ISCTE Business School
Instituto Universitário de Lisboa

SMART TVS:
THE NEW AGE OF TELEVISION AND ADVERTISING

João Miguel Costa Ceriz

A dissertation submitted as partial requirement for the conferral of the degree of MSc. Marketing

Supervisor:
BSc Electrotechnical Engineering, MSc Marketing Management Rogério Canhoto, Guest Professor in ISCTE-IUL, INDEG Business School

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– Lombada –

Resumo

A televisão teve, ao longo de toda a sua história, um papel preponderante na cultura e economia mundiais. A sua importância reside no seu potencial enquanto veículo de informação e entretenimento, mas também de promoção para as marcas, que foi, aliás, a sua principal fonte de receita ao longo dos anos. Com o lançamento das Smart TVs, a publicidade na televisão sofrerá uma grande revolução graças à união entre TV e internet, criando um novo mundo de inovação e tecnologia para o qual este estudo abre as primeiras portas.

O estudo é constituído por uma revisão histórica e literária, seguida da elaboração de um estudo exploratório qualitativo a 12 especialistas internacionais da indústria da publicidade e da televisão. Dessa pesquisa concluiu-se que uma grande mudança irá acontecer, mas de forma gradual e progressiva, alterando-se alguns dos principais paradigmas atuais da publicidade na televisão tais como a capacidade de avaliação de resultados e a segmentação.

Posteriormente concluiu-se que a futura publicidade na televisão fará uso de aparelhos complementares à TV para melhorar a experiência e impacto no utilizador. Privilegiará também a componente social e interativa da publicidade, assim como a personalização dos conteúdos provenientes de ligações on-air e online.

Finalmente concluiu-se que alguns dos principais papéis dos elementos da indústria irão mudar sendo os anunciantes e os canais de televisão os menos afetados, ao contrário das agências que terão forte necessidade de adaptação e dos produtores de TV que sairão fortalecidos graças à oferta de soluções publicitárias para as marcas.

Palavras-chave: TV advertising; Smart TV; Connected TV; television; TV history; future advertising; consumer behavior; technology.

Classificação JEL: M31 - Marketing; M37 - Advertising

Abstract

Television had, throughout its history, a leading role in the world economy and culture. Its importance lies in its potential as a vehicle of information and entertainment, but also of promotion for brands, which was its main source of income over the years. With the launch of Smart TVs, advertising on television will suffer a great revolution thanks to the merger between TV and the internet, creating a whole new world of innovation and technology for which this study opens the first doors.

The study consists in a historic and literary review, followed by the elaboration of an exploratory qualitative research to 12 international experts from the industry of TV and advertising. This study concluded that a big change will gradually and progressively happen, by changing some of the major current paradigms of advertising on television such as the results measurement and targeting capacity.

Later it was concluded that the future TV advertising will make use of complementary devices others than TV, to enhance the audiences' impact and experience. The social and interactive component of advertising will be valued, as well as the customization of content coming out of on-air and online connections.

Finally it was concluded that some of the main roles of the elements of the industry will change being advertisers and broadcasters the least affected, unlike agencies that will have strong need of adaptation, and TV producers who will be strengthened through the delivery of advertising solutions for brands.

Key words: TV advertising; Smart TV; Connected TV; television; TV history; future advertising; consumer behavior; technology.

JEL Classification System: M31 - Marketing; M37 - Advertising

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Thanks to the universe, the chaos and the chance,

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"The slow one now will later be fast, as the present now will later be past"

Bob Dylan[1]

1. Introduction – "*Season Premier*"

Born in the 30's, television has become over the decades more than a technological apparatus to assault the habits and behaviors of the entire world population. Around it, a market was born, fueled mainly by advertising, motivating large investments and an unparalleled economic and social impact. The television has not always been the same, however, since a few years after his appearance until today, remains the most popular medium to the public and, consequently, to advertisers. In 2010, by the hand of some consumer electronics manufacturer's companies (CEM), a big change started in the history of TV. Two of the biggest mediums ever, held hands: Internet and Television, giving rise to Smart TVs or Connected TVs (synonymous terms).

The possibilities of change in the TV market are immense, particularly those related to advertising. These new TVs are not yet the most popular around the world but are having in the first two years of adoption (2010-2012), an incredible success in the market with a huge penetration[2]. Also, the developers started producing applications and other alternative kinds of commercials to these new TVs, what suggest that the advertising market will react and respond to this technological evolution. There were several different moments in the TV and advertising history fueled by many different factors and Smart TVs appear to be taking the next big step in the history of TV advertising.

1.1. Research Objectives

There are significant signs that new times for TV advertising are arriving. Those evidences were deeply explained in the following chapter creating the need for further investigation and understanding about the characteristics of that change. TV advertising has been mostly the same in content and objectives for the last decades that is hard to imagine how the traditional paradigms of TV will look like in the future. Knowing this, this study has as a main objective: to increase the understanding about the impact that smart TVs will have on TV advertising.

[1] In the song "The times they are a - changin'".
[2] According to Futurescape (2012), in Europe there were 4 Million connecter TVs in 2009. That number is expected to grow to 47 M in 2014.

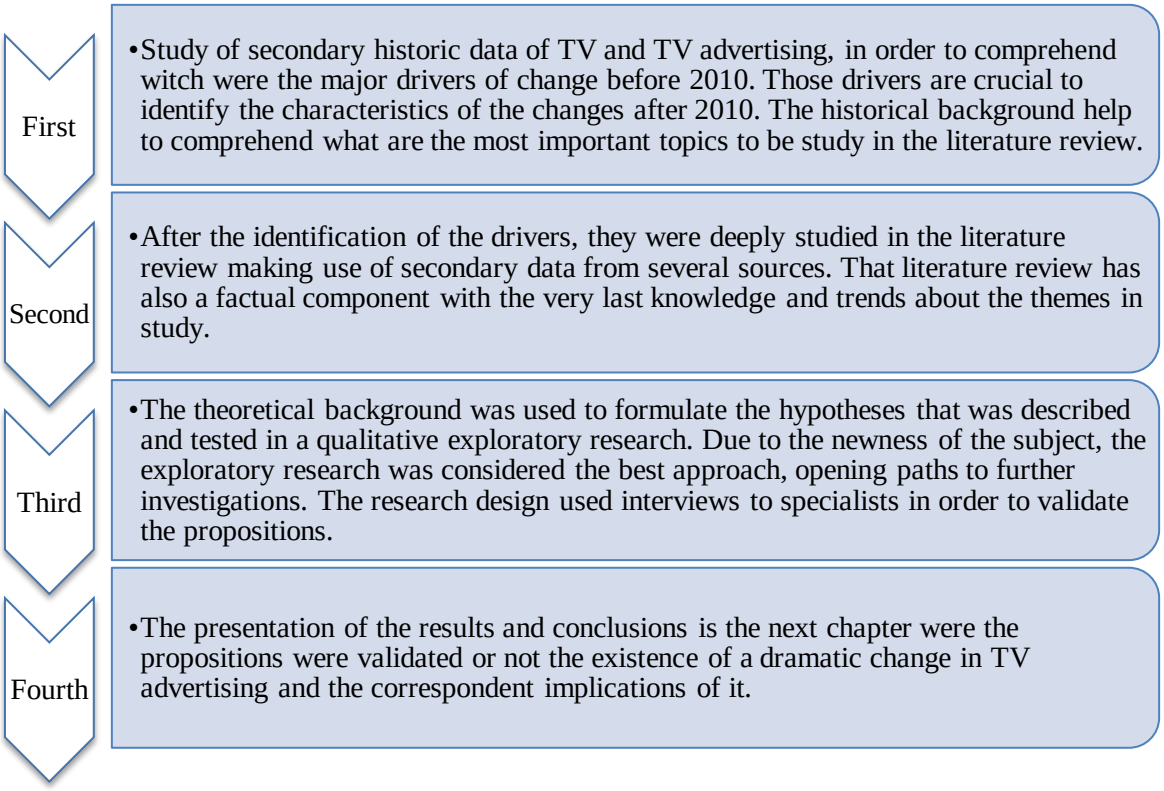
That main objective can be divided in secondary objectives that pretend to increase the understanding about:

- The kind of changes that will take place.
- The main characteristics of the future smart TV advertising.
- The implications of those changes on the market players.

It's also important to explain that this study did not enter in several areas such as: "when will happen the change"; "what are the deep implications to the consumers"; "what are the deeply implications to the broadcasted TV and the traditional commercials"; "what are the implications to the online marketing", among others. There are several relevant themes to study besides the one approached in the thesis. However due to the scarcity of literature and general knowledge about the theme, it was impossible to approach every area, being chose those considered more important.

1.2. Structure of the study

I order to accomplish the objectives described before the following structural approach was used to guarantee a strong logic, coherence and consistency.



1.3. Field of research

The proposed research is qualitative and has an exploratory nature. In order to accomplish the research objectives a list of propositions has been made from the knowledge extracted from the literature review and were later tested in interviews to industry specialists. Those specialists were chosen based on the most important industry players according to (Parry, 2011). To the Parry's model was added the Consumer Electronic Manufacturers (CEM) due to its increasing importance in the Smart TV's market (IDATE, 2010). Interviews were conducted to announcers, agencies, networks and CEMs. The conceptual area the study has the objective of identifies and understands the implications of the Smart TV in the future of TV advertising.

1.4. Research importance

There are evidences that the Smart TV's are going to cause an impact in the TV advertising market but, however, due to the very innovative nature of this theme, there aren't many researches about it. Furthermore, according to same opinion leaders (Sunyer, 2011), the companies that are able to secure a key position in the smart TV market could potentially become the dominant power in the next television revolution as smart TV gradually replaces traditional television. In fact, the knowledge about such change can be very important to the industry stakeholders such as the announcers, the audience, the developers, the networks, the agencies and the CEMs. This study also pretends to be relevant in an academic way as it improves the awareness of this theme creating a deep and relevant approach and, above all, a study about a very early phenomenon that is consequently very hard to study. Academically, this study also opens several doors to further researches and investigations.

In resume, the scarcity of existing research and the great potential value of the knowledge about this area were the main reasons why this study was initiated.

1.5. Considerations

To initiate this study there were a couple of terms, definitions and assumptions that had to be considered and defined. In order to avoid mistakes, the following topics will explain the meaning and the proposed understanding of some crucial points[3].

1.5.1. Definitions

Audience: population or target group viewing a television program or a TV commercial.

Broadband: refers to a telecommunications signal or device of greater bandwidth, in some sense, than another standard or usual signal or device (and the broader the band, the greater the capacity for traffic).

Broadcast: is the distribution of audio and video content to a dispersed audience via any audio visual medium.

Smart VS Connected TV: In this study both terms were considered synonymous. Generally both words are used in the same way, the reason why there are two synonymous terms is related to the CEMs companies[4]. Smart TV is also referred as "Connected TV" or "Hybrid TV", (not to be confused with IPTV, Internet TV, or with Web TV). The terms is used to describe the current trend of integration of the internet and Web 2.0 features into modern television sets and set-top boxes, as well as the technological convergence between computers and these television sets / set-top boxes.

Smart TV VS Internet TV: while "Internet TV" refers to the changeover from traditional broadcasting to the use of the Internet to transmit video, smart TV instead emphasizes the greater value that the openness and interactivity of the Internet brings to viewers. Besides more flexible viewing services and richer content, smart TV can also provide non-video entertainment services such as sophisticated games or participation in TV show voting activities. Even more importantly, smart TV can be used for purposes that go beyond pure entertainment, such as video calling, gaming and even home security and medical care.

---

[3] Definitions from Wikipedia (2012)

[4] Smart TV is a term that became popular with Samsung and Connected TV with other Consumer Electronic manufacturers such as LG and Sony.

The term **television** and the abbreviation "**TV**" were used several times over the course of this work and with different senses. It is important to take into account that it may refer to the device or to the media. In the case of the case of media, this includes not only the equipment, but also the TV content available in other devices. I.e. in the phrase: "TV viewing habits have changed", the meaning is that the viewing habits have changed regardless the device.

1.5.2. Assumptions

The Smart TVs adoption all over the world is going to continue like the most recent studies indicate. That's the reason why the knowledge about the changes in TV advertising is considered so valuable.

It is considered throughout the thesis that the incredible success of sales and the massive production of TV content and software relating to smart TV ' s, indicate that these will continue to be adopted globally.

Consequently, it is assumed that the advertising market will continue to make use of the new TV features to achieve its purposes as it made before. That means that more changes in the way companies advertise on TV are expected.

1.5.3. Other considerations

The study consider the period before 2010 as the past of TV advertising history, the period between 2010 and 2012 as the present were the smart TVs were launched and the period of time after 2012 the future of TV advertising.

Due to the fact that the discussions about this theme are so recent, there isn't many data available so it was impossible to focus on a specific geographic region. Instead, the criteria to choose and compare data were the similarities in the cultural and economic patterns. Knowing this, North America, Europe, Australia, Japan and South Korea were considered comparable countries concerning the data collection and processing.

Also a consequence of the innovative character of the theme addressed in this thesis is that several online sources had to be used since they are where the most recent information is. One of the most used references was Wikipedia. Many recent reports

and independent audits[5] classified the Wikipedia as being as accurate as British Encyclopedia. Furthermore crowdsourcing is the best tool ever produced to the knowledge dissemination, creation and reproduction, and it's a waste and a mistake to disapprove it or ignore it. Since the beginning until the end, in this dissertation, Wikipedia was used as a valid secondary source. However, that has not inhibited the critical reading of the information there.

Finally, it will be considered that the drivers of change of TV advertising are the same from the past, present and future. The state of art of each driver is in constant change; however they continue to have influence. In 2012 the main booster to the revolution in study was the technology with the device "Smart TV", but other drivers of change that were study in literature review keeps a crucial influence.

[5] http://www.ted.com/talks/lang/en/jimmy_wales_on_the_birth_of_wikipedia.html

"If you would understand anything, observe its beginning and its development."

Aristotle

2. Historical Background – TV and Advertising

With the propose of study how the advertising on TV is changing after 2012, it's crucial to look back to the history and understand how it evolved before 2010. In the next topics, it will be identified the key moments in history and the drivers associated to them. The way change happens and the way TV advertising evolved, are crucial areas of study also in order to identify the drivers of change. Those drivers of change will be later used to deep research in literature review.

Over the years TV has been the most important mass media and one of the very best tools to the companies to communicate. The technology changed and the audience and its behavior too, but they still evolving and there are evidences that a new era is about to begin.

2.1. Early History 1930 – 1950

For decades before its invention, something called television had been part of science fiction stories. By the end of 20's and beginning of 30's the imagination came reality. The firsts of TV, so called 'early history', are the very beginning of the device that changed the world.

2.1.1. First TV set and broadcast

Early approaches to the TV set were based on mechanical devices using a kind of moving peephole that focused light reflected from a scene on a photocell. The world's first public demonstration of a mechanical television was in Scotland by John Logie Baird (1926). However, the first all-electronic TV programming was launched by BBC[6] from Alexandra Palace in London in 1936. In that summer, the Berlin Olympic Games were televised by Telefunken using RCA[7] equipment (Smith, 1998).

[6] The British Broadcasting Corporation (BBC) is a British public service broadcaster headquartered at Broadcasting Housein the City of Westminster, London. It is the largest broadcaster in the world, with about 23,000 staff.

[7] RCA Corporation, founded as the Radio Corporation of America, was an American electronics company in existence from 1919 to 1986.

In the United States, four people are given credit for major inventions leading to television: Philo T. Farnsworth, Allen B. DuMont, Charles Jenkins, and Vladimir K. Zworykin. Their ideas were putted into development and the official launch of television in the United States was telecasting parts of the New York World's fair in 1939 (Encyclopædia Britannica Online, 2012).

Illustration 1 - Popular "tabletop" TV

Source: tvhistory.tv

The first TV receivers had 13 cm (5 inch) screens and black and white pictures. It costs about half the price[8] of an automobile. As things picked up, new, less expensive TV sets were introduced, including the popular tabletop version (in Illustration 1).

2.1.2. First TV commercial

Two years after the first broadcasted content born the first TV ad in the history of advertising. It went to air on NBC's WNBT[9] at 1 July 1941. The company was Bulova® Watch and took place before a baseball match between the Brooklyn Dodgers and Philadelphia Phillies – Illustration 2. The ad featured a Bulova® watch displayed over the map of the United States, while their slogan "*American runs on Bulova® time*" resonated via a voiceover. The Bulova® Watch Company chalked out 9 dollars for a 20 second spot and went down forever as the first TV ad in the history of both the world and U.S. television advertising according to (History of TV, 2012). In February 2012 a 30-second TV spot during the Super Bowl, costs according to Reuters, 3.5 million dollars in average.[10] According to Barclays Capital (2012), TV could reach $60 billion in ad spending in 2012.

Illustration 2 - First TV ad

Source: tvhistory.tv

When World War II (1939-1945) ended, 70 TV stations immediately went on the air in USA. Things expanded rapidly until the number of available TV channels VHF[11] wasn't enough. In 1952 the Federal Communication Commission (FCC)

[8] Full list of TV prices from 30's to 50's in appendix 2.
[9] The National Broadcasting Company (NBC) is an American commercial broadcasting television network and former radio network headquartered in the GE Building in New York City.
[10] Video Data Base with 2012 Super bowl commercials in http://www.superbowlcommercials2012.net/
[11] Very high frequency (VHF) is the radio frequency range from 30 MHz to 300 MHz.

launched UHF[12] television providing place for 2,053 stations providing conditions to the beginning of the golden age of TV. Thus, the rapidity with which television captured the public imagination—combined with surveys showing that brand recognition levels were higher than in radio—meant that television evolved as a genuine mass medium, providing sponsors with an unprecedented means of reaching the consumer (Williams, 2003).

2.2. Golden Age 1950 – 1990

The so-called "*Golden Age of Television*" started in the 1950s when television began its explosive growth. Radio sets, which had dominated living rooms for several decades, had been shuffled to kitchens and bedrooms to make room for the new center of attention: TV. Television became what radio had been in its golden age — the central medium of entertainment and diversion for almost every home. In 1950, there were 8 million TV sets in the U.S.A and in 1951 there were 13 million. Furthermore, the entire world was adopting the trend since by 1959, almost all the countries in America, Europe and Australia had introduced[13] the TV set (History of TV, 2012).

2.2.1. Single Sponsor

With the growing importance of TV as medium, naturally came its importance as an advertisement channel. The intent to advertise was great by that time but the technological limitations were huge – before 1956, all TV programming had to be done "live" since the video recording was unavailable – so the solution found was the single sponsorship of the TV shows (Williams, 2003).

Illustration 3 - Example of single sponsor show

Source: tvhistory.tv

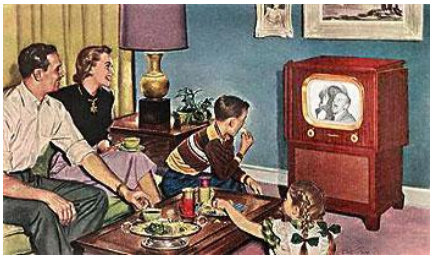
Television schedules in the 1950s were chock full of programs with titles such as Kraft Television Theater, Colgate Comedy Hour (Illustration 3), and Coke Time. As with radio, these programs were produced by advertising agencies for their sponsor-clients. However, the television audience was a paradoxical, abstract entity, not an amalgam of individuals with differing backgrounds, tastes, and interests but a huge consumer collective that could be attracted en masse and delivered, so to speak, to advertisers.

[12] Ultra-High Frequency (UHF) designates the Radio frequency range from 300 MHz and 3GHz.
[13] Appendix 3: Date Timeline of the introduction of television in countries.

2.2.2. TV Becomes a Home's Focal Point

By 1960, the cost of TV sets had come down considerably being present in 87 percent of the homes, taken the place of radio as the family's evening focal point as represented in Illustration 4. In a short time the viewing public wanted more TV channels. When the satellite relay of TV signals became possible, a profusion of satellite services, including HBO[14], Showtime, and many specialty channels, became available (Smith, 1998).

