has been benefiting from analogue transmission with images and sound aired by the local broadcaster, the Mauritius Broadcasting Corporation. Already since 2006, Mauritius became the first country in the African continent to broadcast digitally in the form of digital video broadcasting (DVB) and as from mid-June of this year, local television broadcasting will be fully digital. This research paper assesses the change taking place in the field of digital broadcasting but assesses the different forms of broadcasting available in Mauritius. It also suggests that there is a need to integrate Internet-based television which is likely to be the next level of broadcasting while this trend will essentially depend upon the degree of sophistication of the user/public.*

1.0 Introduction

The Mauritian public television broadcasting undergoes a major change since 17th June 2015 with the elimination of analogue transmission that was effective until now [1]. This year commemorates the fiftieth year of television in Mauritius and as a means of marking a difference in transmission, television will go 100% digital from now on [2]. This is not a revolution as such but a major leap in broadcasting because Mauritius stands as the first country in sub-Saharan Africa to have shifted to digital broadcasting since 2006—much earlier than certain European countries, including France [3]. The Mauritius Broadcasting Corporation (MBC) will cease broadcasting analogue images that it was used to during the past fifty years to broadcasting entirely digital images and sound. This is in line with developments in information technology taking place in the country since the millennium with the intention of making Mauritius become an intelligent island while making breakthrough in technology.

1.1 A fairly sophisticated market

Mauritius stands as a fairly sophisticated market because the country has a Gross Domestic Product of \$9,715 per inhabitant and is considered as one of the richest countries in Africa [4]. This degree of economic wealth has been accompanied over the years by a consistent policy of education that has lifted up the masses from an average literate to a highly literate nation. The purchasing power of the population has improved over the years while making Mauritians become more consumption-oriented since the past thirty years.

In today's context, 92.8% of Mauritian households own television sets, 114% mobile phones and 17% or higher a computer and accessory per household [5]. This clearly explains that the average Mauritian is well-oriented to using information technology. This degree of sophistication has also moved alongside the quality of products and services provided to the consumer. Incidentally, entertainment and broadcasting had to go along with the degree of sophistication of the consumer.

1.1.1 Satellite-based terrestrial broadcasting since 2000

The first degree of sophistication regarding broadcasting comes from the acceptance of satellite-based terrestrial

broadcasting by the Independent Broadcasting Authority (IBA). This was an initial step to accommodate high quality transmission of images. Satellite television broadcasting was provided by two pay television companies namely CanalSat Maurice and Parabole Maurice—two broadcasters offering products licensed respectively from their French counterparts like Canal Plus France and Mauritian promoters [6]. Pay television was the first to offer high quality broadcasting and this quickly appealed to the viewers. To date, nearly 150,000 people subscribe to pay television through satellite transmission with 100,000 for CanalSat [7]. There has been a recent move when satellite television provided certain channels under high definition (HD), an international standard in terrestrial broadcasting.

1.1.2 DVB-T broadcasting since 2006

Taking into consideration the high level of competitiveness offered by private pay television companies, the local broadcaster, MBC, initiated digital video broadcasting-terrestrial (DVB-T) since 2006. Earlier, it provided three analogue channels (MBC -1965, MBC 2-1990, MBC 3-1994) with certain degrees of variability regarding quality transmission [8]. Usually, an additional antenna was required to watch an additional channel. The introduction of DVB-T was an advent in broadcasting since it followed the same technology as satellite transmission but with a lower degree of sophistication. DVB-T as satellite transmission requires a set-top box which is a device that transforms images into numerical digits which are eventually converted to high quality images like digital video disc transmission (DVD). By 2008, it was the standard that was adopted in more than 35 countries and over 60 million receivers deployed and in use [9]. There has been a possibility of increasing the number of channels, 6 as from 2006 to 17 channels currently thereby offering a larger viewing choice for television viewers and the possibility of having specialised thematic channels like cinema, cooking, sports, etc.

1.1.3 Internet Protocol Television since 2008

The diffusion of information technology in Mauritian households has been a key feature in bringing about a new mode of transmission of television images coupled with internet services. Mauritius Telecom, Orange, has followed a similar concept of broadcasting provided by companies in France like Bouygues Telecom, SFR among others

ers, that offer internet and television services under high quality transmission — normally coming close to 20 Mbps transmission [10]. Since Mauritius is a small island nation, a transmission speed of 300 Kbps on average provides efficient broadcasting of television through the internet using the Internet Protocol system which links television with internet and without the need for an aerial or a dish. My T is the company offering such a service ranging presently from 1Mbps-2Mbps with options like replay, television on demand, etc. [11].

1.2 The Impact of Digital Broadcasting

From this standpoint, it becomes important to find out the impact of digital broadcasting on Mauritian viewers. Presently, this might not represent a sea change for the viewer except that the whole broadcasting system has gone digital. There are certain implications for the viewer and these are briefly discussed.

