Mobile TV: Towards a
Theory for Mobile Television

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ABSTRACT

With people's successful adoption of mobile devices and the imminent change to Digital Terrestrial Television, the transition of TV to the emergent mobile scenarios is a foreseeable future. In this upcoming scenario viewing patterns and behaviors are defined by time dimension, place and social context. It is within these specifications that the transmission of personalized television through mobile phones is believed to have a tremendous end-user impact. In this doctoral investigation our aim will be to measure this aspect in a country where this emergent media is verifiable (Portugal). Our methodology proposes the apprehension of mobile television's (mTV) reality through fundamental social and theoretical assumptions, interviews with Portugal's mTV market's basic players and a statistical evaluation of Portuguese's mTV's viewing motivations and consequent satisfaction levels. We intend to base our theoretical framework on the media gratifications theoretical perspective and through a laboratory sessions with three samples of mTV users/adopters in Portugal. Through this approach we believe it is possible to apprehend mTV's usage and current reality in Portugal and possibly its foreseeable future.

Categories and Subject Descriptors

H.4.3 [**Communications Applications**], H.51 [**Multimedia Information Systems**]

General Terms

Measurement, Experimentation, Human Factors, Theory.

Keywords

Mobile Television, Expectancies, Satisfaction Levels, Consumers, Portugal, Media Theory

1. INTRODUCTION

Today, wireless communication networks are believed to be one of the fastest evolving issues in contemporary societies. From a media theoretical perspective McLuhan's historic globalization desire is defined through today's general access to media content and technological devices to consume it without geographical boundaries. Therefore, it is understandable that the Mobile Phone is considered generally as the trademark of contemporary society. In Innis's terms we could say that it (this device and its impact) defines the society that we live in [1]. However, when we regard the possibility of consuming television through a mobile phone, it is a whole different story. First, it is important to understand that we are talking about the convergence of two successful case studies –Television and this medium's consumption through an enhanced end-user mobile media experience in a cell-phone. In addition, with the deadline for the implementation of DTT (Digital Terrestrial Television) fixed in 01 of January 2012 and the progressive adoption of DVB – H, mobile television (mTV) is defined as a fundamental "killer application" of TV's near future. We also have the ever-more present use of YouTube to watch mTV. In this study we consider both of these realities as mTV. So, we could say that there are some issues to solve regarding the sources and forms of diffusing this type of television. Nevertheless, besides these issues, we regarded that most of the current trails and academic research are based on mere technical analyses. And, to our understanding, this aspect represents a serious problem because, in a world where wireless telecommunications emerge quickly, overlooking data provided by early adopters may be regarded as a problematic issue. Why? Well, through the media studies' long history of researching and evaluating new mass media, one basic idea has always emerged – early end user acceptance is precious. Therefore, our perspective is of a more social order because we believe: "it's about the people (…) not just the technology"[2].

2. BACKGROUND

Today, several realities are associated to the term: *Mobile TV*. Nevertheless, they all mean the same: television diffused through mobile platforms. When we look at the basics - these television contents are based on live broad-cast emissions (Pull) and Push – and – Store for a quasi PVR (Personal Video Recorder) television consumption experience. When it comes to

methods of delivery we have satellite (DMB, GPRS) cellular operators (UMTS, CDMA) and terrestrial (DVB-H and WiFi) [3], [8]. When it comes to the delivered television content, through the revision of the literature, we observed that the grids are basically completed with the re-emission of recycled broadcast television programs. The same thing happens in Portugal – the country where our doctoral investigation shall be realized.

We believe that consumers may not be satisfied with this issue. However, this is nothing new. Historically, we can regard that for example: "the railway did not introduce movement, or the wheel or road (…) but it enlarged the scale of previous human functions, creating new kinds of work and leisure" [4]. Therefore, we believe it is safe to assume that an experimental phase is needed when any new media is developed. We also believe that mTV is in this phase [5]. It still has unsolved identity issues [6], [7]. Currently, the mTV market is defined through the following realities of re-used broadcast television [5]:

- **TV in your Pocket**

It is too pure and simply rebroadcast the television programs that are emitted first on conventional television programming grids [5]. If we look at contemporary mTV corporate options, we may observe that this concept can be characterized through the inherent idea of a promise of an individualized, personal television experience but without specific mTV content [5]. The user may personalize his television experience but the basis will always be the conventional reality. This kind of mTV rebroadcasting of regular television linear content is defined as: "Simulcasting Linear TV" [7]. Still in this topic, we can also retrieve the concept of "Repurposed TV" where existing content is recycled for the mobile medium with minimal adaptation – basically it is the same content as what is aired on the regular TV grids; however, counterparts are split up into smaller segments or are cropped to better suit the smaller screens of mobile devices [9].