Illustration 4 - Traditional family in front of a TV set



Source: tvhistory.tv

Moreover, the color sets were about to hit the market. Although color film had been around since the 1930s, was in 22nd November 1953 the first program to be broadcasted in color. The program was the “Colgate comedy hour”. However it was just in the 60s that color sets started selling in large numbers with the introduction of GE's Porta-Color15 set in the spring of 1966. According to the Table 1, from 66 to 68 the number of color TV households more than doubled (History of TV, 2012).

Table 1 - Number of Color TV Households and Percentage of USA Homes with Color Television - 1964 to 1978

COLOR TELEVISIONS

Year	Number of Color TV Households	% of TV Households with Color TV
1964	1,610,000	3.1
1966	5,220,000	9.6
1968	13,700,000	24.2
1970	23,400,000	39.3
1971	27,600,000	45.2
1972	32,800,000	52.6
1973	39,400,000	60.1
1974	44,950,000	67.3
1975	48,500,000	70.8
1976	51,200,000	74.0
1977	54,900,000	77.0
1978	56,900,000	78.0

Source: tvhistory.tv

In the beginning of the 60s, the advertisement networks were competing for the US national audience and the television programming became more important to their economic success. Increasingly, the networks found themselves desiring the sponsor/ad agency programming control, and the sponsors in turn found themselves hard-pressed to underwrite increasingly costly programs (Williams, 2003).

[14] Home Box Office – American Premium Cable Television Network.
[15] General Electric's Porta-Color – first "portable" color television.

2.2.3. TV Becomes an Advertiser's Focal Point

To solve the problem of the raise of program's costs, NBC executive Sylvester L. Weaver advanced the network's answer: participation advertising, dubbed the "M*agazine Concept*." Under this arrangement, advertisers purchased discrete segments of shows (typically one- or two-minute blocks) rather than entire programs. Like magazines, which featured ads for a variety of products, the participation show might carry commercials from up to four different sponsors. Similarly, just as a magazine's editorial practice was presumably divorced from its advertising content, the presence of multiple sponsors meant that no one advertiser could control the program. While participation advertising met with some initial resistance on Madison Avenue, many agencies saw that it was the ideal promotional vehicle for packaged-goods companies manufacturing a cornucopia of brand names, such as Procter and Gamble with such disparate products as Tide (laundry detergent), Crest (toothpaste), and Jif (peanut butter)[16] (Smith, 1998).

Later on, "*The Magazine Concept*" began to dominate television advertising, as it has ever since. Instead of relying on audience identification with a specific show, sponsors now spread their messages across the schedule in an effort to reach as many consumers (or at least as many of those within a specified demographic) as possible. There is no denying that as an instrument of mass communication conveying information and entertainment to the general American public, as an instrument of mass merchandising and advertising for the business community, and as a source of massive profits for the networks, American commercial television is eminently successful (History of TV, 2012).

2.2.4. From 60 to 30 seconds spots

By 1970 the transition from 60-seconds to 30-seconds as the standard length for commercials takes hold. The change began in the 1960s with the controversial practice of "*piggybacking*," or putting messages for two related products from one company into the same one-minute commercial. The networks cast aside concerns about corporate relationships and began selling 30-second units (Smith, 1998).

[16] Video with "Magazine Concept" TV ads: http://www.archive.org/embed/Televisi1960

The 1970s continue with the banning of cigarette ads on television. Networks opposed the change because the cigarette companies were a major source of ad revenue, but the ban held. To bring in more advertising money, the networks switched to alcohol companies. In the 1980s, television advertising targeted new consumers—children. Advertisements during Saturday morning cartoons were popular, as were shows based on kids' toys (like G.I. Joe and My Little Pony). Commercials also went big budget by hiring major directors to create ads, such as Ridley Scott's ad for Apple Computers (Herr, 2007).

2.2.5. Fiber optic and satellite TV

The introduction of efficient fiber optic cables in 1970, by Corning's Robert Maurer, Donald Keck, and Peter Schultz improved the delivery of television programming to American homes and businesses. It allowed 65.000 times more information than conventional cooper wire. At the time, Arch Oboler states that "*within a decade all movies will be in three dimensions, supplanting the absurdity of 2D movies in a 3D world as the electric light supplanted the gaslight*". The forecast was wrong in the date, but not in content. Also in 1972 the American first pay-tv network, Home Box Office (HBO) was launched leading to the creation of a national satellite distribution system. The first satellite launched carrying television was at the same year: the Canada's geostationary Anik 1 (Harries, 2002).

With all the new features enhancing the TV technology in terms of the devices and the data transmission, the advertising was also benefited. Even with the same 30 seconds spots, with the raising number of channels available with different audiences, the targeting options increased. Also the number of viewers and the geographic areas augmented in a large scale at the same time cost per contact decreased, strengthening the TV's positioning as the best mass communication medium (Harries, 2002).

Illustration 5 - Apple's first TV commercial in 1984

Source: YouTube.com

Some of the TV commercials made at that time, were "set in stone" in the consumers' minds. Catch phrases, popular songs or

jingles and celebrities endorsements were common way of became popular. Some included the Colgate's commercial 'Blue Minty Gel'[17] featuring kids to the tune of Madness 'Baggy Trousers' or the Apple's First TV ad in 1984[18], known as the commercial that introduced the Apple Macintosh Computer to the world (History of TV, 2012).

At the end of the 80's, TV history was still inside the so called "*Golden Age*", however the information age was saving the best part to the end of the century. In fact, in terms of technology and consumer behavior change, this was just the beginning (Harries, 2002).

2.3. Modern history 1990 – 2010

By the 1990s there was major news in television technology and advertising. New ways of signal transmission and new devices came out. Also, the typical hour-long program contained now up to 19 minutes of advertising space. The TV programming was now full of ads that became more and more annoying to the users, losing effectiveness. Some could also blame the internet, the laptops and other complementary product of entertainment and information but in fact, the percentage of time spent watching TV was still growing. The origin of the lack of effectiveness was in advertisement itself. The solution was to look for alternatives and many came out (McChesney, 2007).

2.3.1. The race for alternative TV advertising

One of the most popular alternative ways to be present in TV programing without commercials is the product placement. The first cases date from the beginning of the TV commercials but only in the 90s they start to appear in large scale as a way to catch the attention of an audience tired of meaningless commercials. The ways of apply it were many, from the popular "*007 agent*" using an Omega watch to the program "*Extreme Makeover*: *Home Edition*" that used product from Sears, Kenmore and Home Depot to refurbish the houses or even the "*Doctor House*" using a Mac Computer (Illustration 6).

Other way to be present in TV programming is the naming and sponsorship of competitions, soccer stadiums, Nascar teams among other options. Sponsorship is a cash and/or in-kind fee paid to a property (typically in sports, arts, entertainment or

[17] http://www.youtube.com/watch?v=gdcVRueT2cw
[18] http://www.youtube.com/watch?v=OYecfV3ubP8

Illustration 6 - Apple's product placement in popular TV series

Source: Global Television Network Canada

causes) in return for access to the exploitable commercial potential associated with that property, according to IEG[19]. IEG projects spending on sponsorship globally grow 5.2 percent in 2011 to $46.3 billion. Europe will remain the largest source of sponsorship spending apart from North America, followed by the Asia Pacific region.

Illustration 7 - iTunes Logo Banner in CTV

Source: CTV

Another type of advertisement that grows popular in the 90s mostly for advertising TV shows on the same channel is an ad overlay at the bottom of the TV screen, which blocks out some of the picture. "*Banners*", or "*Logo Bugs*", as they are called, are referred to by media companies as Secondary Events. By 2012 the expression "*Banner*" is first associated to the internet since it became the most popular way of advertise in it (Wikipedia, 2012).

2.3.2. On demand nightmare? Not Yet.

Some years later by the year 2000, the TV commercials became even more threatened with the introduction of digital video recorders such as TiVo (Illustration 8), which allow the recording of television programs onto a hard drive, also enabling viewers to fast-forward or automatically skip (time shifting) through advertisements of recorded programs (Vivian, 2011).

[19] http://www.sponsorship.com/

There was and still is speculation that television advertisements are affected by digital video recorders as viewers choose not to watch them. However evidence from the UK shows that at the end of 2008 – several years after the first introduce of this technology in the market – 22 percent of UK households had a DTR[20]. The majority of these households had Sky+ and data from these homes (collected via the Sky View panel of more than 33,000) shows that, once a household gets a DTR, they watch 17 percent more television. 82 percent of their viewing is to normal, linear, broadcast TV without fast-forwarding the ads. In the 18 percent of TV viewing that is time-shifted (i.e. not watched as live broadcast); viewers still watch 30 percent of the ads at normal speed. Overall, the extra viewing encouraged by owning a DTR results in viewers watching 2 percent more ads at normal speed than they did before the DTR was installed.

Illustration 8 - TiVo's DVR (Digital Video Recorder) set

Source: tivo.com

2.3.3. Technology never stops

Nevertheless the DVR[21] was not the only innovation entering the market. In 2005, South Korea became the first country in the world to have mobile TV when it started satellite DMB[22] (S-DMB) and terrestrial DMB (T-DMB) services. Mobile TV is one of the features provided by many 3G[23] phones like smartphones, but not only, other portable TV devices are also available. South Korea and Japan are at the forefront of this developing sector. Mobile TV services were also launched subsequently in many other countries like Hong Kong in March 2006 and United Kingdom in September 2006 (Wikipedia, 2012).

Illustration 9 - 3DTV enhancing viewers experience

Source: geektech.in

[20] Digital TV receivers, or digital converter boxes, are stand-alone components that allow analog televisions to receive digital signals

[21] A digital video recorder (DVR) or personal video recorder (PVR), is a consumer electronics device or application software that records video in a digital format.

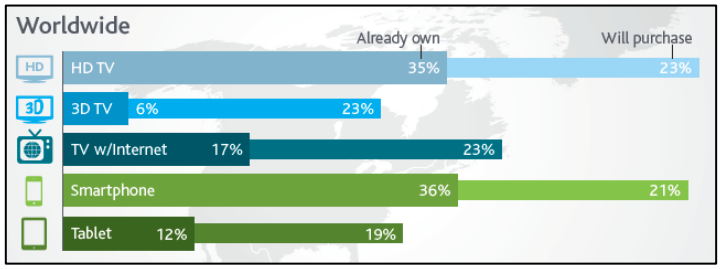
[22] Digital Multimedia Broadcasting (DMB) is a digital radio transmission technology. It can operate via satellite (S-DMB) or terrestrial (T-DMB) transmission.

[23] 3G or 3rd generation mobile telecommunications is a generation of standards for mobile phones and mobile telecommunication services fulfilling the International Mobile Telecommunications-2000 (IMT-2000) specifications by the International Telecommunication Union.

Furthermore many other technologies appeared to enhance the TV viewing experience such as HDTV[24] in Europe at 2004, with resolution substantially higher than traditional television systems. HDTV is by 2011 a popular kind of TV with 35% of penetration rate worldwide that motivates the contents change, however has not significantly changed the advertising. The same happen with 3DTV, first introduced in 2011 (glass-free) that brought the three dimensions video to the consumers home but once more, without influence in the TV advertising industry. However this last technology isn't, by 2011, popular yet (6% penetration – Figure 1) mainly because of the lack of programming and the high costs of the devices, so it's real impact is by far, unknown. (Nielsen, State of Media Consumer Usage Report, 2011)

Similarly to the devices, the transmission technology improved the quantity and the quality of content delivered to the final consumer changing also the consumer's preferences along the years.

Figure 1 - Device's penetration worldwide



Source: Nielsen 2011

Also "*The convergence of cable, satellite and digital technologies has transformed the basic arena of film and television distribution from national to global*" (Harries, 2002, p. 12). According to the "Market & Trends report" (IDATE, 2010), in 2009, 478 million household worldwide had access, on their primary TV, to television from the terrestrial network, or more than 39% of all TV households – Figure 2. Nevertheless, this reception mode is in the process of chronic decline, in both absolute value as well as relative value. Cable is the second place television reception mode worldwide with more than 440 million TV households, an increase of 3.3%, resulting in market share of more than 36% in 2009. In mature TV markets, cable has achieved high penetration rates but is nearly at saturation (IDATE, 2010).

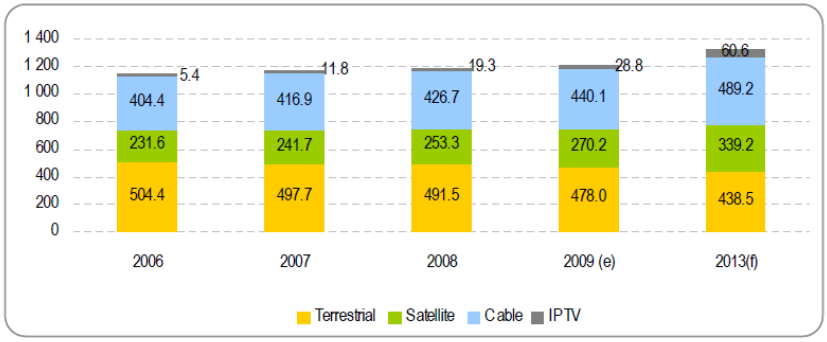
The third place television reception mode worldwide, satellite was the solution selected in 2008 by 22.2% of TV households. Unlike cable, expansion of satellite is not endangered by saturation, and actually has helped launch new bouquets in some regions (Poland, Russia, and Nigeria). In addition, the expansion of prepaid digital offers also

[24] High definition television has one or two million pixels per frame, roughly five times that of Standard definition (1280 x 720 = 921,600 for 720p, or 1920 x 1080 = 2,073,600 for 1080p).

resulted in growth from households that have access to satellite as primary TV reception mode (IDATE, 2010).

In 2009, IPTV[25] had only been adopted as a primary television reception mode by 2.4% of TV households worldwide. However, this reception mode logically experienced the highest growth, with an annual increase of 48% and a five-fold increase between 2006 and 2009. Even in 2009, the strongest penetration of IPTV was in Europe (4.7%), followed by North America (4.3%), which is expected to become the primary market worldwide for IPTV in 2010 (IDATE, 2010).

Figure 2 - Change in worldwide TV reception modes, 2006-2011 (millions of TV households)



[e] estimates, [f] forecasts

Source: IDATE, according to World Television Markets January 2010

In addition to all these changes, the consumer's behavior around the TV altered in many other ways. To watch TV doesn't mean anymore to use a TV set or even that the content has to be paid or even professional. A prosumer revolution is in line (Harries, 2002).

2.3.4. Media and video revolution

In the latter part of the 20th century new terms like new media, digital media[26] and social media became familiar. The term 'new media' has become an effective catchword both as description of the digital delivery of media via the internet, DVD and digital Television and as reference to the 'newness' such technologies have brought to media more generally (Harries, 2002).

Thus, a great part of the content produced in this new era is video and is here where TV was affected. The amount of video content produced in the year of 2011 is greater than ever and it's consumed in more places than ever. Besides the professional content we

[25] Internet Protocol television (IPTV) is a system through which television services are delivered using the Internet protocol suite over a packet-switched network such as the Internet.
[26] In Digital Media Data is electronically stored in Digital (As Opposed To Analog) Form.

now have "*prosumers*"[27] that create and stream large amount of amateur's content. Furthermore the multiplicity of formats, platforms and devices allows the largest supply of video content ever (IBM Corporation, 2007).

There is online broadcasting of old media contents (CNN[28] online), online broadcasting of online exclusive contents (YouTube Channels), user content generation (YouTube users videos), streams of users channels (Ustream[29]) and movies streams, rent and sell (Netflix). According to the report "State of the Internet US Q2" (comScore, 2011), the category that most is driving the web growth is the movies sites with 31% growth (Apr2010 to Apr2011). YouTube and Netflix are the two leaders of broadband video content, the first with small length films and the second with long length movies (Parry, 2011).

Altogether, these kinds of video watching are taking credits as complementary or even main means to communicate products and brands. They are frequently used to complement TV 30s spots with shorter video ads that recall the main ones. Some other times, the online video advertising has nothing to do with the traditional Ads since the video produced online is enough in quality, targeting, quantity and results measuring to equal or exceed the traditional ones (ReelSEO.com, 2011). However the lack of control and supervising leads sometimes to an excess of ads that molests the brand's image, and reduces the effectiveness to nothing. The Illustration 10 is an example, were the consumer has to close the ads to watch the video stream (Harte, 2010).

Illustration 10 - Spam in online video advertising

Source: atdhe.tv

Also the online video directories are an emerging form of interactive advertising, which help in recalling and responding to advertising produced primarily for television. These directories also have the potential to offer other value-added services, such as response sheets and click-to-call, which greatly enhance the scope of the interaction with the brand (Australian Communication and Media Authority, 2008).

[27] Prosumer is a portmanteau formed by contracting either the word professional or less often, producer with the word consumer (Wikipedia, 2012).
[28] Cable News Network (CNN) is a U.S. cable news channel founded in 1980 by Ted Turner.
[29] Ustream is a website which consists of a network of diverse channels providing a platform for life casting and live video streaming of events online.

2.3.5. Manufacturers role

Manufacturers were from 1990 to 2012 one of the greatest boosters of change thanks to the investment done in areas such as R&D and Marketing. There were several innovations done from the CEM, from the quality of the screen / image, to the remote controllers or set-top-boxes that increased the TV experience opening new possibilities to entertainment and advertising industries. In fact, CEM are not only developers and producers of televisions, but producers of technology capable of entertain, inform and facilitate the consumers' lives.

Table 2 - Q4'10 Worldwide Flat Panel TV Brand Rankings by Revenue Share

Rank	Brand	Q3'10 Share	Q4'10 Share	Q/Q Growth	Y/Y Growth
1	Samsung	21.6%	21.4%	27%	2%
2	Sony	11.8%	14.2%	54%	34%
3	LGE	13.5%	12.7%	20%	18%
4	Panasonic	9.1%	8.3%	15%	13%
5	Sharp	8.0%	8.1%	29%	67%
	Other	36%	35.3%	25%	8%
	Total	**100.0%**	**100.0%**	28%	15%

Source: DisplaySearch *Quarterly Advanced Global TV Shipment and Forecast Report*

The most recognized brands in the world are, in order of highest revenues in 2010, Samsung, Sony, LG, Panasonic, Sharp and others such as Mitsubishi or Hitachi (Table 2). Despite the market share, Sony remains one of the most widely recognized TVs for presenting high end quality at reasonable prices in their CRT[30] and LCD[31]. However, Samsung has done amazing things with Texas Instruments DLP processors that match their own rear projector technologies. By 2010 Samsung is growing in sales, revenue and R&D being the nº1 company in revenues worldwide for the first time. Other brands[32] had entered the market and cause impact. Most of the greatest manufacturers in the world had an important role and had the payoff of their investment in sales.

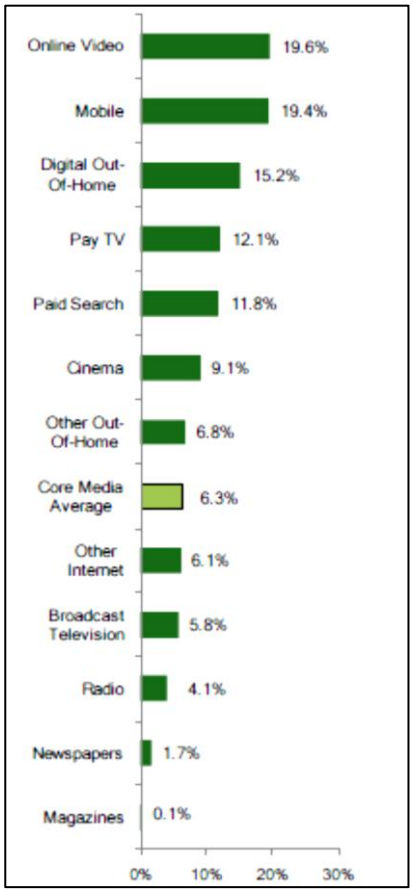
Moreover, aside from the sales, big improvements in the technology have been made by CEM companies such as the Hitachi with the first LCD, Panasonic with the world's first 3D television that doesn't require glasses or Samsung with the Smart TVs. Also other companies such as Google and Apple are about to hit the market with their televisions, impacting the industry leader with new revolutionary operative systems and entertainment and advertising solutions. For all the explanations before, CEMs have to be considered as crucial to the TV development, especially in technology (IDATE, 2010).

