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THE CHALLENGE OF IMPLEMENTING INTERACTIVE CONTENT IN DIGITAL TERRESTRIAL ECUADORIAN TELEVISION

EL DESAFÍO DE LA IMPLEMENTACIÓN DE
CONTENIDOS INTERACTIVOS EN LA TELEVISIÓN
DIGITAL TERRESTRE ECUATORIANA

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RESUMEN

El artículo busca analizar cómo se encuentra el proceso de implementación de contenidos interactivos en televisión digital terrestre ecuatoriana, como una herramienta que permite aprovechar, no solo la calidad de imagen y sonidos generados, sino las nuevas formas de interactividad que estas ofrecen, en la que los usuarios pasan de ser televidentes a ser partícipes del contenido multimedia que generaran los medios.

El estudio recopila información que permite analizar el proceso de implementación de la televisión digital terrestre, mediante un análisis de contenido de carácter descriptivo, sistemático y cuantitativo de la información; un monitoreo de los canales de televisión ecuatoriana *Teleamazonas*, *Ecuavisa*, *RTS*, *Gama Tv* y *TC Televisión* en un período comprendido entre noviembre de 2016 y febrero de 2017.

Se concluye que, pese a que han transcurrido cuatro años desde que el Ecuador inició las emisiones de prueba de televisión digital terrestre, en algunas estaciones televisoras no han aprovechado el verdadero potencial que ofrece la plataforma, siendo nula en algunos casos la presencia de contenidos multimedia que permitan interactuar al usuario con el medio de comunicación. Por otro lado, se determina también que los canales de televisión ecuatorianos tienen una tarea pendiente en torno a la generación de contenidos interactivos.

PALABRAS CLAVE

Televisión Digital Terrestre; TDT; contenidos digitales; medios digitales; interactividad; multimedia.

ABSTRACT

This paper seeks to analyze how the process of implementing interactive content in Ecuadorian digital terrestrial television is, as a tool to leverage not only the quality of image and sound generated, but the new forms of interactivity they offer, in which users go from being viewers to become participants in the multimedia content generated by the media.

The study collects information to analyze the process of implementing digital terrestrial television through a content analysis of information, which is descriptive, systematic and quantitative; a monitoring of the Ecuadorian television channels *Teleamazonas*, *Ecuavisa*, *RTS*, *Gama Tv* and *TC Television* in the period between November 2016 and February 2017.

We conclude that, although four years have passed since Ecuador began emissions testing digital terrestrial television, some television stations have not taken advantage of the true potential of the platform, being zero in some cases the presence of multimedia content allowing the user to interact with the media. On the other hand, it also determines that the Ecuadorian television channels have a pending task related with creating interactive content.

KEYWORDS

Digital Terrestrial Television; DTT; digital content; digital media; interactivity; multimedia.

1. INTRODUCTION

In 2013 Ecuador began a regular broadcast of digital terrestrial television (DTT) in the Japanese standard with Brazilian adaptation (ISDB-T). This implementation promotes the generation of content, increases the image and sound quality and fosters the creation of interactive applications.

The key to leveraging the benefits of DTT would be to deliver content and offer services, which although may exist on other platforms, meet the needs of users (Fernandez, F. & Goldenberg, S. 2008).

Content, digital and interactive now, start from the logic of hyperlinks, using audio, images and data, separate or together. This makes programming in the field of production more complex, but much more interesting and appealing to the audience (Said, E. Flores, M. 2009).

In this sense, the present study focuses on investigating the contribution of DTT in terms of generation of interactive digital content, with reference to Ecuadorian channels such as: *Ecuavisa, Teleamazonas, TC Television, Gama Tv, Ecuador TV*, among others, which are currently in regular test transmissions.

2. OBJECTIVES

Analyze the implementation process of interactive digital content in the Ecuadorian digital terrestrial television.

3. METHODOLOGY

The research developed in this study is descriptive, systematic and quantitative, which allows an analysis of the implementation of interactive content in the Ecuadorian terrestrial digital television, in order to identify and explain interactivity as one of the characteristics of open digital television. A quantitative methodology is posed for information on how digital content are present in the DTT.