1.2.1 Wider choice of programmes

The average viewer benefits from a greater choice of programmes than ever before. Generalist channels will exist but they are supported by specialised channels. For example, documentary channels like NatGeo Tv or Discovery Channel are highly appreciated as a good choice for the viewer.

1.2.2 High quality reception and satisfaction

Viewers benefit from high quality reception and satisfaction since analogue television could offer up to 625 pixel resolution. DVB-T offers a range of resolutions starting from the average 720x480i up to 1024x768i high definition resolution [12] [13]. Pay television offers up to 1980 image definition known as 2K with the opportunity of moving to 4 k.

1.2.3 The need to pay for premium viewing

Apart from viewing high definition television, there is a pay barrier that is imposed on viewers. Pay television charges subscription ranging from Rs 500 to Rs 2000. IPTV broadcasting offers a package ranging from Rs 1 000 to Rs 3000. DVB-T provided by local television is highly subsidised but there is a modest fee of Rs 150 monthly. (Mauritian rupees)

1.2.4 The viewer holds the "image"

Digital television offers a panoply of channels and viewing opportunities. Specialists in broadcasting state that it is now the time for viewers to have control and ownership over viewing and traditional broadcasters like national state-owned television might suffer from dwindling audiences. The consumer watches television actively and even interactively [14].

1.3 Challenges of Digital Broadcasting

Digital broadcasting may well represent a major advantage for viewers but it is affected by challenges from the outset. Analogue transmissions were limited to professionals in industry namely state-owned television broadcasters. These were the sole providers of images in the past in the same way as the professional press did it. With the flow of information technology at the societal level, there might be challenges worth considering. They are briefly explained below.

1.3.1 Diluted audiences

The first challenge concerns audiences that will vary from one television channel to the next. Despite the fact that national broadcasters believe that they retain the larg

est audience, this might not be true except for special events like the FIFA World Cup or the national elections. Otherwise, the viewer's choice is broadened and loyalty is almost threatened. The public is now assaulted by news and pretend-news from many directions, thanks to the now infamous "information superhighway" [15].

1.3.2 Increased competition

National broadcasters are facing competition in all parts of the world. Granted an almost exclusive monopoly over the most valuable content in the living room, cable and satellite companies have developed their products in a competitive vacuum, insulated from the pace and intensity of innovation that has transformed every other part of the tech industry [16]. Pay television and private channels "add salt to the wound" by offering more attractive programmes with a higher degree of flexibility. With low levels of censorship and premium offers like the "British Premier League" or the latest Bollywood or American movies, national digital providers face competition in the same way as private broadcasters.

1.3.3 Internet and lax regulations

Digital television may be of a great advantage with better images and sound but might face strong competition from the internet itself. Although key players like private television and entertainment companies charge fees, some internet engines provide free viewing for unauthorised material. Bollywood movies of the 1970s or the past are available at a click of the mouse on providers like "YouTube" or "Dailymotion".

1.4 Opportunities for Digital Broadcasting

This does not mean that the days of digital television broadcasting will be over. There are opportunities that are worth considering with the expectancy that the future is still alive. They are listed below:

1.4.1 Integrating DVB-T with the internet

Integrating digital television with the Internet is an option that all television broadcasters are choosing. The technical innovation over existing multimedia terminals with DVB and Internet access will be the introduction of MPEG-4 and MPEG-7 functionalities [17]. They use the internet address to promote their image and this allows viewers and internet users to keep in touch with them through the internet. Programme lists and developments are available from the Net.

1.4.2 New platforms for distribution-Television on-Demand

There is also the opportunity to integrate digital television with the internet in terms of providing television on demand (TVOD) which allows viewers to watch any important missed out programme. There is also the chance of watching a movie/programme at any time by paying per view although this mode has historically suffered from a lack of available network bandwidth, resulting in bottlenecks and long download times [18].

1.4.3 Sensitising traditional customers

DVB-T might be an accomplished fact for the technology-savvy person but something to discover for the traditional viewer or "laggard". This segment is likely to purchase new television sets which are Liquid Crystal Digital (LCD) or Light Emitting Diode (LED) and support very well-programmes aired by digital broadcasters [19].

1.5 Conclusion

This paper initially covered the aspect of digital television or DVB-T coming of age in a sophisticated society like Mauritius. There have been developments taking place like satellite, internet-based television and digital television broadcasting represents the needed change to providing greater satisfaction and choice to the viewers. Digital transmission will be the new tendency in the current and forthcoming media environment. It is not clear enough to say that this will shape viewing in the long-run as there are developments like Internet Protocol television (IPTV) that can shape tomorrow's viewing without the need for broadcasting through cable, aerials and transmitters. The switch from analogue to digital broadcast television, known as the Digital Television Transition, is a breakthrough in image transmission for society as it reflects the way in which society espouses sophistication and technology [20]. It acts as a base for digital transmission and is the "norm of the day" be it in Mauritius or any part of the world.

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