[30] The cathode ray tube (CRT) is a vacuum tube containing an electron gun (a source of electrons) and a fluorescent screen used to view images.
[31] A liquid crystal display (LCD) is a flat panel display, electronic visual display, or video display that uses the light modulating properties of liquid crystals (LCs). LCs does not emit light directly.
[32] A full list of brands in http://en.wikipedia.org/wiki/List_of_television_manufacturers

2.3.6. Advertising on TV by 2010

TV has been an integral part of people's lives since the 1940s, providing consumers with news, information and entertainment. At the same time, TV is evolving. In addition to scheduled broadcast programs, we now have video on demand, internet TV, 3D TV and TV applications. In 2010, TV experience was richer than ever before. These factors have changed the way we consume TV and will certainly change the way companies advertise in it. Those 200 billion dollars of TV ad spent globally is rather enticing and plenty of it is going to move to new alternative ways of communicate, rather than the old value chain where brands give money to agencies that create 30 second spots and pay the broadcasters to interrupt viewing with ads that most of the times, don't even mean anything to viewers.

Figure 3- Annual growth rates 2011-2016 by Medium



Source: MAGNAGLOBAL-Advertising Forecast 2011

However that doen't mean that the announcers are losing its interest in TV as communication medium. In fact it's the oposite. Television advertising investment surpassed $18 billion[33] in the first quarter of 2011, growing almost nine percent versus the same period in 2010 (Nielsen, State of Media Report, 2011).

The importance of TV in advertising is growing because of the appearance of multipe contents, transmission technologies and devices (such as tables, smartphones, laptops and Connected TV's). The difference is that the method to reach the audience is not the same as before. Looking to the Figure 3, we have the TV advertising trends, being the online video (19.6% growth rate), mobile (19.4%) and digital out-of-home (15.2%) the leaders in growth and the ones that probably will catch the attentions in the next years. (MagnaGlobal, 2011)

The "old box" still has a great potential to grow and evolve, proving that can still be the promotion leader in effectiveness and investment.

[33] Appendix 5.

2.4. Drivers of change

Along the last decades, the history of TV and advertising was hands hold for many reasons. They evolved several times and in several ways but most of them driven by the same variables. Those variables were identified in the last chapters as being technology, advertisement and consumer behavior changes. These variables were identified and related to the TV advertising history because of several reasons listed in the following table:

Table 3 – Drivers of Change influence from 1930 to 2011

Drivers of Change		Early history 1930 – 1950	Golden Age 1950 – 1990	Modern History 1990 – 2011
Technology	**Devices**	• Mechanical • First electronic TV	• First color TV • CRT	• On demand set top boxes • DVR • HDTV and LED • 3DTV • Mobile TV (tablet / smart phone)
	Signal Transmission	• Analogue Terrestrial	• Analogue Satellite • Analogue Cable • Fiber Optic	• IPTV • Digital Satellite • Digital Terrestrial • Digital Cable • 3G and 4G tech
	Programming / Stations	• 1 to 70 TV channels • All TV programming had to be done "live"	• Pay TV • Hundreds of channels	• Thousands
Consumer Behavior	**Buying devices**		• By 1960, 87% of homes had TV	• HDTV 35% pen. • 3DTV 6% pen. • TV w/net 17% pen. • Smartphone 36% pen. • Tablet 12% pen.
	Viewing	• Broadcast live	• Broadcast live or recorded • TV becomes a home's focal point	• Broadcast live, recorded or online • User content generation • Streams of users channels • Online and on demand movies
Advertising	**Key moments**	• First TV Ad	• Single sponsorship • First TV ad in color • Magazine concept • Banning of cigarette ads on television • Television advertising targeted new consumers—children	• One hour has 20 minutes of advertising space = less effectiveness • On demand treat • TV in first by investment and still growing
	Method	• 20, 30, 60 or 120 seconds spots	• **60-seconds to 30-seconds** • Testimonial Ad • Direct response TV ad • Public service announcement • Celebrity Endorsement • Infomercial	• Product Placement • Sponsorship • Banners • Online video advertising • Interactive • Social networks • Apps ads

The table does not pretend to be an exhaustive list of facts but an evidence of the importance of study advertising, consumer behavior and technology as a mean to understand how the TV advertisement will evolve in the future. That was the next chapters' objective.

3. Theoretical and factual analysis

The theoretical and factual analysis is a critical part of this study. It intends to collect and gather the main relevant knowledge to the understanding of the theme in study. With the future of television advertising in mind, and after the study of its historical background, technology, advertising and consumer behavior where identified as being the most important areas to be detailed. It is pretended to study the influence of each driver in the others to outlook the general knowledge that will support the hypotheses. To do so, relevant books, papers, sites, articles and reports will be used, with stronger influence of the newest ones due to the very innovative characteristics of the theme.

3.1. Technology

The first critical evolution factor to the television and consequently to its advertising was the technology. It's crucial to understand what technology means and how it can affect / be accepted by the consumer, the markets, the products and the behaviors. This is important because, Smart TVs are a new device and that kind of technologies could not have always have an easy beginning in the market. During the next chapter an exhaustive analysis will be done having in mind the full clarification of the concept and influence of technology.

3.1.1. Fundamentals

Beginning with the fundamentals of technology, it's important to clarify its definition. Technology is a term with many different meanings and understandings. It was defined by (Crabb, 1823) in its 'Universal Technological Dictionary' as "*a description of arts, especially those which are mechanical*". Latter, according to Merriam-Webster[34] technology is presented as "*making usage of several physical and intellectual tools to execute a function*". The tools could be machines, techniques, crafts, systems or simply knowledge, used mostly together to solve problems. The adaptation of human kind to the environment and to the external problems is improved by technology.

The word comes from the Greek τεχνολογία (technología); from τέχνη (téchnē), meaning "art, skill, craft", and -λογία (-logía), meaning "study of-" (Crabb, 1823). By

[34] Merriam-Webster, which was originally the G. & C. Merriam Company of Springfield, Massachusetts, is an American company that publishes reference books, especially dictionaries that are descendants of Noah Webster's An American Dictionary of the English Language (1828).

the most of the people technology term is used in a broader way meaning anything new and advanced in terms of science. In the XXI century is commonly associated to the latest kinds of devices in each function; either telecommunications medicines or aeronautics. Technology can be used to describe also the techniques that provide development in many areas of the human life like chemistry or physics (Harte, 2010).

In terms of media, especially the mass media, there is a high technological dependence. One of the characteristics of mass communication is its reliance on technology. People can communicate face-to-face, without technological assistance, but for mass communication, however, the technology is crucial. It exists in many forms and helped many kinds of media to evolve. Printing technology (press), chemical (photography and films), electronic (sound and TV) or digital (internet, etc.) are examples of that (Vivian, 2011). The television wasn't an exception and, as several other areas of the human's lives, was critically influenced by the evolution and "fame" of technology. Evolution dictates the possibilities of more and better devices and contents and "fame" dictates the receptivity and the perceived value to the general public[35] (Parry, 2011).

The traditional television set, work with technology that is part of the past. However latest evolutions brought TV again to the podium in the newness inventions with smart TV's (next topic). Looking to Smart TV's as newness technology is important to understand how the consumer's acquisition of technology works. There are three crucial laws to be considered in the acquisition of new electronic media technologies – new media or new means of delivering old media (Comstock & Scharrer, 1999)[36].

- The first is about the functional equivalence, which requires that new technologies serve at least most of the functions of established technology.
- The second states that the viewer's particularly pleased by what they are receiving will want the means to receive more of the same. Those not as pleased will be attracted to technologies with new options.
- Third law has the affordability into account, saying that the households with higher social economic status are regularly the first adopter of new technologies.

[35] in appendix 10, an example of how the brands use the attractiveness of technology to promotion

[36] (Comstock & Scharrer, 1999)'s model is based in 'Diffusion of innovation research' (Rogers, 1995), 'The history of media diffusion' (Himmelweit, Oppenheim, & Vince, 1958; Lin & Jeffres, 1998; MacBeth, 1996; Scramm, Lyle, & Parker, 1961; Williams, 1986), and various studies of the adoption of and satisfaction with these technologies (Dobrow, 1990; Ducey, Krugman, & Eckrich, 1983; Jacobs, 1995; Levy & Windahl, 1984; Perse, 1990a; Perse & Fergunson, 1993; William, Phillips, & Lum, 1985).

Relating these studies with new kinds of TV sets, it's possible to reach the following conclusion:

- The latest models fit the oldest features,
- Have options in terms of more of the same and different content,
- Are ready to be adopted by high and low income households due to the range of price policies in the market (including set-top-boxes).

The latest models of television sets – connected TV's – are ready to have good levels of adoption in terms of technology. During the next chapters, several kinds of technologies will be addressed, mostly related to the TV and video viewing, always with the purpose of understand the future of TV advertising. However it's important to state that some of the technology related areas of study addressed here, have no direct relation to the advertising although they have with the behavior of the consumers. More than talk about television and advertising, we are talking about consumers so even if the relation – between technology and advertising – is not obvious, there is a relation with consumer behavior that later will have influence marketing strategies (Comstock & Scharrer, 1999).

3.1.2. Technology in TV

"People don't want something better than a TV. They want a better TV."

Jeremy Kaiman[37]

Technology affects everything, and due to its broader meaning here, the influence in TV and advertising will be the deepest approaches here. First the TV device and specially its latest evolution status: connected TV's and other contemporary devices that reflect the most recent technology developments. In fact, the role that TV has been playing so far is changing. We are definitely in a moment of transition, a moment where "*old media systems are dying and new media systems are being born*" – in great part, thanks to technology (Prata & Chambel, 2011).

[37] Sales and Marketing Director, Samsung in Canes Lions 2011

3.1.2.1. Latest technological state of TV: Smart TV's

Television emerged as many other media, as a technologically synthetic response to the needs of the society. Political, social and economic evolution brought new challenges and behaviors. In 2012 the saturation of content and devices as well as the advent of the internet and the decreasing of the broadcasting viewing enhance the creation of the Smart TV or Connected TV (Williams, 2003).

The very first concept of mixing internet and TV came to the market in 2007 by Samsung however the device didn't become popular since the 3D television sets were just about to begin their journey catching up the attentions. The Internet TV nonetheless became more popular; referring to the usage of video content online but in that time mostly in PC's or in TV thought consoles or similar devices. Through broadband[38], the consumers are already viewing Internet video using laptops, smartphones and tablets. In line with the multi-device trends, the audience engages frequently in the TV shows and internet services – such as social networking – simultaneously (Tolani, 2012).

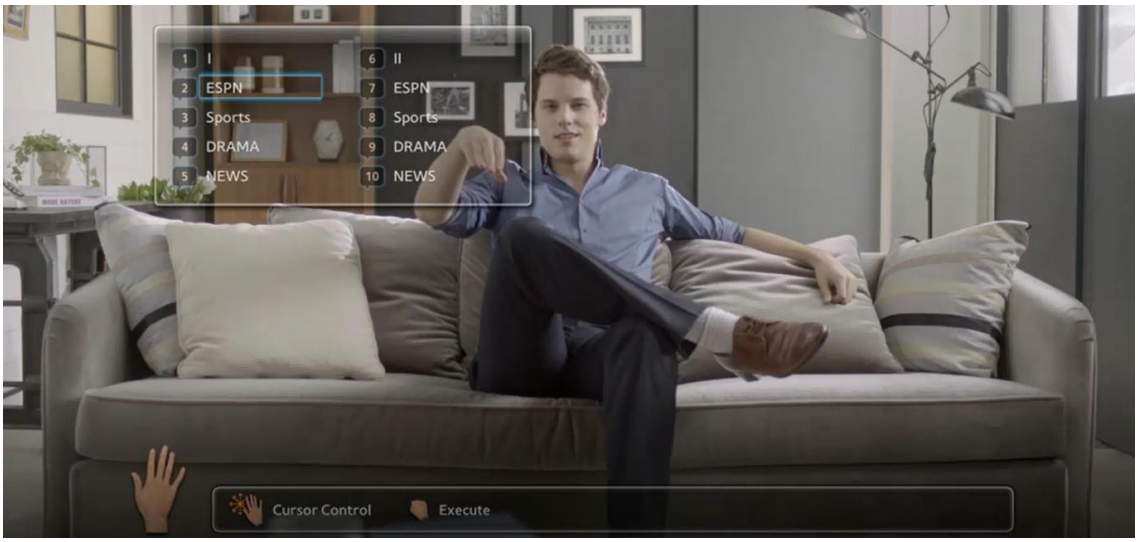
In 2012 the television is ready to go online increasing the video choice, combined with new interactive services, but unlike the other devices, with a stunning and huge screen quality (Nielsen, 2011). In 2010 the first Smart TVs[39] entered in the market by Samsung as a "normal" television set with several more features that come from the internet connectivity. Like a smartphone, a smart TV offers a number of "internet connected services" that normal televisions can't offer[40]. The evolution that smart TVs represent has its origin in two main factors: the device and the signal reception. About the first, this new TV sets have the equivalent of a computer built into it with a CPU (central processing unit), a hard drive and a modem, among others. About the second, it has internet connectivity which allows the device to receive the signal not only from the traditional sources, such as cable, satellite or broadcast, but also from the internet. The join of these two main changes represents the main evolution of this device and the booster to an improved user experience. Several times before there were new devices with new features – such as color TV or 3D TV – and / or new signal reception technologies – such as cable or IPTV – but never before both happen together and at

[38] Countries with more than 60% home broadband penetration: majority of Western Europe, the USA and Canada, Australia and New Zealand. Countries with approx. 100%: Japan, South Korea and Singapore. (Source: Saïd Business School, Oxford University for Cisco.)
[39] From 'channel intel' the movie "what is Smart TV?" - http://youtu.be/MuC6HK0ZjVg
[40] A full list of connected TVs contents and services in Appendix 8

the same time, representing this time a bigger change than what those examples represented before individually. In fact, smart TVs enable apps, media streaming, web browsing, games and, perhaps most importantly, Internet Protocol Television (IPTV) (Kovach, 2010). These features weren't new since 2005, but now the term "smart TV" has given them a name and is expected to make them more popular around the world – according to (LU, 2011) by 2015, 54% of TV in China will be Smart TV.

Aside from lacking productivity functions, such as email and word processing, a Smart TV is a lot like a computer. It enables web browsing, YouTube watching and catch up on social networking. Some of the TVs support flash and cloud storage[41] as well, which means a better web browsing experience, as well as the control features such as "facial and vocal recognition" and "motion control" – Illustration 11. Furthermore, smart TV make possible to watch on demand content in a way that wasn't possible before. Broadcasted content is still available but will lose popularity since the user has now the whole internet as an entertainment data base (gigaom, 2006). Apps currently include games, internet radio, weather and entertainment. To make a normal TV become "smart" it's alto possible to add a set-top box that is an economical way to bring streaming content and media reading.

Illustration 11 - Samsung's motion control system[42]



Source: Samsung in CES 2012 – Los Angeles

The Smart TV's arrival is caching up the attentions in many ways, their technology is enough to revolutionize the market in many ways. According to (Sunyer, 2011) in the

[41] Cloud storage is a model of networked online storage where data is stored in virtualized pools of storage which are generally hosted by third parties.
[42] Presented in CES 2012 – Los Angeles by Samsung.

Smart TV Summit - London, 2011 that brought together the perspectives from the industry leaders[43], the key topics in which the Smart TV's will cause more impact are:

- Content Provider and Broadcaster Perspectives
- Companion Devices and TV Applications
- The Rise of Social TV and a Revolution in TV Advertising

Illustration 12 - Samsung Apps: the engaging over the sale

Source: Samsung.com

Furthermore, there are several ways the Smart TV's can represent a market opportunity. Many companies[44] are now competing to connect home TV sets to internet: consumer electronics manufacturers, game console firms, tech companies and pay-tv operators. In the case of the manufacturers, the opportunity is to transform their business models from sales to services. The online services such as "Samsung Apps"[45], VOD or social networking experience, are an approach to the continuing relationship with costumers and not only by selling the device. Moreover is reasonable to believe that the major revenues in advertising that nowadays go to networks will change destiny to new providers of social, interactive and connected kinds of advertising (© Futurescape Ltd, 2011). The challenges are many and the opportunities too, not only in the TV device but also in other complementary devices as the next topic explain.

3.1.2.2. Multiplatform television (Other TV / Video devices)

Illustration 13 - Apple's range of products that allow video viewing

Source: Favim.com

We are entering a new era of superabundance of media and much of it will be delivered by screens. Traditional formats like books, magazines or TV were separate and discrete channels; each used technology in its own way (Parry, 2011). One of the consequences of this media landscape change is the multiplicity of devices and platforms for the same media. That

[43] In Appendix 12 – Facebook's Strategic Partner Developer Karla Geci ; Sony's Proposition Development Manager Edward Uzzell; Smartclip's Vice President Connected TV Shirlene Chandrapal; Samsung's Head of Content Services Dan Saunders; Zeebox's (previously known by its stealth name of tBone TV) Co-Founder Anthony Rose

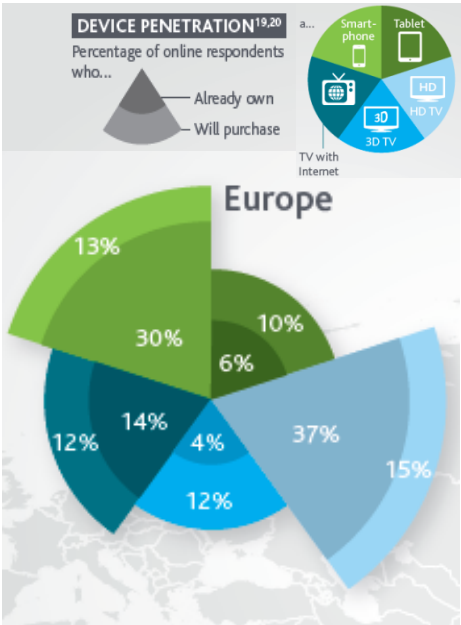
[44] Appendix 7 – List of competing platforms for connecting TVs to the internet.

[45] Korean TV maker Samsung spent $70m on marketing its Internet TV apps in 2010. This includes a series of international competitions for developing innovative apps: the US competition had a $500,000 prize fund (© Futurescape Ltd, 2011).

is happening with TV. According to Niki Strange in (Bennett & Strange, 2011), multiplatform television can be understood as a commissioning and production imperative that increasingly requires practitioners to produce and exploit content for screens and sites away from the traditional TV screen and schedule, including the production of online content such as web sites, interactive television apps, mobile phones, and other portable media devices[46]. As the author says, there are several implications to the multi-platform trend, but since the technology is the fundamental theme to analyze in this chapter, the following paragraphs are mainly about the devices.

The TV content viewing is available in 2012, in several different devices. Aside from the TV set (which includes Full HD, 3D and Smart TV) it's also possible to use a tablet, a smartphone, a laptop / personal computer, a set-top-box or a gamming console to access video content (e.g.: Illustration 13). Media viewing is becoming richer than ever thanks to the increasingly number of devices available, some with different and revolutionary features and other because of the cross / combined usage (Bennett & Strange, 2011).

