Interactivity, numerical/synthetic images, Web 2.0 and digital television language

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Abstract-- The discussion about the deployment of digital television in addition to issues of standardization and systems, must also pass by the discussion of the creation of audiovisual content. This discussion points towards the definition of new languages and paradigms for semiosis. I understand that the artistic processes of filmmakers, videoartists and artists of art & technology, working with systems engineers, can point the way for the establishment of these new languages and semiotic representations of human thought..

I. INTRODUCTION

Apart from technical standards, Digital TV is seen grappling with research language, adapting the model proposed by television innovations technological systems. Thus, issues such as interactivity on the WWW and Web 2.0, interactive art and art & technology, digital images and synthetic images are presented and help to build paradigms of language interactive digital television. Some concepts inherent in these arrangements and artistic platform (found in Arlindo Machado, Janet Murray, Lev Manovich and Manuel Castells, among others [1]-[2]-[3]-[4]), such as interactor, user, immersive and interactive environment, and hypertext browsing, digital images and synthetic images become part of the world of television language.

I understand that the process of creation of languages is established in close relation with the standardization of technology platforms. Therefore, using the paradigm of the language divide in two phrases, the language of manners, or language usage interactor/user and the language of vehicles and platforms, or the language of production and transmission [5]. The languages of use and production is also contaminate and pollute the business model of broadcasting.

The arrival of players/platforms like mobile phones, i-Pods, web TV, i-Phone, blogs, vlogs, YouTube, MySpace, Flickr, Facebook and Twitter, for example, inserts another way of thinking about these languages. These new technology platforms enable the emergence of a new type of viewers/users, especially those who become producers of content and, therefore, also refers to a dichotomous question that was very present in the 80s: the global versus local . The maximum of this decade was "*think globally and act locally*. Today, I understand that this maxim can be reversed: "*think locally and act globally*." Understanding that, he means the assimilation of the viewer in the broadcasting business model and break the paradigm transmitter/receiver current TV, in the issue of interactivity.

Moreover, the procedures adopted by artists of art & technology, videoartists and filmmakers, in their seminal interactive and immersive work, inside and outside the Web, influenced and influencing the language of interactive Web TV and interactive digital television. This time, experiments such as Nam June Paik and Shunya Abe, Rejane Cantoni & Daniela Kutschat and Labloratório de Sistemas Integrados at USP, Yoichiro Kawaguchi, Gary Hill and Hideo Nakazawa, by the side of videoart and art & technology and David Blair (WaxWeb first video transmitted over the Internet, in 1993), Florian Thalhofer (13Terstock, interactive documentary, 2004), Jean-Luc Lamarque (Pianographique, 1993, CD-ROM, and 2001 for web) and the Brazilian group Preguiça Febril (Circ_lular, 2004), by the side of the Web, are milestones of language creation and search for other paradigms for the production of audiovisual content [6].

In other texts of mine, I drew attention to how the art world to help develop and improve programming for television, having as references the birth and development of videoart and works of art & technology. As seen in Doug Hall and Sally Jo Fifer [7], Arlindo Machado [8] e Walter Zanini [9] and Kathy Rae Hufman [10], cooperation between artists with knowledge of language and audiovisual aesthetics and engineers with technical knowledge of cybernetic systems, led to the creation of works and technical apparatus that would change the support of the arts and platforms. In this package, include mechanisms such as synthesizersvideos of double Nam June Paik/Shunya Abe and Steve Rutt/Etra Bill, which were the result of experimentation with computer systems, working at the limits of digital and analog signals [11]-[12]. Also included Yoichiro Kawaguchi, who from the 80`s were involved in the development of HDTV at SONY laboratories, and thus the creation of artistic forms digital systems from cyber self-flow generating mathematical, Gary Hill, also in the 80's, which went through artist residencies in the same SONY (1985), creating videos with cutting-edge technical apparatus, and in 90`s, Hideo Nakazawa, who passed by NHK laboratories and created works that helped in the development of language and technology of HDTV.