So, the opinions of DTT users were analyzed and compared with the application of 400 surveys to citizens of the Metropolitan District of Quito; it was made an interview directed to 4 media technical specialists and an expert on the topic of technology and communica-

tion. Also, a monitoring of 5 media which are open signal in order to record programming and identify the interactivity present in digital content.

4. CONTENT

Digital Terrestrial Television (DTT) is the consequence of applying digital technology, with a binary encoding in the television signal, which is then transmitted via terrestrial airwaves. These waves do without the need for a satellite or cable to propagate through the atmosphere, as received through conventional UHF antenna through a built-in TV encoder which decodes and outputs the signal that finally the public receives (Urrego, B. 2013).

In 2006, the Brazilian digital terrestrial television system (SBTVD-T) was established, as well as guidelines for transmission from analogue to digital (Decree 5.820). The new system consists of a set of technological standards for the transmission, reception and broadcast of signals and terrestrial digital images that enable the digital transmission of both high-definition (HDTV) and standard definition (SDTV) and simultaneous digital transmission fixed, mobile and portable reception and interactivity (Pérez, W. Hilbert, M.: 2009).

As Said, E. and Flowers, M. (2009) mentioned, the contents became digital and interactive, based on the logic of the creation of the so-called hyperlinks, using: data, images and audio together or separately, having consequently a greater degree of complexity when generating programming within the field of content production. However, this becomes more interesting and appealing to audience because it allows them to interact with the media directly and in real time.

Since its introduction, nearly four years have passed since Ecuador entered the digital terrestrial television, and gradually the regular television channels have adopted the digitization process, starting with test signals. Many of them, as *Ecuavisa*, *Teleamazonas*, *TC Television*, *Gama Tv*, *RTS*, show in some of their transmissions a transformation in terms of improved image and sound quality; however there is progress on the implementation of interactivity.

This is demonstrated by the present study, which recorded the programming of these channels in broadcast television during the period between November 2016 and February 2017. The study was conducted in prime time, in order to analyze digital content.

In reviewing the monitoring of programming of the channels mentioned, technical limitations of the test transmissions are shown. The first and most notable is the near absence of virtual guidance, as Ecuadorian channels have a limitation by providing this service to the viewer; this implies the absence of the program name, brief synopsis and broadcast schedule. One of the reasons is related to the program schedule, which is not accurate,

for example, on February 15, 2017, in the RTS channel, the reality show *America's Next Top Model* exceeded in two minutes its presentation (11:32). This television management spread to all channels, with certain exceptions. In the TV channel *Gama Tv*, it was found a better management of the grid, with almost exact times in advertising and programs. By contrast, other channels exceed or delay their programs one to two minutes. The only register of appearance of the virtual guide was made on February 13, 2017, in the program of *TC Television: En Boca en Boca*.

The item related to images shows an important development, since HD and SD signals are mixed in programs such as the news, creating a cut on the image in its aspect ratio, showing 4x3 videos, filled with informative slates on right and left sides to inform about the version of the channel in HD, for example: *Teleamazonas HD*. Only the current foreign programming can be seen in HD - 1080p.

Some final observations focus on the coincidence of programming for HD and SD versions. Both coincide 100%. Also, in none of the cases the option of supplementary audio (SAP) was found, which is widely disseminated to select the original language of the product or comments on sporting events.

Another result of monitoring was the lack of audio leveling in some programs of *Teleamazonas HD*, being the sound level higher by 25% in the HD version.

In addition to this, the image in all test channels has better quality than its SD version, with the particularity that the study was conducted with a standard antenna. This shows the potential of the new DTT model, which has been implemented in the country.

100% of channels do not offer any interactivity for the user. This aspect will be gradually implemented at the time channels include their own content with programming languages such as *Ginga*.