Figure 4 - Device's penetration in Europe



Source: Nielsen

According to the Figure 4 from (Nielsen, State of Media Consumer Usage Report, 2011), the penetration of these devices in Europe is high – Smart-phone 30%, Tablet 6%, HD TV 37%, 3D TV 4% and TV with internet 14%. These values can look not so good, but it's crucial to have into account what some of these technologies are no more than two years old. Although all the new available devices and technologies, traditional broadcast networks continue to deliver content directed to the masses and not to the individuals, says (Arens, 2009). However, the all new video enabled devices, allow the consumers to choose the online content they want to watch, sharing and endorsing through online social networks.

[46] In appendix 11 there is comparison with laptop, netbook, tablet and smartphone.

However, the growth of options means at the same time a growth of complexity to some viewers. The content available on TV is not yet fully available online – at least in legal sources – and a lot of content has not mobile versions to the content fully compatible with mobile devices. The complexity is now reduced with the connected TV since they avoid the necessity of connect the PC to the TV to access online content. Nevertheless the combination of the growing online content sources and the network's content creates a potentially overwhelming number of choices. Also fragments and confuse the experience of many viewers since they are used to a passive, lean-back interaction. All the new media devices actively seek out video to watch online adding flexibility but also complexity (Klym & Montpetit, 2008).

What this means in practice is that "*We are witnessing a media convergence: TV, PC and mobile devices are becoming one*" (Martin, Santos, Shafran, Holtzman, & Montpetit, 2010, p. 3). These same authors presented in the "2010 IEEE Consumer Communications and Networking Conference"[47] officially registers in a paper published in Cambridge by MIT, the 'neXtream': a multi-device, socially aware framework for video content consumption. Their proposition was to improve the consumers experience in some key areas: content aggregation, social networking, delivery platforms and interactivity. The framework had the job of consolidate, organize, sort and prioritize the video content to resolve the mounting diversity of offers.

In fact this has to be the solution and some companies are already putting that in practice (Klym & Montpetit, 2008). In Portugal, the telecommunication's company 'ZON' – one of the two most important in that country providing TV, internet and phone solutions – created a new product called 'IRIS'. That product was awarded with the "Most Innovative Design or User Interface" in the conference 'TV of Tomorrow Show 2011' in San Francisco. It uses the NDS's technology: snowflake[48], to organize and deliver the most relevant video content in its client's TVs[49]. The

Illustration 14 - Iris by ZON fibra

Source: ZON.pt

[47] About Multimedia Communication and Services.
[48] NDS Snowflake™ is based on a unique user interface that is both sleek and smart from the company NDS Group Plc. which is a developer of pay TV technology. NDS was established in 1988 as an Israeli startup company. It was acquired by News Corporation in 1992.
[49] Full features description in appendix 9.

service is delivered by optic fiber and aggregates the multiple platforms such as tablets and smartphones and pretends to face and win the challenge against the IPTV's and smart TV's operative systems that are entering in the market (ZON, 2012). The challenge is so far not only to aggregate and deliver the video content over many devices but also to do it in a meaningful and easy way to the consumers, using the features and technology capacities of all the devices (Bennett & Strange, 2011).

3.1.3. Technology influence in advertising

Before was exposed the influence of technology in television, but its influence in advertising is also fundamental to explain the future of TV advertising. According to (Tolani, 2012) the history of advertising can be briefly resumed in the following events: "the beginning", "Propaganda and Mechanization", "The Emergence of New Mass Media", "Television", "The Advertising Revolution", "Contemporary Advertising" and "The Future of Advertising". If is not yet obvious to understand that technology is the main bare bone of the advertising history, it is an evidence that with "contemporary" the author means "digital ads", "cable channels" and "internet marketing". Also with "revolution" he means "direct mail" or "internet" once again, all of them are consequences of technological evolutions or the evolutions it self's.

"*The next 5 years will hold more change for the advertising industry than the previous 50 did. Increasingly empowered consumers, more self-reliant advertisers and ever-evolving technologies are redefining how advertising is sold, created, consumed and tracked* (IBM Corporation, 2007)". This citation from an industry leader in terms of technological innovation defines in straight lines how the technological component is not the only driver, but one of the most important.

In the Illustration 15 it's possible to see an example of using of technology – 3D video mapping – to promote a brand. Not only because it uses a technological advanced method, but because that method together with the visual stunning effect are the reason why the ad had a huge impact. Technology is, in fact, one of the main catalysts for marketing evolution (Parry, 2011). Access more and better information is easier and the possibility to improve the relation with the consumer, making it talk and share with its network, is now less costly (Australian Communication and Media Authority, 2008). Until few years before 2012 the companies were afraid of empower the consumer but

Illustration 15 - BMW advertising using video mapping technology in Madrid, Spain

Source: Creative Technology Holland – ctholland.com

now is commonly known that the challenge is to use that empowerment to the companies' benefit. It means that the creation of a multi-way communication line between the company, the consumers and its peers is crucial to gather information, understanding and attending the necessities in a more efficient and effective way. Thus, the technology is having a great deal improving those conditions, for example with the advent of internet in terms of speed, costs reduction and content development, for instance the social networks (Australian Communication and Media Authority, 2008).

Furthermore, (IBM Corporation, 2007) identified the three main reasons for the influence of technology in marketing's and advertisement's evolution. First, technology can allow a new medium to serve the same function of the traditional one, and offer an extensive replacement to a legacy service. For example, consumers have transacted the directories advertising they used for ages, to online search engines. These engines can easily end with the yellow pages because they are able to establish a direct relationship with the content producers (advertisers) and consumers. Paid search content requires almost no bandwidth that there is no need to negotiate with an internet service provider to ensure the information reaches the user. Such change cannot easily or quickly be replicated in other media given the inherently more complicated – and often regulated – elements contained therein.

Second, technology can support the fragmentation of audiences across content as it becomes progressively more cost effective to target niche audiences, allowing the possibility of increment in smaller advertising units. That makes the new medium more flexible in terms of cost and targeting, allowing smaller advertiser to enter the market.

Pay TV programming is suffering an increasing in the advertising, fact that illustrates this effect. With the wide range of channels, pay TV involves also a wide range of narrowly targeted channels, and none can generate enough audience sizes incumbent free to air broadcasters have maintained in the past. Although some big advertisers use commercials on pay TV programming to reduce costs or enhance their targeting, small and mid-sized advertisers who may have otherwise have been priced out of the medium find themselves with national access and low price points (IBM Corporation, 2007).

Third, technology supports fragmentation of advertising inventory maintaining similar content as it happens in behavioral advertising techniques online, whereby anonymous user data or anonymous user profiles are created to segment viewers of online content. Then, different commercials can be injected into the same content but viewed by different users. Also, with the adaptation of such techniques in other mediums like TV, the same could be done in the future with TV commercials (IBM Corporation, 2007).

"While many advertisers will continue to orient their marketing activities around content association for their brands, portions of budgets can be allocated to inventory which connects back to a consumer behavior (such as purchases of goods offline) or other —strategic objectives"

(IBM Corporation, 2007, p. 2)

3.1.4. Considerations

Resuming this chapter, there are strategic keynotes to highlight the most important conclusion to make and save for the following chapter:

- Technology in its broader meaning is well accepted by the general public and is commonly associated with something “new” and “better”.
- Smart TV’s as well as other substitute / complementary video devices presented before are, by 2012 the latest technology evolution and are being well accepted.
- There are evidences that the technology also enhance the marketing and advertising experience and effectiveness. Smart TV has incredible features with a lot of potential to be used to advertise.
- Due to the close relation between the technology and advertising, when a great change occurs in the first, the second is highly influenced in a good way. That means that it’s wise to expect a significant improve in TV advertising due to the great changes in TV technology.
- Technology can be confusing due to the large number of functionalities and devices. Smart TV aggregates different medium making its usage easier.

Technology has the power and the duty to help improving Television as a medium and a device. Also it improves the advertising in all its functions. However there are questions without answer so far, such as the acceptance of technological progresses by the general public or the behavior of that public regarding the television. Consumer behavior is a component of all he business decisions and so it is in this research. It’s meaningless to research about the future of TV advertising if TV is about to lose the last audience.

The following chapters will go deep into the fundamentals of consumer behavior as well as it’s the influence in TV and technology. Together they will strength the theoretical basis of this study to understand the relation all the factors and their influence to the future.

3.2. Consumer behavior

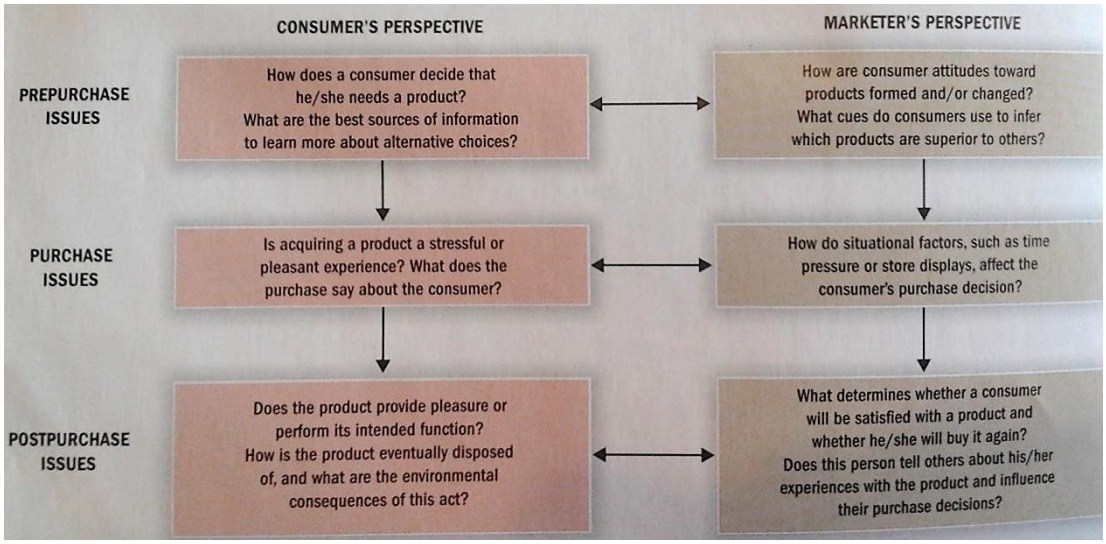
Understanding the consumer behavior is, in marketing studies, one of the greatest challenges and a key to success. Looking forward to study the future of TV advertising, is important to go deep in the technological approach but not less important, is the understanding of the way people behave. Specially regarding to technology and advertising. The approach will have into account the main concepts and the last trends in this theme.

3.2.1. Fundamentals

According to (Engel, Blackwell, & Miniard, 1993, p. 4), consumer behavior can be defined as "*those activities directly involved in obtaining, consuming, and disposing of products and services, including the decision processes that precede and follow these actions*". It is a very complex area of studies, having roots in management, phycology, and economics, among others. Also, the approach to the theme can be different according to the desired output. In its early stages of development, researchers referred to the field as "buyer behavior"; since they had in mind only the relationships between the consumers and sellers to the buying purpose. However, its common sense now that the relationship is far more complex and can be seen as a long process (Solomon, 2011).

The consumer behavior process is straight related to the consumption process, not only in the moment of buy but before and after as shown in Figure 5 – which presents the most important questions to answer in order to understand the consumer in each phase.

Figure 5 - Stages in the consumption process



Source: (Solomon, 2011)

Also, it's crucial to look to the consumer's and marketer's perspective. Considering the whole process of consumption there is several variables that can influence the consumer in different moments. One of the tools to push the consumer to know or buy a product or brand is the advertising. Inside advertising there are several different mediums that could be used (next chapter), but television has been the most popular one (Solomon, 2011).

Next chapter is going to explain the perceptions and behaviors of the general public about the television. New viewing habits, multi devices usage and social TV viewing were the most relevant topics found to latter approaches to Smart TV advertising studies.

3.2.2. Behavior regarding TV

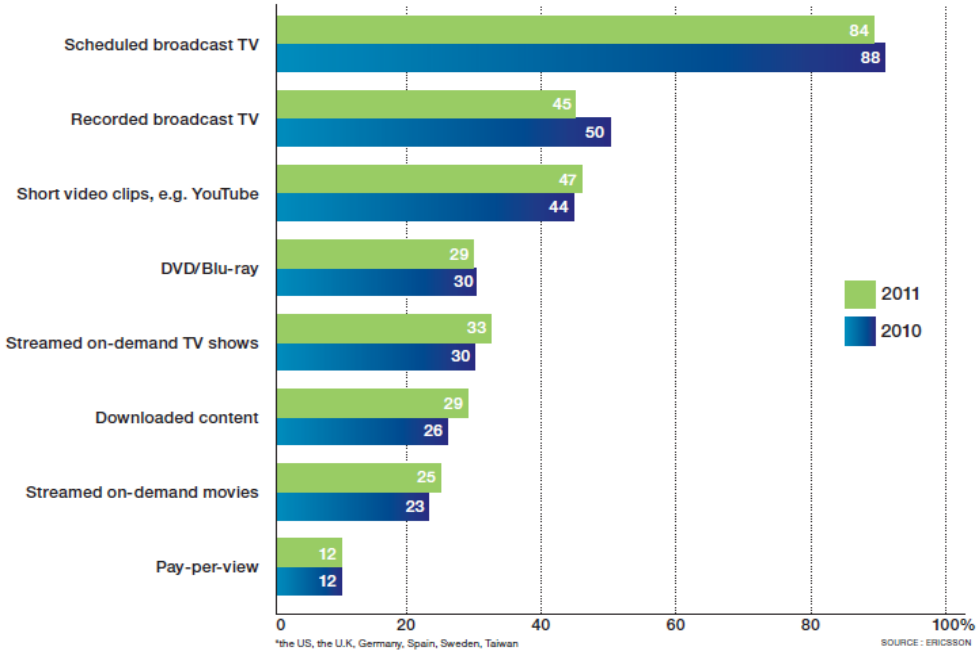
The television has been part of the society for decades (Historical Background) and still is. However the changes in the media landscape reshaped the way consumers behave. The appearance of multiple TV channels and websites, as well as access to information on their various formats around the world, strongly affects traditional media. Digital technologies have transformed the space-time organization of social life creating new forms of action and interaction, new modes of social relation and new forms of relationship with each other and with us (Thompson, 1995).

Moreover, according to (Parry, 2011) user are becoming "creators and editors in their own right". Digital technology allows anyone to create content, from a "homemade newspaper" to a blog, a video, an apps or a videogame. This "power" gained by the users in the digital era is affecting TV. First, user generated video like YouTube are competing with TV channels. Some times in different screens and some others in the same. Second, the user has now the tools to create its own channels. All of these changes are crucial to the consumer's behavior regarding TV but the ones that are more relevant to the future of TV advertising are, in fact, the evolution of TV viewing, the multi-devices usage and the TV as a social phenomenon (Parry, 2011).

3.2.2.1. Contemporary viewing habits

According to (Parry, 2011) the contemporary TV audience is changing. The last decades created a different consumer especially after the new millennium. As shown in Figure 6, from 2010 to 2011, broadcast TV is decreasing in consumer's choice, scheduled or recorded, as well as the DVD/Blu-ray. All the other kinds are increasing or stable (pay-per-view). According to (Ericsson, 2011), the increase in on-demand viewing is driven by freedom of choice since is available what, when and where the user wants. Another big factor behind the on-demand uptake is that it is becoming easy to use.

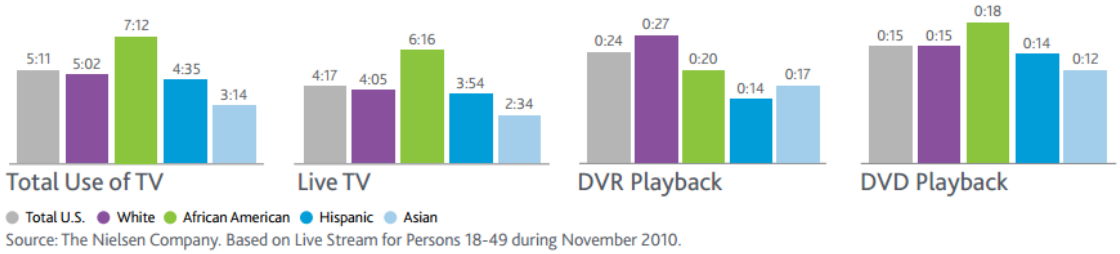
Figure 6 - Consumer TV / Video viewing habits



Source: Ericsson

With the advent of user-friendly set-top boxes, such as Roku, the Boxee box or Apple TV – coupled with super-simple and affordable streaming services such as Netflix – the popularity and ubiquity of on-demand viewing is increasing rapidly. "*Traditional TV companies are also offering better on-demand viewing by making more content available and simplifying their services. We also see consumer's spending money on on-demand that was previously spent on broadcasted viewing*." says Anders Erlandsson (Ericsson, 2011) who's in charge of the research.

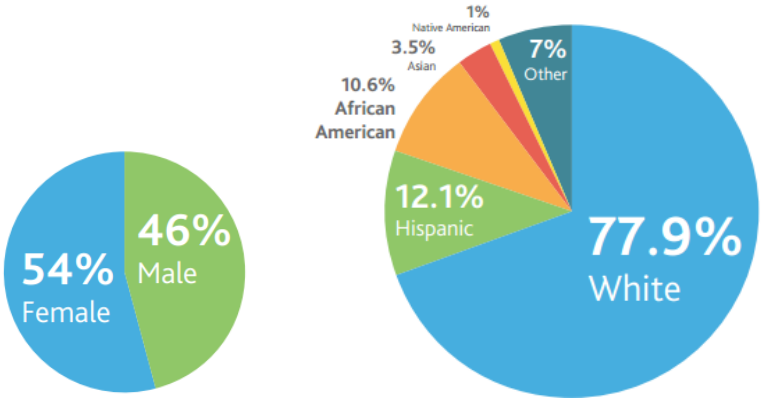
Figure 7 - Total Day TV and Peripheral Usage by Race and Origin (Daily Hours: Min)



Moreover, looking to the demographic characteristics of the audience in 2011, the main key facts are, as shown in Figure 7,the follow (Nielsen, 2011): "African Americans" are the ones that most use TV in total. They are also the ones that most use Live TV and DVD playback, unlike the DVR Playback where the "White" are in dominance.

The advent of the paid TV, cable, internet TV and on-demand changed the paradigm, however the overall time spent watching TV is growing (Nielsen, 2010). The great success of the video websites and the business model that they represent is one of the evidence that the consumption habits are changing (McChesney, 2007). The online TV viewing is of the main trends and, looking deep in its audience, "female" gender and "white" ethnicity are the leaders in this trend as shown in the Figure 8.

Figure 8 - Online Video Viewers by Gender and Ethnicity



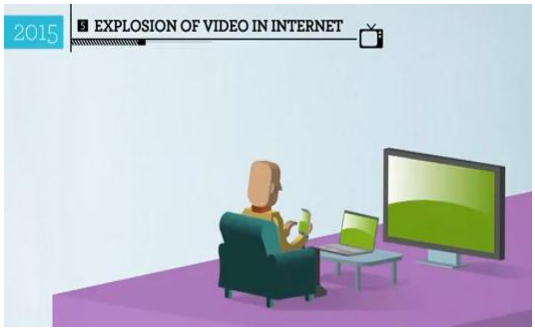
Source: The Nielsen Company

In conclusion, it's not true that the broadcasted TV is dead and there are not many evidences that will die soon. Instead, it will probably lose the preference of the audience for the 'traditional on demand' and 'internet-based on-demand' viewing (Parry, 2011).

3.2.2.2. Multi / mobile devices usage

Furthermore, as shown in technology analysis (last chapter), digital technologies are delivered by screen supported devices. That means that screens of all sizes will become the predominant way in which we receive information and entertainment as Parry (2011) says. Different formats will meet various needs – *"Smartphones are merging with tablets. Computer monitors are merging with television*" (Parry, 2011). The same author refers the "screen-based" media, the "user-control" trend and the "unlimited" amount of content as the key factors to the digital media in the future. The advent of new devices is one of the main reasons for media integration in what is called cross media. Cross media are particularly interesting in what concerns to the range of new opportunities they create in terms of communication, entertainment, learning, and other activities (Prata & Chambel, 2011).