- **TV anytime, anywhere**

This concept's basis can be observed the release of the television viewers from the constraints of the obligation of consuming television in a specific place. This theoretical approach intends to highlight the consumer's ability to control their medium to an extent in which they may choose how, where, when, and what kind of TV content they consume [10].

- **TV on the Go**

It promotes a "fast-food idea" of television. Therefore, there is the intention of emphasizing the differences among mobile and traditional TV viewing [5]. We agree with this perspective, however. Why? Because when we think about mTV we can observe that mobile devices are operated at "arm's length" and continued viewing can cause eye discomfort and eyestrain [11]. Therefore, we also consider that television content for this type of television must have a short duration. This kind of content is mobile specific – "a necessary final step in the evolution of mobile television" [9]. Shani Orgad considers that the mobile phones' small screen, shorter usage duration, noisier usage environment should lead to a new visual grammar that will eventually be expressed through mobile specific content [5].

- **Enhanced TV**

In a similar mode as the one that happens with interactive television – this perspective is what some authors define as an "out of the box" issue [12]. In simple terms this proposal is based on the interactive possibilities that characterize television – it regards the potential creation of innovative manners of including users and tailoring media contents to satisfy individual needs[5], [12]. In what regards specifically mTV there has been a large discussion on the potential that this reality has in providing a platform for user generated content [5].

Through these various stages, we feel that we are obliged to ask: "Does mTV enhance a new television experience?" Or, is it possible to conclude that: "Conventional television interaction and consumption habits are not enhancing a new television experience"? As an end-note, and in an attempt to answer these questions, we can say that currently the specificity of mTV content is the main discussion. However, currently linear content is an essential reality in the present and future of mTV content because currently this kind of television is regarded in a very McLuhanian manner – as an extension of the classical media. Or as a parallel media reality that exists side by side with classical media [4]. However, one thing is sure: plenty of issues are still unsolved and therefore this reality is still unclear.

We believe that television diffused through a mobile phone has should apprehend the unique benefits of this gadget [13]. Therefore, we believe that with the application of this kind of TV, consumers might not be satisfied with mTV's current reality Why? When we consider the specifications of mobile phone use we can see that they are fragmented and, therefore, their media consumption desires are individualized and divided through various fixed and mobile media platforms [14], [15], [18]. When it comes to its applications and content, we believe that mobile phone user's demand interactive, flexible, enhanced, personal, and context-aware media realities [7]. And the same thing occurs with mTV [9]. So, we believe that we can define these aspects as: possible mTV expectations. So, can redistributed mTV content satisfy these needs?

3. THEORETICAL PERSPECTIVE

When we think about the motivations in which we can support the potential desire for "Mobile TV" (MTV), we believe it is important to look at this issue from a theoretical point of view. Therefore, we will observe this topic through the "Uses and Gratifications Theory" (UGT). The justification for the use of this theory is due to the simple fact that we suggest a theoretical approach based on investigating an active audience with their media and the UGT perspective considers this reality [11]. Its theoretical approach intends to understand consumers' motivations and concerns in the context of media use. We approached this theory through previous investigations that we believe can define the mobile phone's current converged reality – Television [11], [19], [27], [26], [28], Internet [20], Digital Television [23]. Internet, Computer Mediated Technology [22], [24] and Cellular Phone [29], [21]. However, we observed that there does not exist any UGT study that investigates the "Mobile Television" (mTV) reality. Thus, this aspect gave this investigation the desired originality and the desired scientific contribution because we believe that we can expand this theories' theoretical approach by including mTV reality.

As an end-note, we believe that it is important to state that the selected UGT based studies all indicate that non-tangible issues (of emotional nature) are, in fact, the most important elements regarding the expectations that consumers have of their

media. This aspect is fundamental to develop this doctoral study's inquires for the selected samples. Through the choice of the UGT theoretical concept, we observed that its application is going to help this investigation understand "how" and "why" consumers use their cellular phones to watch television. This aspect leads us to our investigation methodology. These aspects shall be regarded in the following part of this paper.

4. METHODOLOGY

This investigation will have a fourfold perspective that is divided in the following phases:

4.1 The revision of the literature

In this part our main intention is to identify the problem – mobile television end-user expectancy and acceptance – and explore it through various theoretical perspectives. Since mobile television (mTV) literature is scarce, we will retrieve all the important media and social academic investigations that are believed to be fundamental. We shall start through McLuhan's perspective. We chose this approach because he was the first theoretician to identify the concept of the contemporary "active – audience". He implied that it desired constant connectivity and communication without any geographical boundary concern [4]. Since we are focusing on the social apprehension of a wireless technology and its progressive social changes, we shall also retrieve other social academic analyses.