In the above explanations it should be added that citizens in Ecuador are not ready for the digital switchover yet, since according to the survey conducted in the Municipal District of Quito, 85% of people do not know about the subject, and out of the 15% remaining, only 7% have televisions capable of receiving digital signal, while the remaining 8% do not have TVs with IDTV technology, having two options, buy a new TV or buy a new decoder required to receive the digital signal.

In Rivera's opinion (2017), the issue remained only on paper in the speech made by the State for adopting the Japanese-Brazilian format, which meant just that, as part of the com-

mitment of adopting this new format, we, Ecuadorians, should also implement decoders within TVs or what is called a *middle Word* or software that acts as the operating system.

For its part, the National Polytechnic University began to carry out certification of these TVs that comply with the regulation, but in compliance with the standard there was only observation of frequencies, transmission range and signal pickup, etc., i.e., the technical part. However, it was not established as a requirement that television had integrated software like *Ginga*, being the case of *middle Word*, and not having the system incorporated, it is not possible, although I develop something, that channels can reproduce that interactivity (Rivera, 2017).

On the other hand, the problem also occurs when TV channels as *Teleamazonas*, which began to renew their equipment, have not yet managed to meet the changes required for HD programming. So says Jorge Niveló, chief operating officer of *Teleamazonas*, because "the cost is very high and investment too demanding and sacrificed for the channel, then you should absolutely change everything: the technical field, master control, the switcher in the cameras, change cameras in the studios, change satellite reception systems and the edition among other technical aspects».

Thus only satellite and wired TV offers interactive content, unlike DTT, which does not offer the real potential that can be achieved in Ecuador.

The implementation of the Terrestrial Digital Television (TDT), in different countries of Latin America that have adopted standards ISDB-T, which lead to the possibility of incorporating interactive applications through the use of a middleware named *Ginga*. To speak of interactive is to speak of the processes of digitalization (Tapia, et al., 2011) that are yet to be explored (Petit and Rosés, 2003: 26) because of the sole fact of incorporating technology that does not guarantee any innovations and neither does it motivate the use of the interactivity in television (Marquioni, 2012)

The case study of Colombian television usage isn't different to what goes on in Ecuador, as mentioned by Johana Perdonó, director of digital content at RTVC, there are other applications of interactivity for TDT, one of them is known as 'one way', «in which the viewer, through the remote control, can use a button to access the digital program guide (DPG), but it doesn't involve an answer, it only provides access to additional information of channels that is currently on screen». On other hand, it is possible to generate a second level of interactivity, which allows the user to respond and «can take place through a set-top box or

through televisions that have the option in the moment when the providers give them, and which consists in a MDP format, where there is a transfer of contents to mobile devices»

The Argentinean experience has turned into a «major option in which through [digital television] it is possible to access new contents, especially those for children, cultural contents and documentaries» (Mastrini, et al., 2014: 81)

In the case of streaming television, the digital gap widens even more because in services like Netflix, streaming content is offered upon request on the web. They also allow users to download, create playlists, rate content and view material on various mobile devices; thus breaking with the traditional logic of rigid TV content.

The ideal scenario is that the user interacts with the screen, search and obtain information, exercising their citizenship (Caffarel, 2007). Applications themselves do not guarantee interactivity, they depend on the decisions of television stations, regulatory policies and audiovisual industry in general (Cobo, 2005 and Goldeberg Fernández, 2008).

The challenge lies in the media, so as to generate new multimedia and interactive content, which are attractive to viewers and allow them to have a full balance between entertainment and digital content.

5. CONCLUSIONS

Digital content in test transmissions of DTT in Ecuador are limited because they only replicate the analog signal without providing added value. In addition, there is a lack of a platform to apply interactivity for viewers.

The low rate of televisions with IDTV in the country turns out to be one of the most complex problems because users must purchase new televisions, set-top boxes or a pay TV system to see new digital content.

Ecuadorian television channels should work in multimedia content, with the possibility of providing complementary metadata and support the information transmitted, without neglecting the possibilities of interactivity of content for users of non-pay television in the country.

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