Illustration 16 - Multi Platform User



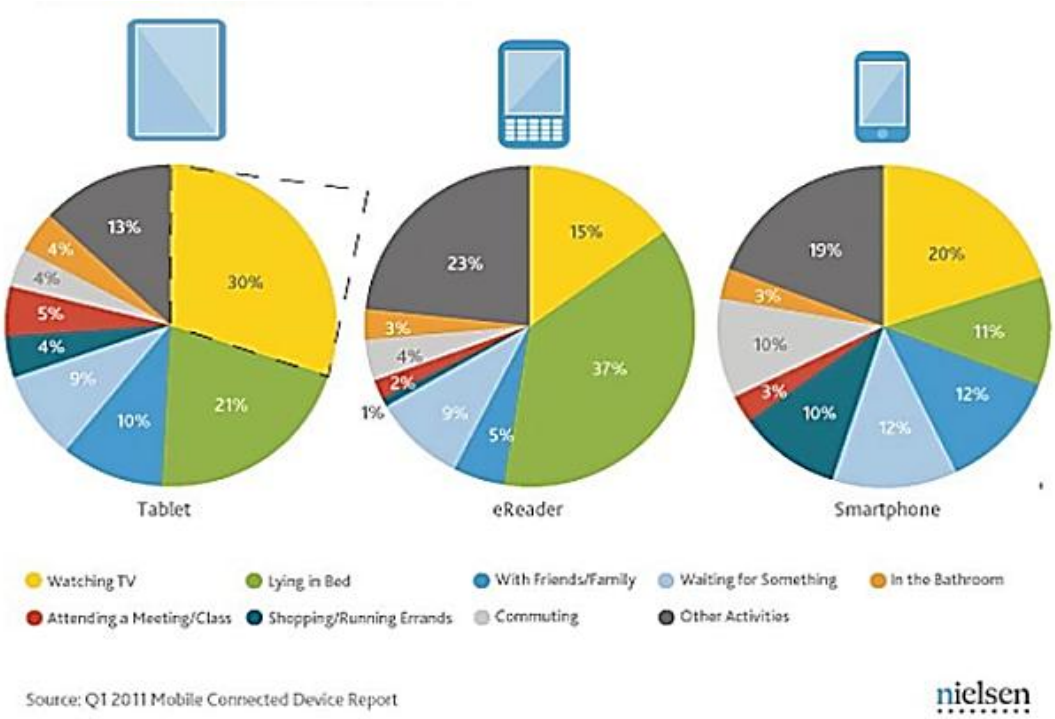
Source: Digital Life: Today & Tomorrow

Based on the Mitsue Venture research[50] all made with 2010 data, the faster internet access, the multiplicity of devices, the increase of offline and cloud storage capacity and the improve of consumers experience are dramatically changing the device's usage habits in terms of video content. The users are getting used to video in internet through multiple platforms specially TV's, tablets and smartphones replacing the physical distribution by download and streaming. However the time is not being divided by all the devices, instead the users are using the devices at the same time. The amount of time spent watching television is still increasing as well as the time using TV and internet simultaneously according to the (Nielsen, 2010).

Looking to some data from appmarket.tv based in a Nielsen's Q1 2011 survey of nearly 12,000 connected device owners, 70% of tablet owners and 68% of smartphone owners said they use their devices while watching television, compared to only 35% of eReader owners. And 61% percent of eReader owners use their device in bed, compared to 57% of tablet owners and 51% of smartphone owners. Furthermore, from the total time using

50 "Digital Life: Today & Tomorrow": Presented in 'MRC European e-Commerce Payment & Risk Conference' – Barcelona, Spain, May 2011

Figure 9 - Time distribution for device usage by location

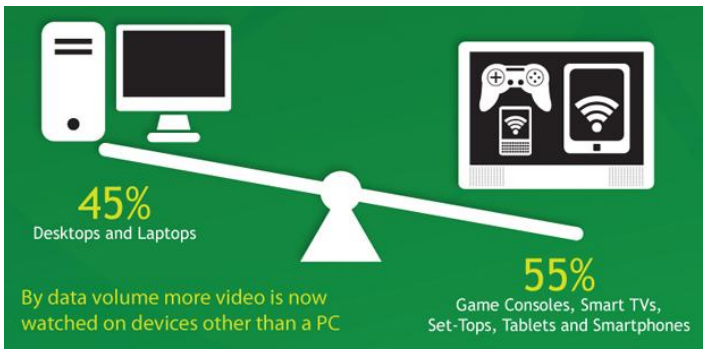


a Tablet, EReaders and Smarphones, 30%, 15% and 20% of it is watching TV simultaneously as shown in the Figure 9.

In fact the devices usage is changing and that happen progressively with the content and devices technology evolution. The people start to use other devices than TV to watch all kinds of video content including the TV's content. The most popular device was the laptop since it had the fastest internet access and good screen quality. At the same time some other people never stopped to watch TV but this time using other devices such as smart phones, tablets or laptops to other activities such as gamming, chatting, or using social networks at the same time (Parry, 2011).

After a first move from the offline devices (TV, magazines, Game consoles or newspapers) to the ordinary computer as top preference entertainment devices, now the trend is to move from the PC to Game Consoles, Set-boxes, Tablets, Smart Phones and Smart TV's since they are now "connected devices". By

Figure 10 - The Post-Pc Era



Source: Digital Life: Sandvine's Network Analytics

data volume, more video is now watched on devices other than a PC as shown in the Figure 10, many times using more than one device to multi-task such as gamming, chatting, or using social networks.

In fact TV still is the "media king" but is now in alliance with many other devices performing changes that will generate a whole new potential of multi-platform media (Parry, 2011).

3.2.2.3. Social TV and video sharing

TV is a privileged way to watch video - a very rich medium, in cognitive and affective terms. In spite of being watched in a passive mode, it may encourage viewers to participate. When watching a TV program, the viewer's frequently feel the will to know more about something or to comment and share their experience in that moment (Vivian, 2011). Such will impelled the TV manufacturers to create interactive and social features, allowing the creating of the concept of "Social TV". According to (WELLENS, 1979), social TV "*represents means of linking individuals together by providing each with an electronically mediated representation of the other's voice and visual presence*". In 2012, social television is a general term for technology that supports communication and social interaction in either the context of watching television, or related to TV content. This concept is in part related to the smart TVs however they are not the same. A smart TV has the technology to allow social interaction and viewing, so can be considered also as a social TV enable device; however a social TV device doesn't necessarily have the smart TV features. Smart TV is always a social TV, but social TV isn't always a smart TV (DeMartino, 2011).

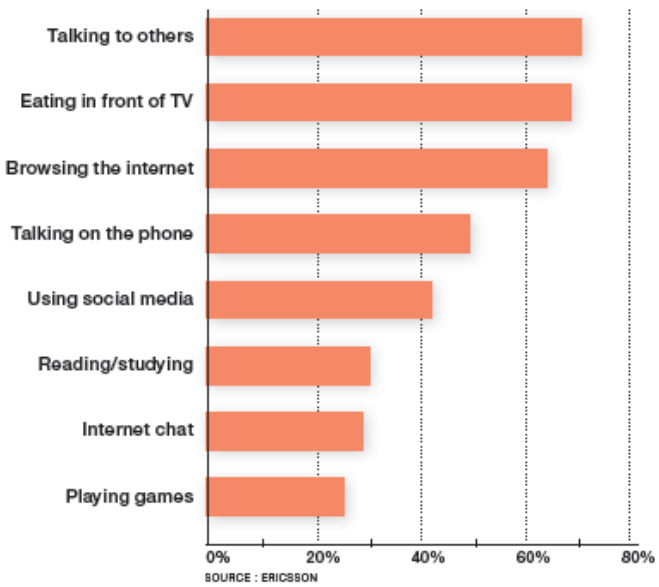
One example of social TV is the iTV – that in its nature allow the possibility to access, interact and share information about the program. As Prata & Chambel (2011) say, we are definitely in a moment of transition, a moment where old media systems are dying and new media systems are being born. The traditional 'spectatorial' culture is giving way to a participatory culture (Prata & Chambel, 2011).

Moreover, the evolution from one-way, analog services to two-way digital and IPTV delivery platforms enabled a new world of possibilities of interactivity. Early features for interacting with content were mostly focused on ecommerce but the growing

importance of "social media"[51] changed the mindset to enable a shared TV experience. The integration of Web-based social networks like Facebook and MySpace into the TV device to enable social TV, it's a reasonable and predictable evolution towards a P2P-based community distribution system called community TV (Klym & Montpetit, 2008).

The evidences of this social revolution are many. In TVGuide.com's presentation[52] the company explained how the TV media is becoming more social and in what different ways. They verified a five million "check ins" in social activity over the last year at the same time users watch TV contents – with series in the top popularity. In fact watching TV had always a social component associated either during or after the moments of the shows. By 2012 the technology allow people to extend bounds of socialization. According to Anders Erlandsson[53], especially in USA the usage of social media is impacting the TV viewing. The majority of the families combined TV with Twitter, Facebook, texting, voice calls and forum discussions about what they watched as the Figure 11 shows. More than 40% uses social media at the same time they watch TV and more than 60% browse on internet.

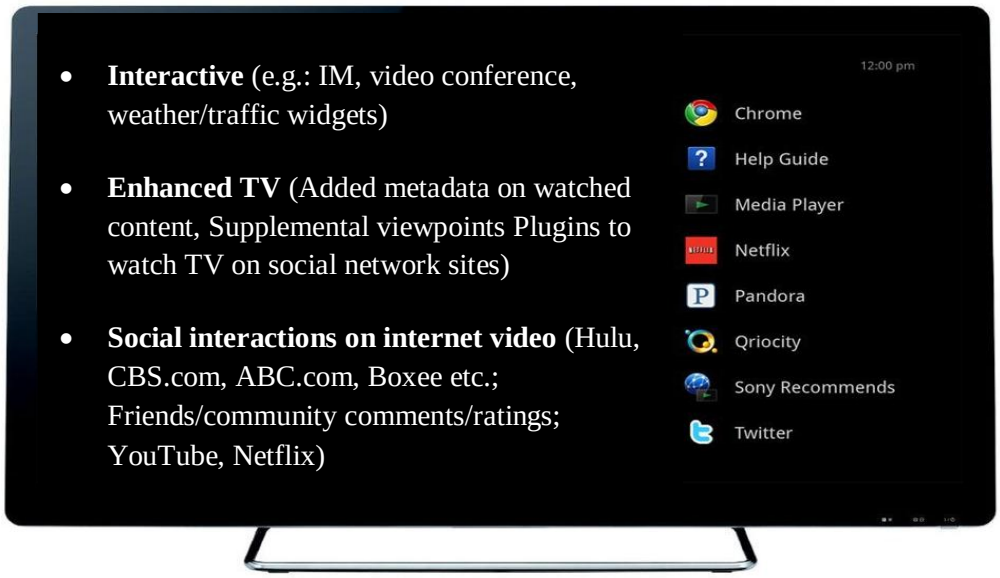
Figure 11 - Consumer activities while watching TV



Furthermore the boom of Social TV applications on TV is enhancing the change and creating new opportunities to increase the social experience and the popularity of this new trend. They could be created by users, by software companies (both to earn money) or they could be created by announcers as a way to be present in a relevant way to their customers. Currently, the main kinds of apps available to TV devices are:

[51] Andreas Kaplan and Michael Heinlein define social media as "a group of internet-based applications that build on the ideological and technological foundations of web 2.0 and that allow the creation and exchange of user-generated content."
[52] During Mashable Media Summit 2011 subordinated to the theme: "The Future of Social TV".
[53] Anders Erlandsson is in charge of the research for Ericsson's annual TV and Video Consumer Trends Report. He has studied consumer behavior, TV and media since 2005.

Figure 12 - Kinds of Social TV applications



TV image source: infobarrel.com

Smart TVs support all the enabling the access to all kinds of media content and experiences, even with more than a screen or device. Moreover, social media apps are some of the most popular since they growth in importance in the last years. Actually they continue to influence how consumers interact with brands and share content every day. Increasingly, TV viewers leverage social media as a platform to talk about and engage with TV content. These conversations are not only opening new channels for consumer engagement with their favorite TV shows and fellow fans alike, but also are providing insight into which viewers are driving the conversations and when.

Finished the analysis to the behavior regarding television, the next step is to understand the behaviors regarding advertising. This is important because advertising is one of the most important points of analysis in all the study. Having in mind that this study wants to understand what will happen to the future of TV advertising, the actual perception and reviews of the consumers have a strong influence and importance.

3.2.3. Behavior regarding Advertising

"Consumers will continue to gain more power over content, but they will not 'skip' all forms of advertising. Fewer will pay for all the content they want to consume; there will be new models to trade attention to advertising for content."

Account Executive, full-service media agency, USA

As the citation before refers, consumers' behavior regarding advertising is changing since the consumer is getting more individual and consequently more complicated to understand. The following sub chapters will focus on reasons to the consumer to gain control over the advertising detailing the perceptions about it.

3.2.3.1. TV Advertising consumption

It is a well-known problem that the surplus of advertising all over the channels reduced its effectiveness, trust and value. Advertising in both traditional media and the Internet is very easily ignored by the audience, losing its perceived value and becoming even annoying (Wang, Zhang, Choi, & D'Eredita, 2002). In fact, the high number of advertisements competing for individuals' attention on a daily basis lowered the chances of careful processing. The time and the attention of the audience are not infinite. The result is that they can't dedicate the adequate attention to each commercial. The competition is becoming even more intensive with the online advertising due, again, to the excessive number of ads (Wang, Zhang, Choi, & D'Eredita, 2002).

According to "Advertising Glossary"[54], effective frequency is the "*exposures to an advertising message required to achieve effective communication. Generally expressed as a range below which the exposure is inadequate and above which the exposure is considered wastage*." In 2012, the traditional TV spots are generally far from the effective communication. The same individual is exposed several times to the same spot without having into account if the individual cares about it of if he is watching it for the tenth time.

In fact, according to (Herr, 2007), based on Nielsen statistics, the number of 30-second TV commercials seen in a year by an average child is 20,000. Moreover the number of TV commercials seen by the average person by age 65: 2 million. The numeric

[54] http://www.advertisingglossary.net/definition/1092-Effective_Frequency

explanation to these facts is simple. According to the 'American Association of Advertising Agencies (AAAA)' and the 'Association of National Advertisers, Inc. (ANA), in the primetime slot, non-programming time on network television was 16:43 minutes per hour. The daytime level of advertising was 20:53 minutes per hour. Network news showed 18:53 minutes of commercials per hour and late night news aired 19:06 minutes of ads per hour.

Furthermore, the exposure to the TV commercials is not always maddening. A simple way to deliver a commercial to the right target is to let the target find it and watch it. John Hallward[55] analyzed the top viewed TV commercial on YouTube and among the top 20 video ads selected by Ad Age, the average viewing count (on YouTube) for the ten ads[56] with the highest number of 'views' was about 11.3 million. Comparing these levels of exposure with TV, the conclusions are not very encouraging (Hallward, 2010). However the author refers that despite the week response to the audience in this case there are two crucial advantages of this kind of exposure: first, those who watch the commercials are much likely to take full attention, suffering the corresponding impact of it than those on TV. Second, those 11.3 million viewers were impacted with a zero dollar cost per contact (considering that the commercial was produced to TV) (Hallward, 2010).

3.2.3.2. Advertising trust and effectiveness

Several studies show a general negative perception attitude towards advertising. Apart from the excessive number of commercials, the majority of the ads reach individuals when they do not want or do not need. That creates a reaction that could be simply the avoidance and overlook or even worst the irritation. In both options the message wasn't delivered (Ducoffe, 1996). This reaction to advertising is valid for many medium, but regarding our object of study, TV is one of the most affected medium by the surplus of commercials. Data from (Ericsson, 2011)[57] shows the "most important features" and the "willingness to pay" features in the moment of buying a television. In the first criteria, the third most wanted is "no commercials" (out of 15), appearing again in the second criteria in the fourth position (out of 15). The TV commercials have no effectiveness by

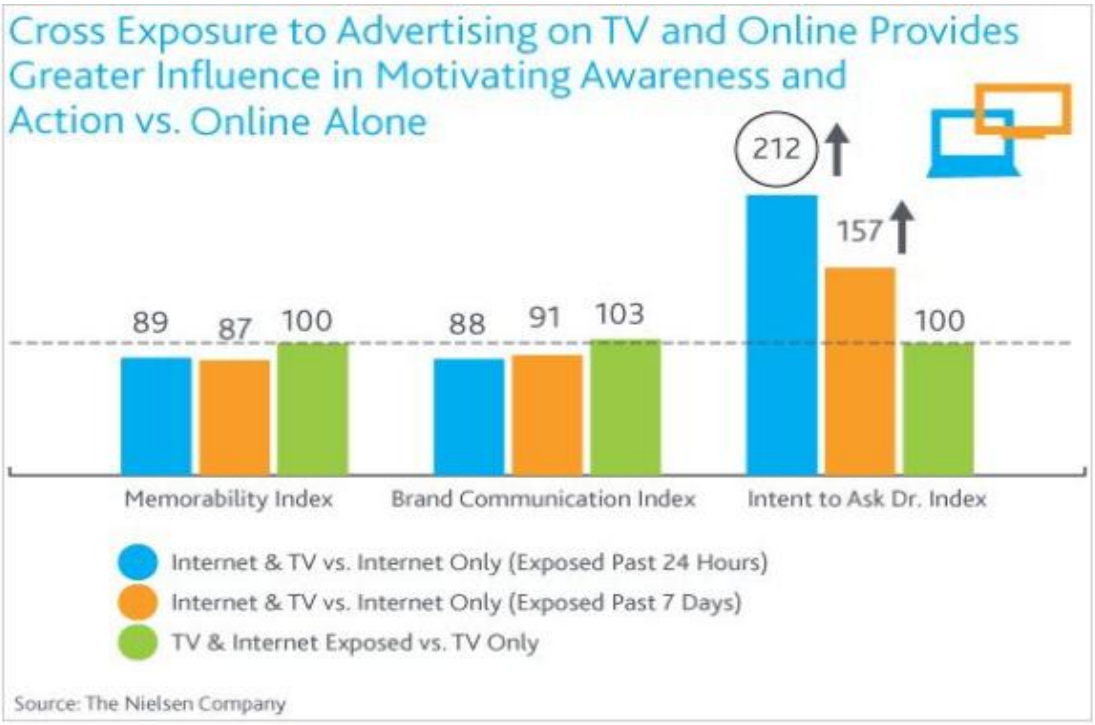
[55] John works in Ipsos ASI, with a global role for product development/product management. He is a published author, "Gimme!" (2007), and the 2008 winner of the ARF's "Great Minds Award" for Innovation (New York).
[56] These are English language ads
[57] Appendix 13

2011, being even so annoying that the people is more willing to pay to avoid it, than to have 3D TV or personalized content.

However, the study of TV advertising doesn't relate anymore only with traditional commercials. Online advertising and online video advertising is crucial to analyze also since smart TVs are "connected". The Internet is in 2012 a very good medium for advertising growing each year in revenues and users. So far, despite the fact that TV still is the most relevant media, online ads become a worthwhile alternative to traditional media (Wang, Zhang, Choi, & D'Eredita, 2002). According to the same authors, internet and web have the power to support goal-oriented consumers. This can be used by directional online ads through data based marketing and revolutionize the internet based medias like smartphones, tables or connected TV's.

The Nielsen Company presented data (Figure 13) that supports that airing an ad on TV and online, greatly increases its effectiveness. In a study conducted by the same company, about the direct-to-consumer drug advertising, exposure on TV and online, there was major news. The percentage of patients that ask their physician about the drug was more than twice on both mediums than on TV or internet alone. This percentage grew significantly higher when consumers were isolated by how recently they had seen the ad.