I postulate that in one instance, artist residencies in television stations contributed to the development of digital television and content production from these paradigms. In that sense, I understand that digital television go beyond the technical standardization of the pairs "digitalization and compression", "encoding and decoding", "transmission and reception", "modulation and demodulation". For me [11]-

[12], digital television has to be understood in two distinct fields: the field of technical apparatus of signal emission and the field of technology, content production (regardless of its issue).

This rapprochement between artists and engineers, of which I speak here, goes beyond the use of editing software and digital image manipulation, it is more inclusive, since it seeks to open the black box, in the means created by Vilém Flusser [13]. In the creation of tools for editing and digital manipulation, the software created is given in the hands of these artists to create their digital arts and languages; in the symbiotic integration (Paik/Abe, Cantoni & Kutschat/LSI-USP, Yoichiro Kawaguchi and Gary Hill/SONY, Hideo Nakazawa/NHK), the development of language and technologies propose a new understanding of black box opens.

II. INTERACTIVE DIGITAL TELEVISION

In terms of digital TV, the existing process so far, today we add new elements, which go beyond the variations of genres and formats, process elements of interactivity are engaged in each. In the control of an interactive television program, the responsibilities and tasks are divided among other fields of knowledge such as software engineering professionals for its realization. In this concept, the traditional flow of television production is compounded by the flow of production of software engineering, which brings to your television set steps (characterized in Deborah Mayhew [14]), from planning to use/final implementation, through proof of concept, prototyping and testing. Many of these processes are not the basis of audiovisual elements, rather, they are computational processes and synthetic images, which creates a new concept in production and delivery of content on television. This is because, for me, the interactive television program is more than a single channel audiovisual media (as was traditionally) is an application that in its production provides some parameters not considered by the audiovisual professionals, such as lines of code for the implementation of the interactivity, interface prototypes, as well as their concepts of usability in Nielsen [15]-[16].

Since at least 1993, Mark Gawlinski has predicted the assimilation of software engineering in the production of interactive digital television [17]. Recently in Brazil, Gil Garcia de Barros [18], in his dissertation, defended at the Escola Politécnica da USP, under the guidance of Marcelo Knörich Zuffo, cites in particular two aspects of usability: visual consistency and consistency of behavior, seeing that the use of visual interface within the application package is a major prerequisite for an interactive digital television.

The producer of audiovisual content should think about a new language, and not only in modes of production with a language based on current conventional television in that most of the time, the viewer is just a passive recipient of information. One of the main characteristics of interactive digital television is that the possibilities of interaction with which the viewer is confronted generate breaking the continuous flow of television programming. This break is closer streaming multimedia language than the language of the current conventional television. It is hypertext, with its links and associations, as defined by Janet Murray. Therefore, I see digital television in addition to television viewing as a means of transmission and production of isolated programs but as a set of content, programming and applications.

III. CONCLUSION

In conclusion, the interactive digital television is close to the process of expanded cinema, interfaces expanded art, Internet/Web and interactive installations. With the introduction of interactive digital television, a new learning becomes necessary, both from the viewer, in their language of media use, as the producer side, in their language production to the audiovisual field. And in an environment where the user starts to produce its own contents and replace it with third parties (who also become producers), languages for use and production mix. And it is this mix that will leave the language of interactive digital television. Given this, we can start talking about the emergence of a new language, which is made from the changes in language use and production of audiovisual content.

User-generated content and its transmission and reception through flexible and affordable systems allow more interaction in the model of broadcasting. And with that a great transformation in this model. Thus, the digital television system adopted in Brazil can also count on multidisciplinary elements for the development of new technical and aesthetic languages. I reaffirm what has briefed at other times, the advent of a new language brings about change in the representation that makes the human world, which leads him to create new semiosis. And in today's world, these representations and semiosis are mediated, in their great majority, of cybernetic systems, generators and synthetic digital images.