Given that we are evaluating the consumer's mTV interaction, we selected the Media Effects Theory. The reason for this selection is because we will study mTV's effects on its consumers. However, as expressed earlier, we also intend data regarding end-user expectancies and satisfaction levels towards mTV consumption, the Uses and Gratifications Theory (UGT) suits this objective perfectly. This sub traditional premise of the media effects theory focuses on investigating the motives behind the selection of a certain mass media by consumers [11]. This theory also allows an experimental or quasi-experimental approach where the manipulation of the evaluated data to respond to the purposes of discovering motives and media selection patterns is possible [11]. And since this investigation includes a laboratory phase, this theory's perspective is necessary for the apprehension of the consumer's expectancies and satisfaction levels towards the use of mTV. Besides this academic perspective, we intend to consult current academic journals, market reports and Whitepapers. This way a multidisciplinary theoretical perspective is always guaranteed.

4.2 Data analyses of previous mTV user studies

Since we are approaching an emergent technology in the media corporate scenario, we believe that it is important to analyze end-user studies conducted through mobile television trails. These investigations might help us apprehend the contemporary "Mobile Television" (mTV) reality from the market's perspective. However, in these scientific productions all of the narrated trails are industry driven events and thus, these studies results must be analyzed with caution. Nonetheless, and since we do not believe that this data may complete an mTV market perspective, we also intend to conduct semi-structured interviews with "Mobile TV" Channel/Project and mTV distribution Directors/ Project Managers. This leads us to the following investigation moment.

4.3 mTV market expert session of interviews

The potential lack of professional based data regarding mTV will be completed with other sources of information – experts in the field of mTV, for example. We believe that this approach is important to apprehend the mTV panorama. Therefore, we selected a panel of mTV experts that will be composed of two types of experts – Portuguese Television and TV Production companies (RTP, SIC, TVI and Produções Fícticias) as well as professionals that are responsible for wireless networks companies (TMN, Vodafone, Sapo – Sapo Mobile and Optimus). The causes for the selection of these experts lies in the fact that when it comes to mTV content production and progressive emissions, only the referred national televisions have ventured in this emergent market. Evidently the wireless companies are responsible for the support of these mobile emissions. Besides this corporate reality we might also include interviews with those experts regarding mTV that have demonstrated their expertise through academic and scientific publications in the fields that we are studying.

4.4 Laboratory evaluation of mTV interaction

We believe that the previous research moments shall provide us with the necessary elements to develop two laboratory sessions with end-user samples. Thus, for these phases we shall select three samples of mTV users composed by teenagers, young adults and middle aged people. We estimate that we may need at least 200 individuals. Through these heterogeneous samples we believe that a general apprehension of Portugal's mTV reality is possible. In the first part of the Laboratory sessions, we shall consider what variables (expectancies) may be defined as: unique expectancies for mTV consumption. So, before the first mTV's interaction moment, we will apply a questionnaire with closed questions based on estimating expectancies. These evaluation elements will result from previous UGT investigations regarding mobile phones, television and the Internet – technical and media elements that are converged by current mobile phones and progressively mTV. After this first evaluation moment, each user shall watch a previously prepared current national mTV applications session with programs that reflect its current market offer in Portugal. The TV genres that will be evaluated are news and entertainment programs that are broadcasted through mTV emissions and other contents that have been downloaded previously to the mobile phone that we will use in these sessions. After this interaction moment, we shall apply to each user a second questionnaire to apprehend data regarding the satisfaction levels of the previous expectancies. Thus, through this approach, we believe we will outline mTV's unique expectancy variables. In both of these evaluation moments we will apply a nine point Lickert Questionnaire starting with – "Strongly Disagree" and ending in – "Strongly Agree". Since we are dealing with emotional aspects, we will also apply an Osgood Semantical Scale in both of these evaluation moments to observe if a shift of the end-user's opinion occurs. All collected data from these sessions shall be statistically evaluated by SPSS statistical software. Since we are still in an initial phase we can include a similar mTV end-user evaluation moment in an exterior environment thus excluding any eventual bias in the proposed investigation.

5. CONCLUSION

As an end-note we could say that mTV assures new, engaging and customized promises of television experience. In our investigation we will attempt to explain how this reality will

occur in Portugal and evaluate mTV's usage and current reality from the end-user's perspective. Through this approach we consider that we will achieve an identity of the Portuguese national mTV market from the end-user's expectancy perspective and see if the current offer is satisfactory. Thus, we can propose some changes in this reality. Another foreseeable conclusion resides in the fact that mTV will be considered a parallel market regarding the national broadcast TV. Besides these points we also consider that an understanding if mTV enhances the cell-phones specifications or the medium's characteristics will be accomplished. Through the selected end-user based approach we believe we will apprehend the unique dimensions of the consumption of this type of TV in Portugal and thus expanding the UG theories' development. However, since this paper represents a doctoral investigation that is now at its beginning, these aspects have yet to be proved through the scientific approach that we intend to develop in this study.

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