Figure 13 - Effectiveness of advertising online and on TV together



Those who watch the ad both online and on TV in the last seven days were 157% more likely to ask their doctor about the drug than consumers who had only been exposed online in the last seven days. Furthermore, consumers who had been exposed to the ad both online and on TV in the last 24 hours were 212% (or more than four times) more likely to ask their doctor about the drug than consumers who had only been exposed online in the last 24 hours. There were many other conclusions on that study, but the following were the most important:

- Cross-exposure was particularly helpful to the brand communication of drug ads that were otherwise seen on TV only.
- Cross-exposure has a similar impact on an ad's memorability with consumers as it does on an ad's brand communication.
- Premium in-stream video ads which aired as part of a full-length TV episode online generated significantly higher levels of ad recall and brand recognition than other internet video, display or standard TV ads.

Furthermore, the report showed that the cross-exposure increases audience in a very significant amount. The company wanted to evaluate the impact on the schedule if dollars were moved from TV to online. The larger impact of moving dollars to online is capitalizing on cross-platform media synergies, or the percent of sufferers who were reached on both TV and online. This figure more than doubled, from 7.5% of the patient universe to 18.1% (Nielsen, State of Media Consumer Usage Report, 2011).

As referred before, the majority of the audience doesn't want more commercials on traditional TV. However that doesn't happen in the same way with online TV viewers. A comScore's survey, found out that the viewer's online will accept up to 75% more advertising per hour – in order to determine viewer receptivity to advertising when watching TV shows online, survey respondents were asked questions regarding their advertising tolerance. Results also indicate that online advertising's "sweet spot" is between six and seven minutes per hour, 50-75% higher than the approximately four minutes per hour that is currently consumed by ads delivered online as part of TV content.

3.2.4. Considerations

Resuming this chapter, the consumer behavior regarding TV and advertising is suffering an intense change. These are the main outputs:

- More than ever, the audience love to watch TV and watch it online, off line, in a TV set, in a tablet or smartphone. This media is not dead, instead is still growing and evolving to something better.
- Moreover the consumers are being exposed to an excessive number of hours of commercials and advertising in general. In consequence its effectiveness is not as high as could be. However is higher only if blended with others medium, especially internet.
- The consumer's appear to be concordant that advertising has to improve and the technology can be a great way. Smart TV's is very well positioned to be the solution to such upgrade in both TV and advertising practices.

If the TV is evolving, the advertising has to do so. It needs to become more relevant, personalized, useful, interesting, and meaningful. The consumers want, as they always wanted, attention and care from the brands as the following citation says:

"*People don't care how much you know until they know how much you care - about them and their problems."*

Robert Cavett

"Half the money I spend on advertising is wasted, and the trouble is I don't know which half."

William Hesketh Lever

3.3. Advertising

Advertising is the third and the last topic of the literature review. It has the objective of collect the knowledge about the theme in general and about the TV and online advertising, the market and the trends in concrete. So much has been said about changes in the business and advertising world, but not enough about TV advertisement change. There's a new world of opportunities that will be described in the next sub-chapters.

3.3.1. Fundamentals

In the marketing field of knowledge, promotion is one component of the marketing mix (four P's)[58], being advertising on of the tools available to let the audience know about the companies' products (McCarthy, 1981). Along the years, this tool evolved and got more complex and consistent being used for the companies in a large scale and, according to some author, in an excessive way losing effectiveness (Illustration 17).

Illustration 17 - Excessive and non-effective advertising in Hong Kong

Source: drivingtraffic.com

An individual that lived in the last century had, during its life a long exposition to ads and commercials of several kinds. We read, watch, listen and look to advertising since

[58] Promotion, price, placement and product (McCarthy, 1981)

we were a child. Even so, it's hard for a common consumer to define it. Advertising is "*a complex form of communication that operates with objectives and strategies leading to various types of impact on consumer thoughts, feelings and actions*" (Burnett, 2006, p. 5).

From the management point of view, it is also one of the facets of marketing where is harder to know what "works" (Batra, 1996). In fact, there are several themes surrounding the advertising management knowledge such as: legal aspects, economic and social impact, models and tool to advertise, targeting, media choice, evaluation metrics, budget, etc. Managing the advertising is a complex field of marketing studies because it requires knowledge in analysis, planning, control and decision-making (Batra, 1996). However, it doesn't stop the professional to look to it as a fascinating subject – "*the most fun you can have with your pants on*" as Jerry Della Femina[59] once said.

Some authors believe that Advertising had change in the new millennium, creating new definitions and exposing the features of the so called "modern advertising". The five basic components to (Burnett, 2006) are:

- Advertising is a paid form of communication, although some forms could use donated space and time (such as PSAs[60]).
- Not only is the message paid for, but the sponsor is identified.
- Most advertising tries to persuade or influence the consumer to do something.
- Advertising reaches a large audience of potential consumers.
- The message is conveyed though many different kinds of mass media, which are largely no personal.

These five main components lead us to a final definition of advertising: "*is paid persuasive communication that uses nonperson mass media and other forms of interactive communication to reach broad audiences to connect and identified sponsor a target audience*." (Burnett, 2006, p. 25).

[59] Jerry Della Femina (born 1936 in Brooklyn) is an American advertising executive and restaurateur. Starting from a poor Italian background in Brooklyn, he eventually became chairman of Della Femina Travisano & Partners, a major advertising house that was billing $250 million per year, had 300 employees, and offices in both New York and Los Angeles.

[60] A public service announcement (PSA) or public service ad is a type of advertisement where the objective is to change the public interest, affecting public attitudes, and potentially stimulating action.

Another author (Arens, 2009), define the components of advertising in a similar way, highlighting the "communication feature", the "structured form", the "composed elements" and "no personal". The author means with "no personal", that it's directed to groups of people rather to individuals.[61]

Having in mind the academic frame of advertising will be next point out the types and mediums used to advertise from the most primitive to the most modern ones. This is important to comprehend what are the actual alternatives for TV advertising and the flaws needed to be filled.

3.3.2. Types and mediums used for advertising

Advertising is complex also because of the several kinds of different advertisers. According to (Burnett, 2006), there are seven major types of advertising: brand, retail or local, direct response, business to business, institutional, non-profit and public service. These can be advertised in the following kinds of mediums:

- Print and out-of-home media (magazines, newspapers, packaging, outdoors, etc.)
- Broadcasted (Radio, Television, Film and Video, etc.)
- Interactive and alternative[62] (Internet, e-mail, video games, etc.)

Even with this structured definition of available mediums, virtually any medium can be used for advertising. Commercial advertising media can include wall paintings, billboards, street furniture components, printed flyers, radio, cinema internet and television adverts, web banners, mobile telephone screens, shopping carts, web popups, skywriting, bus stop benches, human billboards, magazines, newspapers, town criers, sides of buses, banners attached to or sides of airplanes ("logo jets"), in-flight advertisements on seatback tray tables or overhead storage bins, taxicab doors, roof mounts and passenger screens, musical stage shows, subway platforms and trains, elastic bands on disposable diapers, doors of bathroom stalls, stickers on apples in supermarkets, shopping cart handles, the opening section of streaming audio and video, posters, and the backs of event tickets and supermarket receipts. Any place an

[61] The last characteristic of advertising analyzed is the one that suffered the greatest resolution in the last years. With the advent of internet the targeting capacity of the agencies is now better than ever, being possible to reach an audience of millions personalizing the publicity for each individual person with a low cost per contact.

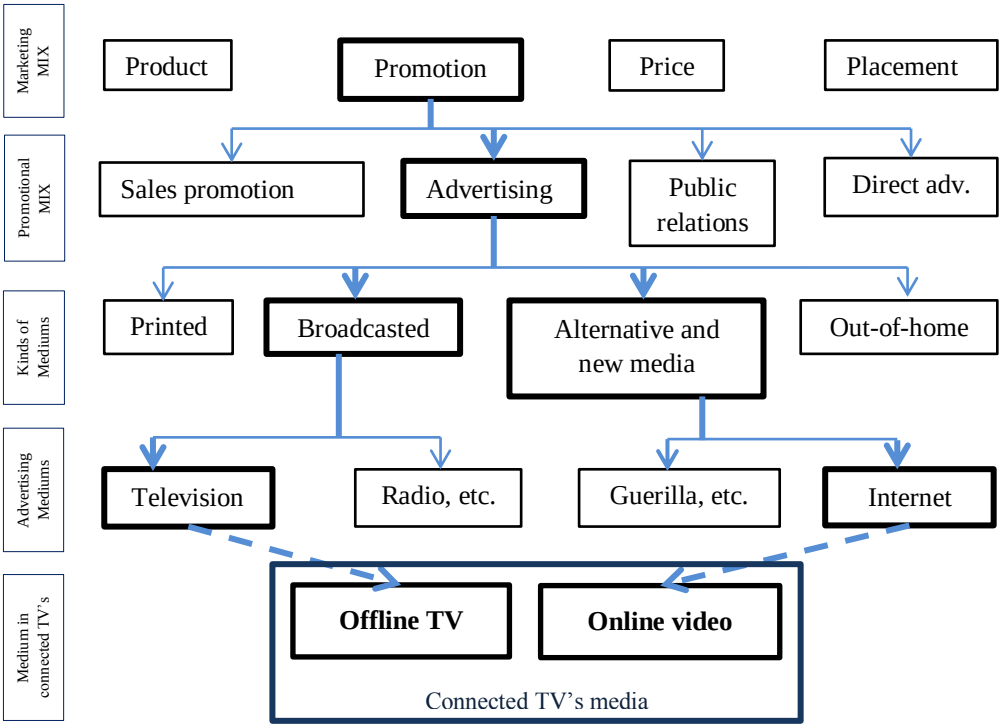
[62] Also called new media

"identified" sponsor pays to deliver their message through a medium is advertising (Wikipedia, 2012).

To the study conduct in this paper its important to understand the TV advertising. TV has been traditionally characterized as one of the broadcasted media alongside with the radio (E. Belch & A. Belch, 2004). That definition had in its basis that the content shown on TV was broadcasted. In 2012 the ways of get TV programming are far more complete than the old broadcasted, even so, that one stills the most popular[63] (Bennett & Strange, 2011). Therefore, the connected TV, object of all the research, is a TV with internet connection. That means that, in terms of advertising, connected TV's are a mix of two kinds of media: broadcasted media and alternative / new media.

However those two big groups have several advertising mediums inside, but only two are relevant for the study: "offline TV advertising" and "online video advertising", because these can be considered the two main sources of advertising content. Bellow the visual explanation.

Figure 14 - Most relevant advertising Media in connected TV's



As shown in Figure 14, from the marketing mix we follow promotion, then advertising, and then, broadcasted and alternative media. From the first we will get Offline TV and

[63] Appendix 6.

from the second the online video[64]. The following topics will explain what is the Offline TV Advertising and the Online Video advertising and its pros and cons.

3.3.3. Offline (traditional) TV advertising

Television is one of the traditional broadcasted media and also the most popular mass media. It has been part of the human lives for decades, because of its entertainment / information features and part of the companies' lives because of its "communication skills". Television is used for advertising because it tells stories, engages emotions, creates fantasies and has great visual impact. Is also used to explain how a product or service works due to its action characteristics, also brings brand images to life and adds personality to a brand (Burnett, 2006). According to (Harte, 2010), the forms of television commercials depend on whether a network, local or cable schedule, but the most popular are the following[65]:

- Standard Interstitial Ads - Standard TV ads are relatively short promotional messages (typically between 30 to 60 seconds) that are placed between media segments (interstitial) in a TV program. The message form in these spots can be:
    - The Slice, or "Slice of Life", is a dramatization (story). To make an effective Slice, create a situation where the product plays a key role.
    - A Talking Person presents a spokesman for the brand. A testimonial commercial is a type of Talking Person.
    - A Demo is a presentation of the product's usage.
    - The Visual primarily uses imagery to sell the product.
    - Graphic Collage is a postmodern style often used in music videos. It appropriates audio and video, and may employ supers.
    - A Combination uses two or more of the last types together.
- Expandable TV Ads - are additional segments of an advertising message that can be selected by the viewer (ad telescoping).
- Interactive TV Ads - are promotional messages that allow the viewer to select and possibly submit information that controls the display and operation of the promotional message.

[64] According to the Bennett & Strange (2011) classification of the mediums.
[65] In the Appendix 15 there are visual examples from the author.

- Overlay TV Ads - Overlay TV ads can be simple icons or messages that are inserted on top of the program display or they can be animated and interactive TV Widgets.
- Embedded TV Ads - are communication messages that are merged into promotional messages (such as product placement).
- Bookmarking Ads - are ads that can be marked for selection and viewing at a later time.

Furthermore, there are Pros and Cons of using television advertising instead of other broadcasted medium or even other mediums. Table 4 based on Burnett (2006), will expose that characteristics.

Table 4 - Pros and Cons of TV advertising

PROS	CONS
Mass coverage	High production cost
Low cost per contact	High air-time cost
Some selectivity	Limited selectivity
Impact (visual, audio, etc.)	Brevity (short time contact)
Prestige / social dominance	Clutter (many ads competing for attention)
Selectivity (cable)	Zapping and time-shifting
	Source: (Burnett, 2006)

Television advertising is often the best choice to the brands to communicate despite its limitations. There are differences from the broadcasted TV, cable or IPTV, but in 2012 the most of the advertising time in TV is fulfilled with 30 second spots. The connected TV's are expected to change that paradigm, helping the prevention of many actual limitations keeping the pros. Due to several Smart TV features, commercials will improve in interaction and customization, reducing the noise and lose of effectiveness, lowering the air-time costs thanks to the internet (Burnett, 2006).

Furthermore, features of TV advertising such as audience and campaigns' results measurement are expected to suffer an improvement. By 2012 and according to (E. Belch & A. Belch, 2004), the size and composition of television are measured by ratings services that often give limited insights with several mistakes. The most common technique is to gather viewership information from a sample of households and then projects this information to the total viewing area. The methods of collecting information are diaries, electronic meters, recorders and personal interviews.

In order to understand if the advertising campaigns are being views, impacting the audience, this is the most common used way. There are another devices and techniques that never became popular because of their lack of effectiveness. In fact, TV is probably the media that where is harder to evaluate an advertising campaigns and that's one of the very first topics to be concerned about in the next generation of TV.

3.3.4. Online video advertising

The online video advertising is a kind of online advertising but due to Smart TV's aggregation of internet on TV, it will compete in a short time with TV advertising and that's why it's important to be study. The online advertising is only possible because of the appearance of internet, one of the most popular and mainstream kinds of new media. Generally, internet advertising has the following pros and cons:

Table 5 - Pros and Cons of internet advertising

PROS	CONS
Relatively inexpensive, quick and easy especially to niche markets.	Is not performing perfectly (yet).
The ultimate research tool; best measure features.	There's resistance to buy and trust online.
The most flexible.	Surplus of content; hard to select and focus.
	Source: (Lane, King, & Russel, 2005)

There's no contemporary analysis written by known authors about the pros and cons of video online advertising, however is reasonable to assume some changes in the table before. Due to the visual power of the video, "impact" can be considered a great pro.

Despite the recent adoption in large scale of online video ads, the verified growth is stunning. The overall investment is far from being the most relevant, but the growing trend is an evidence of what could be its significance in the future (Table 6).

Table 6 - US Online Ad spending, by format, 2010-2015

billions

	2010	2011	2012	2013	2014	2015
Search	$12.00	$14.38	$17.03	$18.85	$20.19	$21.53
Banner ads	$6.23	$7.61	$8.94	$9.93	$10.97	$11.73
Classifieds and directories	$2.60	$3.00	$3.35	$3.65	$3.98	$4.29
Video	$1.42	$2.16	$3.09	$4.20	$5.64	$7.11
Rich media	$1.54	$1.66	$1.73	$1.74	$1.73	$1.68
Lead generation	$1.34	$1.42	$1.45	$1.47	$1.50	$1.52
Sponsorships	$0.72	$0.91	$1.05	$1.18	$1.32	$1.47
Email	$0.20	$0.16	$0.16	$0.17	$0.17	$0.18
Total	**$26.04**	**$31.30**	**$36.80**	**$41.20**	**$45.50**	**$49.50**

Note: eMarketer benchmarks its US online ad spending projections against the IAB/PwC data, for which the last full year measured was 2010
Source: eMarketer, June 2011

128163 www.eMarketer.com

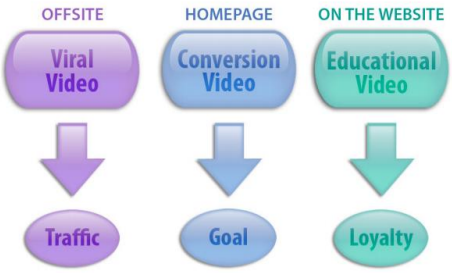
Going back to the term 'new media', it is an effective catchword to describe the digital delivery of media via the internet, DVD, digital television and any other 'newness' such technologies have

brought to media more generally (Harries, 2002). On other hand, according to (Siegel, 2004), internet (or online) advertising is the promotional actions taken inside online environments, being the most visible banner ads, sponsorships, interstitials, rich media pop ups, overlays, webcast ads, in-stream, mini movies and advergames[66]. They are commercial and sometimes noncommercial messages distributed over the internet paying and identifying the sponsor.

Online video advertisements usually come in the form of commercials via Flash presentations, podcasts, web video, contextual video advertising, in-stream video advertising and video banner ads (ReelSEO.com, 2011). The online video advertising can have many kinds (Figure 15), but some of the most popular by 2012, are the "viral" ones. A video cannot become viral just because the brand wants. But those who can get that status are certainly very well successful, adding value to the company and the empathy of the costumers. Brightcove[67] recently published their "Top 6 Reasons B-to-B Marketers Need Videos" as the follows:

- Grab people's attention instantly
- Tell your story in less time
- Bring your ideas to life
- Make your site stickier
- Create a buzz with viral video
- Bring your website into the 21st century

Figure 15 - Kinds of business video



Source: (Sevitt, 2010)

Analyzing that list into three types of video based on their natural homes, there are three kinds of online video for business: Viral video, conversion video and educational video. Those have different objectives as represented in Figure 15 (Sevitt, 2010).

Furthermore the potential of online video advertising is enormous and several researchers and marketers are studying how to fully make progress of it. Scientists from MIT are studying ways to consolidate, sort, and prioritize video content gaining the ability to find content that is of interest to them and their community. For that propose, dynamic stream algorithms were created and tested with success. According to the author the same is done with video ads, so the video online commercials can be

[66] The author does not recall all the online video kinds available in 2012
[67] Brightcove is a Cambridge, MA based company that produces an Online Video Platforms (OVP).

delivered just for those who find it relevant (Martin, Santos, Shafran, Holtzman, & Montpetit, 2010).

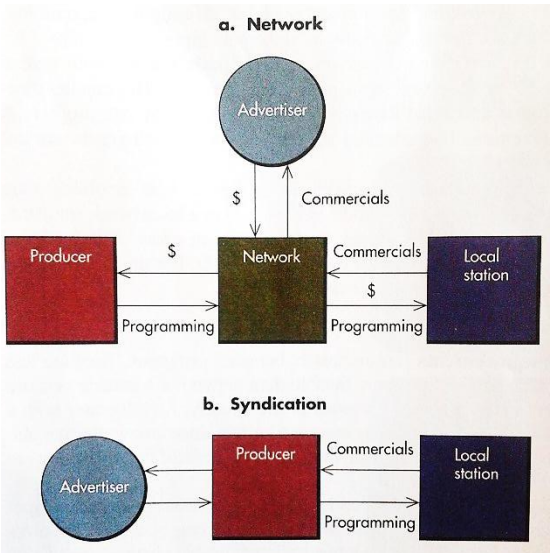
Further research is also being conducted about how to improve the online video ads effectiveness due to the growing number of advertisers that use that kind of promotion such as models of results measurement, interaction, customization, and costumer experience. Connected TV's will speed up that interest since the number of target will substantially grow as well as the possibilities in terms of visual impact and experience (Parry, 2011).