REFERENCE

[1] MACHADO, Arlindo. Máquina e imaginário: o desafio das poéticas tecnológicas. São Paulo: Editora da Universidade de São Paulo, 1993.
[2] MURRAY, Janet H.. Hamlet no Holodeck: o futuro da narrativa no ciberespeaco. São Paulo: Editora da Unesp e Instituto Itaú Cultural, 2003.
[3] MANOVICH, Lev. The language of new media. Massachussetts: Institute of Technology, 2001.
[4] CASTELLS, Manuel. A Galáxia da Internet: reflexões sobre a Internet, os negócios e a sociedade. Rio de janeiro: Jorge Zahar Ed. 2003.
[5] ROSA, ALMIR ANTONIO. Televisão digital terrestre: sistemas. Padrões e modelos. 2005. 303f. Tese (Doutorado em Comunicação e Semiótica) -

Programa de Estudos Pós-Graduados em Comunicação e Semiótica da Pontifícia Universidade Católica de São Paulo, São Paulo.

[6] Rejane Cantoni e Daniela Kutschat. OP_ERA. http://www.op-era.com
Kawaguchi Yoichiro:
http://individuals.iii.u-tokyo.ac.jp/~yoichiro/profile/profie.html
CIC_lular: http://www.pfebril.net/
Onewordmovie: http://www.onewordmovie.ch/
Pianographique: http://www.pianographique.net/
13terstock: http://13terstock.thalhofers.net/WEB-ENG/engine.html
WaxWeb:
http://jefferson.village.virginia.edu/wax/english/8index/g3/1/1a1a2a3.html
Nam June Paik / Shunya Abe: http://www.audiovisualizers.com/toolshak/vidsynth/paik_abe/paik_abe.htm
Steve Rutt / Etra Bill: http://www.audiovisualizers.com/toolshak/vidsynth/ruttetra/ruttetra.htm

[7] HALL, Doug and FIFER, Sally Jo (ed.). Illuminating Video - An essential guide to video art. New York, USA: Aperture/BAVC, 1990.

[8] MACHADO, Arlindo (org.). Made in Brasil: Três décadas do vídeo brasileiro. São Paulo: Itaucultural, 2003.

[9] ZANINI, Walter. Videoarte: Uma Poética Aberta. In: MACHADO, Arlindo (org.). Made in Brasil: Três décadas do vídeo brasileiro. São Paulo: Itaucultural, 2003. [texto originalmente publico no catálogo do 1° Encontro Internacional de Vídeo Arte, Museu da Imagem e do Som (MIS), São Paulo, de 13 a 20 de dezembro de 1978].

[10] HUFMAN, Kathy Rae. What's TV got to do with It? In HALL, Doug and FIFER, Sally Jo (ed.). Illuminating Video - An essential guide to video art. New York, USA: Aperture/BAVC, 1990.

[11] ALMAS, Almir. Televisão Digital: esta história não começa em 2007. Revista Adusp, nº 42, p.60-65. São Paulo/SP, janeiro de 2008.

[12] ALMAS, Almir. Televisão digital: quando chega a interatividade? In: NUNES, Pedro (Org.). Mídias Digitais & Interatividade. João Pessoa / PB: Editora Universitária da UFPB, 2009.

[13] FLUSSER, Vilém. *"A Filosofia da Caixa Preta* – Ensaios para uma futura filosofia da fotografia"*. 1983.

[14] MAYHEW, Deborah J.. The Usability Engineering Lifecycle: A Practitioner's Handbook for User Interface Design. Morgan Kaufmann, 1999.

[15] NIELSEN, Jakob. Usability Engineering. Morgan Kaufmann, 1994.

[16] NIELSEN, Jakob. Coordinating UI for Consistency. Morgan Kaufmann, 2002.

[17] GAWLINSKI, Mark. Interactive Television Production. Focal Press, 2003.

[18] BARROS, Gil Garcia de. A consistência da Interface com o usuário para a TV Interativa. São Paulo: Escola Politécnica da Universidade de São Paulo. 2006 (dissertação de Mestrado).