3.3.5. TV advertising industry

It is very important to understand the player of the TV advertising industry. They are some of the stakeholders for whom it is more important to be close to this possible revolution. They are also some of those who have more influence in the changes in the paradigm. The TV advertising industry has four main players: the *advertisers* (clients) such as Coca-Cola or Mercedes that sponsor advertising for themselves and their products. A*gencies* who assist the creation of the plan, prepare the campaign and other promotional materials. S*uppliers* who assist both – advertisers and agencies – creating the ads. Finally the *media* who sell time and space to carry the advertiser's message to the targeted audience. The TV stations can be organized in big networks[68] (Arens, 2009).

The most popular models to define the relations between the main players are the *network* and the *syndication* as represented in Figure 16. In the first model, advertisers purchase time from one of the broadcasted networks spreading the message throughout many affiliated stations. In the second model the advertiser deals with the producer that purchases time directly with the stations, rather than going through a network (Arens, 2009).

Figure 16 - TV network and syndication distribution models



Source: (Arens, 2009)

[68] Main TV networks: ABC, CBS, NBC, FOX, WB and UPN.

Like the "*invention of television was no single event, (...) it depends on a complex of inventions and developments*" (Williams, 2003, p. 7), its evolution and change isn't a simple and linear process. With the objective of create assumptions and predictions about the future of TV advertisement is necessary to understand the rigid structure of the sector because the relations between them as well as their wills and believes have influence in acceptance of future TV advertising realities.

3.3.6. Future media and advertising approaches

The future is reserving changes but not only in television advertising. Media and advertising in general are changing and even if they are not directly related, some trends and signals of change will help the conducted research.

The advances in mass communications technology over the years, especially the digital ones, caused huge changes and brought benefits in terms of the effectiveness and efficiency of the advertisements. The TV will be one of the most affected in a good way, so it can continue to be the most relevant promotion media in the landscape. The contents are each day more personalized and so the advertising has to be (Bennett & Strange, 2011). Also, other media are overtaking many of the "traditional" media such as television (not smart), radio and newspaper. The cause is not new and it's mainly related to the increasing usage of internet as well as the growing number of "connected devices" (Bennett & Strange, 2011). The digital signage is becoming the major mass media in history since it has the ability of reach specific target in large number for a less money (Bennett & Strange, 2011).

For instance, since the arrival of "entertaining" advertising, the audience may like a commercial in such a way that will watch it later on internet (Parry, 2011). The greatest part of the advertising community is not yet applying enough effort to make it common; however there are thousands of ads available in platforms such as YouTube to anyone willing to see. Some other manifestations of this new media advertising landscape is the web-based advertising, online video ads (last subchapter) with direct response features, mobile ads, social networking advertising among others. This last one is in special position to become one of the main due to its targeting characteristics. Since the social networks have all the data about its members, the possibility of deliver the right message to the right person is huge (Parry, 2011).

Moreover, the niche marketing is increasing its importance using niche targeted ads. Internet was the great booster of this kind of marketing. Advertisers have an increasing ability to reach specific audiences. There are several companies applying this method, for instance, to create on-demand video menus (Lotz, 2007). This trend has also a utility to TV since because of it new advertisers can enter the market of TV advertising. Instead of the traditional TV commercials, the personalized ads can hit only the needed audience decreasing the cost of the commercial (YuMe, 2012).

The adverteinment is also clearly market trend. There are two main kinds of advertainment, advergaming and in game advertising. The first can be a repurposing of an existing, well-known game to feature the brand in the gaming environment to creating more elaborate, custom-built games that involve detailed virtual experiences with the brand's product (Wise, Bolls, Kim, Venkataraman, & Meyer, 2008). The second is considered by many advertisers and agencies a crucial facet of their modern communications objectives, embedding virtual promotion pieces in a game's environment (Lewis & Porter, 2010).

Illustration 18 - In game advertising example in the game 'FIFA'

Source: kotaku.com

3.3.7. Considerations

The advertising chapter gave an important contribute to the conducted research in the following ways:

- Advertising has been the same on TV for the last decades and it's becoming more and more ineffective.
- There are many advertising enabled medium emerging. However TV stills the best to advertise, the combination of more than one medium could improve the audience experience.
- There are strong evidences that TV advertising will continue since the TV itself is growing in audiences, but the ways that ads will be in the future will change due to the media crossing and convergence.
- The online video advertising is "stealing" attention and budget from other channels and it's expected to continue, especially if the Smart TV's pass through the tipping point[69] of success.
- TV advertising industry has three main players: advertisers or announcers, producers or agencies and networks.

The traditional TV is not traditional anymore. In all its functions and purposes it's ready to evolve from a static media to a fully interactive, social and connected new concept hands hold with other devices. Likewise the advertisement inside it has a new world to explore and innovate beginning a new era.

The following chapters will define the frontiers of the exploratory research as well as the steps to conduct it with success in order to accomplish the objectives and gather valuable outputs.

[69] Gladwell defines a tipping point in its book (with the same name) edited in 2000, as "the moment of critical mass, the threshold, the boiling point." As Gladwell states, "Ideas and products and messages and behaviors spread like viruses do." (Wikipedia, 2012)

4. Conceptual framework

The aim of this chapter is, after identify the most important themes to study, formulate the consequent research propositions, based on the literature review. Those propositions will simplify the data collection and analysis having each one a frame of reference[70] to that same objective. It's crucial to have in mind that due to the very recent characteristics of the theme, there's no fully developed theories about Smart TV advertising. That means that the propositions were based on mixes of many authors opinions related in the described way.

4.1. Research objective and research hypotheses

As presented in the introduction, the main objective of this study is "*to increase the understanding about the impact that smart TVs will have on TV advertising*." Knowing this, and after the identification of the major drivers of change in TV advertising and consequent literature review, several conclusions were taken in order to define the hypotheses to test in the research.

4.1.1. First Hypothesis: the dramatic change

There are several evidences along the literature review that a change in TV advertising is about to take place. First, according to the historical background, the most important moments in TV advertising history happen because of fundamental changes in one or more, of the identified drivers of changes: Technology, Consumer Behavior and Advertising. It was also an output, that the advertising industry follows the technology and the consumer behavior trends in order to improve the value and effectiveness of advertising (Parry, 2011). According to these, in the literature review is identified that the three drivers are suffering a change, even if is not fundamental. In technology, the main change is the appearance of the new device Smart TV (Kovach, 2010) and also other complementary TV enabled devices (Bennett & Strange, 2011). In terms of consumer behavior, the audience is still watching TV but in different devices, sometimes at the same time and each day more on demand instead of broadcasted (Parry, 2011).

[70] Defined in the Merriam-Webster dictionary as the set of ideas and conditions that determines how something will be approached (merriam-webster, 2012).

The advertising is improving its effectiveness, relevancy and interactivity with internet, what is favorable to the adoption of such practices in a convergent media like Smart TV (Harte, 2010). Furthermore the audience is receptive to the adoption of Smart TV according to the conclusions taken from the (Comstock & Scharrer, 1999) model, and there is also a great receptivity and motivations from the audience to be pleasant with new ways of advertise in general and specifically in television medium (Nielsen, 2011).

To avoid ambiguous conclusions, a frame of reference was created to define if the change is dramatic or not. That frame was deduced having into account a comparison with past events in the TV advertising history. The most remarkable episodes in the TV advertising history were: First TV commercial, the Single Sponsor era, the Magazine concept, the 30 seconds spots era and the Cable / DVR advertising era (Williams, 2003). The expected changes will be considered "dramatic" if is considered that they will have similar impact in TV advertising i.e. if they are comparable to the historic events described. Consequently, the first hypothesis is:

There will take place a dramatic change in TV advertising, similar to the biggest historical revolutions on TV advertising.

4.1.2. Second Hypothesis: characteristics of the change

The second hypothesis born from the necessity of understand what changes will take place. This proposition is independent from the first because it's intended to comprehend what will change independently of the dramatic characteristics of that change. As a criteria to formulate the proposition of the changes will be considered the paradigms of TV advertising according to E. Belch & A. Belch (2004).

There are several identified paradigms of the traditional TV advertising. These are the paradigms: Creativity and Impact; Coverage and Cost Effectiveness; Captivity and Attention; Costs; Selectivity and Targeting; Measurement. The model next presented has the objective of propose a comparison between the traditional paradigms for E. Belch & A. Belch (2004) and the new realty of each paradigm after the entrance of Smart TVs in the market. To the author's model will be added the paradigm of "engagement and interactivity". It is proposed that this should become a new paradigm since Television change from a one way to a two way communication medium (Nielsen, 2011). The necessary data to enunciate the stat of the paradigms after the change has its

origin in different author referred in the end of each paradigm. Together, they will formulate the new model of paradigms proposed. It's important to notice that to the 2012's paradigm, the smart TV advertising will be considered not only as an "only device" tool but a crossed media tool. In other words, in a Smart TV advertising campaign, the ads can figure across multiple devices as long as the Smart TV stills the principal and the others complementary. Traditional TV advertising paradigms (E. Belch & A. Belch, 2004) (BEFORE) and the proposed change (AFTER) are presented next:

Table 7 - Advertising paradigms, before and after

Paradigm		Description
Creativity and impact	before	The combination of image and sound offers tremendous creative flexibility and makes possible dramatic, lifelike representations of the products and services.
	after	Significant improvements in the image (HD and 3D) and sound quality as well as the combination with motion detection, facial recognition and voice control (CES, 2012).
Coverage and Cost effectiveness	before	TV advertising makes it possible to reach large audiences. Regardless the gender, income, education, location, etc. Because of that, it's considered by the marketers as very cost efficiently.
	after	Smart TV advertising makes possible to reach larger audiences through broadcasted and IP television (Kovach, 2010). It also more cost efficient then before due to the cheaper prices in the online (textual and video) advertising that could be seen in TV (Lane, King, & Russel, 2005).
Selectivity and targeting	before	Some criticize TV advertising for being non-selective medium. But due to the different audience in each channel, program or time, there has a very accurate targeting capacity as well as flexibility to choose the best time and place to their interests.
	after	There are improvements due to the online advertising features (Lane, King, & Russel, 2005). Advertising can be targeted at an individual level using the profile logins and the contextual and behavior targeting (IBM Corporation, 2007).

Paradigm		Description
Captivity and attention	before	Television is intrusive with the commercials since they impose themselves on viewers, even with the on-demand and VCR technologies. These create high levels of exposure witch improves the recall of brands, logos or slogans.
	after	In smart TV each person can watch a specific different ad at the same time in a fully customized way (Lotz, 2007). That fact increases the levels of relevancy and effectiveness of the ads. The high levels of exposure that ensures the recall of brands, logos or slogans will lose some strength (Hallward, 2010).
Costs	before	Despite the efficiency, TV stills a very expensive medium. The high cost of TV stems not only from the expenses buying time but also in the commercial production. Those costs are impossible to reach for small and medium advertisers
	after	To fully take advantage of the smart TV features, the costs of a campaign can be very expensive, keeping the cons of the traditional TV. Also there's a necessity to adapt some of the content to the new devices what has a high cost (CES, 2012). Otherwise the increasing number of possibilities to advertise in Smart TV make possible for a small of medium advertiser to create a niche ad to a very specific target (Sunyer, 2011).
Measurement	before	The size and composition of the audience are the most important considerations. It's a controversial theme due to the fact that the existent measurement techniques are not precise. The measurement techniques are based in a statistical sample that is used to represent the population characteristics
	after	As the internet measurement techniques, the smart TV measurement capacity has two sides. To the broadcasted content will probably be used the same tools, but for the IPTV content there are differences (Kovach, 2010). The feedback mechanisms can be in real time, the pay per view model can be applied to TV commercials and the click through rate can be applied as an effectiveness criterion (ReelSEO.com, 2011).

Paradigm		Description
Engagement and relevancy	after	Television will combined new interactive services (many sponsored) and interactive / social apps and commercials. The aggregation of the mediums proclaims an easier way to interact with the content and also with the advertising creating a relevant and engaging advertising experience (IBM Corporation, 2007).

Consequently, the second hypothesis is:

The major paradigms of TV advertising will change to the following:

- *Significant improvement in the advertisement's* ***creativity*** *and impact,*
- *Larger audience* ***coverage*** *and better cost* ***effectiveness,***
- *Adaptation of the* ***selectivity*** *and targeting capacity of online advertising,*
- ***Captivity*** *and attention using personalization of the contents,*
- ***Costs*** *flexibility to different announcers and objectives,*
- ***Measurement*** *and data collection are one of the most significant improvements,*
- ***Engagement*** *and relevancy will dramatically increase.*

4.1.3. Third hypothesis: the new Smart TV advertising

Along the factual and theoretical background there were evidences of what the direction in which the TV advertising will evolve. Having in mind the contemporary and future trends in Technology, Consumer's behavior and Advertising – main drivers of change from the past – we are now able to structure and enunciate their characteristics in the future. The main contributions to this proposition came from the authors and theories described next.

- Smart TV's as well as other substitute / complementary video devices are, by 2012 the latest technology evolution and are being well accepted (Parry, 2011).
- There are evidences that the technology also enhance the marketing and advertising experience and effectiveness (Tolani, 2012). Smart TV has incredible features with a lot of potential to be used to advertise.
- More than ever, the audience love to watch TV and watch it online, off line, in a TV set, in a tablet or smartphone. This media is not dead, instead is still growing and evolving to something better (Parry, 2011).
- Moreover the consumers are being exposed to an excessive number of hours of commercials and advertising in general. In consequence its effectiveness is not as high as could be. However is higher only if blended with others medium, especially internet (Ducoffe, 1996).
- The consumer's appear to be concordant that advertising has to improve and the technology can be a great way. Smart TV's is very well positioned to be the solution to such upgrade in both TV and advertising practices (Wang, Zhang, Choi, & D'Eredita, 2002).
- There are many advertising enabled medium emerging. However TV stills the best to advertise, the combination of more than one medium could improve the audience experience (Nielsen, State of Media Consumer Usage Report, 2011).
- The online video advertising is "stealing" attention and budget from other channels and it's expected to continue, especially if the Smart TV's pass through the tipping point[71] of success (ReelSEO.com, 2011).

[71] Gladwell defines a tipping point in its book (with the same name) edited in 2000, as "the moment of critical mass, the threshold, the boiling point." As Gladwell states, "Ideas and products and messages and behaviors spread like viruses do." (Wikipedia, 2012)

According to this, smart advertising will have five main characteristics to make the most of Smart TV's features, the consumers will, and the state of art of advertising and promotion. These characteristics pretend to characterize in an exploratory approach the smart TV advertising, making it easier to identify and apply. Consequently, the third hypothesis is:

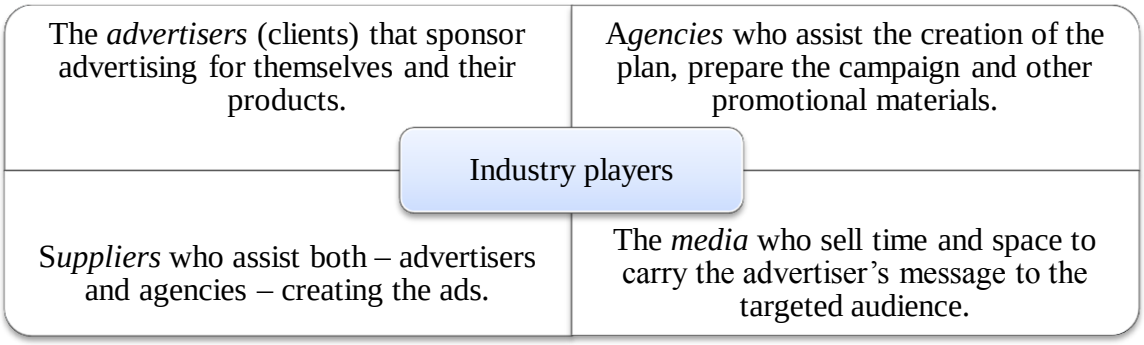
The main characteristics of the future Smart TV advertising are:

- It makes use of Smart TV as core device and **other devices** as a complement. It crosses offline TV with **online video**, **webpages** and **apps** in all devices.
- It increases the delivering of relevant and **engaging** addressable ads in a fully **interactive**, collaborative and **social** way.
- It uses latest online advertising features to increase the **targeting**, **effectiveness** and **measurement** capacity of the campaigns.

4.1.4. Forth hypothesis: Implications to the market players

The market that surrounds publicity and advertising has several players with installed powers and roles. They have been immutable since the 30 seconds spots era started. In order to increase the knowledge about the future TV advertising it's crucial to filter and identify the future role of the main stakeholders. To identify the changes will be compared the traditional roles to the proposition made to the new ones. It's intended to understand if any of them will change, disappear of born. The industry players' role description considered as a reference will be those described by Arens (2009) in Figure 17.

Figure 17 - Industry players' role by Arens (2009)



To the hypothesis proposition some alterations will done to the model. Agencies and suppliers will be considered as the same, due to their intermediary condition. It is also

suggested to integrate in the media, the developers because of the importance of apps and other new media contents (Ericsson, 2011). Also, CEM should be considered not only as a player in the TV industry but also as a new player in the TV advertising industry. Agencies and suppliers will stay mostly the same.

Advertisers will be granted with new opportunities to increase their brand reach trough an integrated and engaging ad experience (YuMe, 2012). Also due to the costs reduction to niche campaigns, small and medium size companies would become smart TV advertisers. **Agencies and Suppliers** will have basically the same role, but will need to improve their knowledge and know-how in technology and new media. Affiliated platforms will act also in the TV advertising market and will gain importance thanks to its aggregation capacity of online time and space (Parry, 2011). The **media / network** as a player can see its function changed. With the possibility of the consumers to create their own on-air and online space, media will lose some of its domain (Ericsson, 2011). Moreover in this group, **developers** should be included and they will be one of the most benefits since smart TV advertising will provide them an end-to-end solution to manage and optimize the content monetization. **CEM** will have the opportunity to participate in the advertising value chain. They will own several advertising tools with direct access television space and time without the need of buy time to a network. Also the apps stores and databases have a growing importance and many of them are owned by the CEM (YuMe, 2012).

Consequently, the Forth hypothesis is:

The implications of the smart TV advertising in the industry players are:

- **Advertisers**' role will keep the same benefiting from better advertising.
- **Agencies and Suppliers** will keep mainly the same role.
- **Media** will lose influence, having online developers and the "prousers" as competitors.
- **CEM** will enter in the advertising market with strong importance.

This was the last hypothesis what means the delimitation of the study propositions and finding objectives. After this the methodology to conduct the research will be deeply described in order to proceed to the data analysis and conclusions.

4.2. Methodology

The next chapter pretends to characterize the methodological options and the kind of research used to the data collection and treatment. That research was made in order to validate the research propositions presented before providing the necessary support to enhance the validity of the study. This chapter will present the following sections:

- Methodological choices: characterization of the type of research purpose, approach and strategy used;
- Universe and sample: indicating the population of the study and definition of the type and size of sample, and the criterion for selection of individuals to include in it.

4.2.1. Methodological choices

The research purpose provides the guidelines to proceed with the research. There are three categories of research purpose according to Saunders et al. (2009): exploration, description and explanation. They differ in the way the hypotheses are formulated and the data is collected. The adopted research purpose was the exploratory. This is the most appropriated since the subject of the study is new and the major emphasis is in the discovery of new ideas and insights to the theme.

The research approach chosen defines first of all, that its nature is deductive in the first part and inductive in the second. Deductive because first were studied existing theories and narrow to create a specific hypothesis expected to work in a particular case. Inductive because in the exploratory research part of the study will be conducted interviews to a small amount of specialists and then generate conclusion for a broader meaning and application.

The results are qualitative since there haven't any statistical calculations; instead, the results from the interviews generate a non-numeric data from where conclusions are taken. The main reason to this choice is because there are not many people with knowledge about the theme in study so a quantitative research has no value in this case. Also because the relations that are in study have no numeric relation known, so it's not possible to quantify them mathematically (Saunders, Lewis, & Thornhill, 2009).

Following the explanation given before, the chosen technique was the one-to-one interviews. These interviews we semi-structured with the objective of let the specialists run out of the concrete question to give valuable insights. The interviews were done in various communication ways, such as face-to-face, phone, Skype and LinkedIn chat.

Due to the fact that the implications and the assumptions of the present study don't refer to a specific country of geographic region, the specialists were from different countries and had to be mainly electronically contacted.

4.2.2. Universe and sample

The target population was chosen considering the objectives of this research. As a result, the universe is immeasurable since it could be defined as all the specialists in one of the following advertising industry business (Arens, 2009): announcers, agencies, networks and CEM. Having that universe in mind, a small sample was chosen specially according to the availability of the respondents to be interviewed. Such criteria had to be taken into account since the targeted people are very busy. It was considered a specialist an employee that has at least five years of experience in television, advertising or technology, a good understanding of the Smart TVs and basic knowledge about the industry operation.

Twelve specialists were chosen; tree from each kind of industry player described before. The amount of population was defined as a reasonable number to get significant conclusions and insights (Saunders, Lewis, & Thornhill, 2009). The populations have the characteristics described in Figure 18.

After the interviews all the data was analyzed in order to validate the hypotheses formulated before. It's important to refer that the respondents' opinions have no statistical validity, however some of their answers will be organized in percentages only with the objective of make the understanding of the information easier. There isn't any intention of an inductive reasoning when its sentenced that a specific kind of industry players has answered more agrees or disagrees. There's no intention of generalize their opinions to whole the industry players since the study is exploratory and the sample is small.

Figure 18 - Specialist characteristics

Industry player	Nr of the respondent	Market	Company	Specialist's role	Country
Announcers, Advertisers	1	Food & Beverages	Danone	Marketing Manager	Portugal
	2	Information Technology and Services	Irish Life & Permanent	*	Ireland
	3	Consumer goods	*	Director Information Technology	Belgium
Networks, Media, Developers	4	TV Media	*	Digital Product Manager	USA
	5	Media / entertainment	Private TV channel*	Content producer / manager	Portugal
	6	Media / entertainment	*	*	France
Agencies, Suppliers, Producers	7	Marketing and Advertising	*	Planning/Buying Consultant	England
	8	Digital advertising	Google	Digital Marketing Strategist	India
	9	Internet advertising	*	Senior web advertising developer	USA
Consumer Electronic Manufacturers	10	CEM	Philips	Sales director	Portugal
	11	CEM	*	Product Manager	Portugal
	12	CEM	Samsung	Corporate Marketing	*

*information that must be kept secret at the urging of respondents

The objective is only to assign the explanations and comments given with the agreed or disagreed positions and with the industry roles. For instance, if is explained that "50% disagreed saying smart TVs are too expensive" and later "most disagreeing industry player: CEM", it's possible to understand that CEMs are those who are talking about the prices of smart TVs (and they have a very important power in it) and that's enough reason to disagree. Finally, all the data authorized were record to further investigation. The interview guide can be seen in the Appendix 16. In the next chapter, will be described the analysis of the data collected in the interviews.

5. Data analysis and primary conclusions

After the interviews, the data collected was analyzed with detail making use of the records and summaries. In the examination of the answers there was an effort in order to understand the position and the opinions about the propositions made always looking forward to comprehend the reasons for those perspectives. For that motive, valuable insights were collected and will be presented in the following chapter.

5.1. Introduction

The first two topics of the interview were about the respondent's knowledge about the TV advertising market and about Smart TVs in general. Due to the sampling criteria, all the respondents had at least five years of experience in the industry and all of them were in functions in the moment in a company that acts in that same market. Also the respondents' roles in their companies were at least managers with high level of responsibility and knowledge of the market operations.

The first conclusion to make was that all the respondents were aware of the meaning of Smart TV and not only the consumer electronics manufacturers. In fact, all of them knew the main functions of Smart TVs before the interview, showing a very good understanding of the main features and futures possibilities in terms of products and services, and also in terms of advertising in the case of the agencies representatives. That proves that Smart TVs are not only a future trend held by the early adopters, but a reality for which the market players are already preparing. Also, all of the respondents showed interest for the conducted research in, agreeing about the relevancy of increase the understanding of the future of TV advertising. They also expressed interest in getting the final research as well as the main findings and conclusions.

5.2. The dramatic change

In the third part of the interview the respondents were asked about the future impact of the Smart TVs in TV advertising and most of them believed in the existence of a change when Smart TV finish to establish in the consumers preferences. There was a consensus about the potential existence of change in advertising; however most of them agreed that the change was not applied to all the areas of TV advertising. For instance, one particular characteristic of TV by 2012 is the broadcasted content and consequently the broadcasted advertising. Despite the internet connection of Smart TVs and its ability to access online content its point out that broadcasted advertising will not end, at least soon. The reason is that broadcasted TV still very popular, getting huge audiences and providing an amazing entertainment experience. However some particularities are expected to change such as the TV enabled devices that will grow in number and in audience as explained before in the factual analysis. There were also a common preoccupation about the evolution of the market in the following years, showing high levels of anxiety and desire to get more information and researches about the theme. In fact, a common agreement was that Smart TVs are in fact conquering their market with a very fast rate and the advertising in it will consequently evolve.

However, some respondents advised that the way advertising will adapt is not obvious and it's not simple and easy to predict. Still there is the conviction in an improvement in advertising as the following citation from one of the respondents says "*If I begin to imagine advertising that enters in your space without being invited, it would be disastrous for the brands. Therefore, brands will need to adapt. They need to create specific messages with different tones of voice to specific target consumers. If they do it, they will be able to increase the impact and engagement they have on consumers. Costs might be superior (or not) but the advertising will be able to connect different platforms that the viewer is able to test and try for themselves, thus, improving the results and making easy to measure it. If will be more cost-effective*"[72].

Despite the assent about the existence of a change, almost all the respondents (10 over 12) agreed that such change will not be critical and cannot definitely be compared to the major revolutions in TV advertising. The reasons were many and it's not possible to relate the answers with the respondents' industries due to the diversity of opinions.

[72] From a content manager in the Media industry.

However there are two main reasons for the respondents to propose that the change will not be dramatic. First those who believe that the market's stakeholders will evolve overtime in a slow change of paradigms, roles and audiences. That means that the companies will get familiarized to the new concept adapting the advertising along the next years, scenario in which the change will not be dramatic. That change of paradigms will only be speed up after the major players realize the full potential of this kind of advertising. The second group show the perception that the general public will never adopt the Smart TVs' functions such as internet browsing, continuing to use other decides to do it. It's important to define that the first group of respondents is bigger than the second with 75% of the sample. In the following table, are presented the summarized results of the answers to the first research question about the agreement to the existence of a dramatic revolution in TV advertising. Number "1" means that the correspondent answer was pointed and "0" that wasn't.

Table 8 - Respondents agreement with the existence of a dramatic revolution

Industry player	Nr of the respondent	Agree with a dramatic revolution?	
		Agree	Don't agree
Announcers, Advertisers	1	0	1
	2	0	1
	3	0	1
Sub Total		**0**	**3**
Networks, Media, Developers	4	0	1
	5	1	0
	6	0	1
Sub Total		**1**	**2**
Agencies, Suppliers, Producers	7	0	1
	8	0	1
	9	0	1
Sub Total		**0**	**3**
Consumer Electronic Manufacturers	10	1	0
	11	0	1
	12	0	1
Sub Total		**1**	**2**
TOTAL		**2**	**10**

According to the table before, there aren't relations between the industry players and the opinions to the possibility of a dramatic change. In fact, only two respondents agreed with the existence of a revolution similar to the major ones in TV advertising; however they still have doubts about the time such revolution will spend.

After the explanation before, the first hypothesis is refused:

There will take place a dramatic change in TV advertising, similar to the biggest historical revolutions on TV advertising.

It's valid to assume that the smart TVs will not cause a dramatic revolution in TV advertising mainly because the change will happen overtime in a slow process, according to the respondents' perceptions.

5.3. Characteristics of the change

In the next part of the interview it was proposed the definition of the characteristics of the change. Even with the refuse of the first hypothesis, this second proposition maintains its relevancy. In this research question, there was two main ways of understand the respondents position. First it was requested to choose between the following paradigms of TV advertising, what were those expected to change: creativity and impact, coverage and cost effectiveness, selectivity and targeting, captivity and attention, costs structure, measurement, engagement and relevancy.

The options were presented in a table with verification boxes and they were not asked about the reasons for their answers. The objective was to comprehend if the specialists were in general agreement about the possibility of that specific paradigms change. From those options, the two more selected were targeting and measurement, with 100% of selections to the first and 83% to the second. A reason to explain the respondents' selection of targeting and measurement is because of their comparisons to internet marketing; kind of marketing where nowadays the targeting and measurement of results are development the best. Paradigms like relevancy or creativity were chosen many times but not so often because it's harder to imagine kind of advertising that don't exist by 2012.

In general terms all the options were chosen at least 25% of the times, in the case of the costs that is the one in which more specialist had doubts. In the next table it's presented the ranking of the paradigms that gather more consensuses about their change in the future.

Table 9 – Ranking of the paradigms most likely to change

Paradigms	Total agreements	% of agreement*	Ranking
Selectivity and Targeting	12	100%	1
Measurement	10	83%	2
Creativity and Impact	9	75%	3
Engagement and Relevancy	9	75%	3
Coverage and Cost Effectiveness	8	66%	4
Captivity and Attention	6	50%	5
Costs structure	3	25%	6

*The percentages' sum exceeds 100% because each participant could select more than one option.

The conclusion to make from these answers is that the paradigms chosen to analysis were correct. Not only because almost all the respondents agreed with the relevancy of each option raised but also because all were selected at least once as a possible target of modification in the following years. Furthermore when asked for other possibilities of paradigms that will change, the respondents had nothing to add to the propositions in the table.

Thus, to better understand if the respondents agreed with the concrete propositions to the paradigms' state of art after the arrival of Smart TVs, there were presented several statements about each paradigm. Once again, in general terms, the respondent manifested their agreement with the proposed declarations only with few exceptions. It was possible to conclude from the very beginning of the specialists' answers that the statements were very much well formulated; pointing out relevant questions and answers.

Next are presented the observations raised to each sentence:

- In the first, "*Significant improvement in the advertisement's* ***creativity*** *and impact"* most of the respondents agreed with it mainly because Smart TV allows more options in terms of advertising due to its technological features witch should enhance the ideas and imagination of the advertising designers. Also the sharing features will allow more impact due to the personal recommendation of the ads, products or services.
    - 75% approval; industry players who disagree: Agencies because they consider that the creativity is already very good and the improvements will be in the techniques and not exactly in the originality.
- In the second, "*larger audience* ***coverage*** *and better cost* ***effectiveness"*** there was a general agreement with the sentence with some doubts raised. The main uncertainty was related to the capacity of Smart TV in get more coverage at the same time. That means that Smart TV are expected to reach more costumers since many are online, but the rise of more channels and the disaggregation of contents (what's not consequence of Smart TV) will keep hard to get large audiences in the same space and time as the TV still does in 2012 in prime time. The improvement in cost effectiveness was largely approved.
    - 67% approval; industry players who disagree: media because some consider that the improvement in cost effectiveness will not be because of the coverage since the audience will be very segmented, but for of the targeting capacity, because advertising will become more expensive.
- About the "*Adaptation of the* ***selectivity*** *and targeting capacity of online advertising"* respondents show their agreement in full. It was commented that this could be one of the first changes and the most expected one. There is a generalized expectation that this could happen in a short period of time what will mainly benefit the announcers and the consumers. For instance, Google has already launched several tools to held easier targeting. One of them pointed out from one respondents was the Active GRP[73] which allows to understand in real

[73] **Gross rating point** (GRP) is a term used in advertising to measure the size of an audience reached by a specific media vehicle or schedule. It is the product of the percentage of the target audience reached by an

time who is watching the commercial, being able to reroute it if is not being well accepted. This tool or others like this one can have huge impact on TV as it is possible to watch online video on TV.

  - 100% approval; No industry disagreed.

- The proposition of "***Captivity*** *and attention using personalization of the contents*" was also very much liked and the specialists manifested their confidence that this could effectively enhance the TV advertising. Although, one specialist from the consumer electronic manufacture industry propose that this change will not happen to all the kinds of products and services announced. The traditional TV commercials could be effective for those brands that are not looking for experience and relevancy but to messages recall.

  - 83% approval and 17% abstentions with no relation with the industry players from where the answers came from.

- Despite the general agreement with the propositions, the "***Costs*** *flexibility to different announcers and objectives*" was the one that wasn't able to gather full consensus. There were expressed several doubt about the capacity of Smart TVs to allow cheaper advertising campaigns to specific niche brands. However the respondents were not able to understand the full potential of Smart TVs in this area since most of them had difficult in imagine the costs structure of the ads in the future with the TV's fusion with internet. For instance, one respondent from an online advertising provider agree that major new are about to reach the market that other respondents didn't know such as the YouTube's True View ads that allow the consumers to control the messages from the advertisers and making them pay only the commercial that are watched. Moreover, the price of the advert is varies not only according to the audience size but also to the seconds each person want to watch. Knowing so, the costs structure will depend much more from the advertisers ability of create better ads and the intermediaries to send them to the right audience.

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advertisement, times the frequency they see it in a given campaign (frequency × % reached) (Wikipedia, 2012)

  - 58% approval; industry players who disagree: mainly the disagreements came from the announcers and agencies who think that the costs will adapt overtime and stay high.

- ***"Measurement*** *and data collection are one of the most significant improvements"* was the, aside with the targeting and relevancy, the most agreed points. In this case, the online connectivity of Smart TVs was considered enough to change the actual paradigm of results measurement. It's clear for the majority of the specialists that several data from the campaigns will be able to be collected in a much easier and faster way. Several companies specialized in data collection will probably enter the market, however is expected to be the Google company to assume very much the development of measurement systems not only for their videos (YouTube) but only for other content owners as they did with online advertising through Ad words and Ad sense.

  - 100% approval; No industry disagreed.

- In last, ***"Engagement*** *and relevancy will dramatically increase"* gather only favorable reviews. After the agreement that Smart TVs features will increase the entertainment and creativity capacity of television, the engagement and relevancy was largely point out one of the paradigms most likely to change in a good way. One agency specialist point out the following comment: "*If the advertising is more segmented and targeted to a specific customer profile it will obviously match his profile. Announcers will be able to know if a certain type of consumers prefers humor announces or serious ones, this will allow them to shape the message and the tone of voice to better match customer profiles, that, on their turn, will feel more connected and engaged by a brand that speaks directly to them."*
  - 100% approval; No industry disagreed.

In general terms there were no similarities in the answers from each player of the industry. That means that is not possible to identify witch industries are more or less skeptics about the changes of the future shape of advertising. This may be caused by the newness of the theme. The respondents only had insights from their own personal and professional perspective and not from the companies' organizational and cultural

outlines (except the CEM). The second hypothesis described next, was considered confirmed after the results analysis done before.

The major paradigms of TV advertising will change to the following:

- *Significant improvement in the advertisement's* ***creativity*** *and impact,*
- *Larger audience* ***coverage*** *and better cost* ***effectiveness,***
- *Adaptation of the* ***selectivity*** *and targeting capacity of online advertising,*
- ***Captivity*** *and attention using personalization of the contents,*
- ***Costs*** *flexibility to different announcers and objectives,*
- ***Measurement*** *and data collection are one of the most significant improvements,*
- ***Engagement*** *and relevancy will dramatically increase.*

It's confirmed that there will be a change in the paradigms in the proposed way, even with some respondents rising doubts and preserving their convictions that new factors could appear in the future and it's not clear that everything will happen as expected. However the average level of agreement with the sentences was 83% with the lowest (costs) being 58%, which is above the 50%.

5.4. The new Smart TV advertising

Looking forward to understand the future of TV advertising, the third hypothesis had three sentences that pretend to explain how that advertising will look like. In the interview it was tested the receptivity of the specialists to that affirmations. The results were very precise, with 100% of the respondents agreeing with all the statements. The strong complexity of each statement predicted doubtful answers, creating discussion around the validity of its meaning and application. Also each sentence has sub parts that pretend to validate different sub hypotheses. The reason why such kinds of hypothesis were made was to incentive discussion opening the respondents' minds to different scenarios and propositions. However the respondents agreed in large scale, there was valuable insights during the interview that increased the knowledge and understanding about the specialists perceptions.

Most of the respondents showed strong level of concordance that the proposed scenario was the most likely to happen. The list next presented shows the comments raised to this hypothesis were the follow to each sentence:

*"It makes use of Smart TV as core device and **other devices** as a complement. It crosses offline TV with **online video**, **webpages** and **apps** in all devices."*

- Is predictable a certain level of dependence of the receptivity from the market players (other than CEM) to the adoption of this new TV advertising perspective, since until now all the innovations are being created by the CEMs' companies from the devices to the apps and to the advertising solutions. Also some companies have a hybrid role such as Google, because of their influence as TV devices developer but also advertising intermediary or content producers what can increase the unpredictability of the future.

- There is great expectancy about the reentrance in the market of Apple TV and the first approach of Google TV as well as the TVs with operative systems fabricated by companies others then the CEM, such as android TV. The reason is mainly related to the strong dominance that those companies (especially Google) have in the online, apps and mobile operative systems (Android from Google and IOS from Apple).

- Online video is increasing its length each day. Longer video makes ad breaks possible, which means additional ad inventory. Additionally, marketers like to use their TV creative online. Cited by one respondent, John McCarus[74] said *"What you're going to see is a massive commitment to long-form programming, TV quality at scale".*

*"It increases the delivering of relevant and **engaging** addressable ads in a fully **interactive**, collaborative and **social** way."*

- It's suggested that the relevancy and engagement will vary very much according to the brand, the target and the budget. Meaningful ads will not be rule to advertise on Smart TV, however that device will increase the possibilities and consequently the competition from the strongest brands to create more and better

[74] Senior VP-branded content at Digitas

advertising on TV as they have been doing, for instance, with online and guerrilla marketing.

- Some respondents also consider that the huge amount of new technologies and advertising options could create a very confusing landscape to all the stakeholders, especially to the consumers. The announcer and the agencies will have also difficulty in select targets, spaces, and times to each personal target. The data collection will help the process but the amount of information will limit the managers' influence in the decisions, increasing the dependence of software. That means that the introduction of engaging and addressable ads is a very hard process to happen. It will, but the time window could be very large.

- About the social component, respondents indicated their expectancy to its importance, since it's already a reality that social buzz surrounding shows can goose ratings. It was also pointed out, now according to a Nielsen study (2012) that ratings seem to be most susceptible to social influence when it comes to season premieres and finales because these are the most heavily marketed in traditional, nonsocial media (especially network promos). This means that traditional promotion increases social buzz witch increases ratings.

- Also about the social capabilities of Smart TV, was said that when product-metadata[75] gets synced with the crowd sourced data that more and more TV viewers are producing themselves, it will become possible to better understand the social-TV phenomenon, and media engagement in general, being easier to create social personalized commercials and brand entertainment, raising TV advertising to another level. All this process is expected to increase its development with Smart TVs.

"It uses latest online advertising features to increase the ***targeting****,* ***effectiveness*** *and* ***measurement*** *capacity of the campaigns."*

- Not all the changes in this area will happen very fast due to the resistance expected from the markets to adopt all the new techniques of measurement and

[75] Metadata describes other data. It provides information about a certain item's content. For example, an image may include metadata that describes how large the picture is, the color depth, the image resolution, when the image was created, and other data. A text document's metadata may contain information about how long the document is, who the author is, when the document was written, and a short summary of the document.

targeting. Also there will be new players and the competition for the new advertising market will define if all the expected changes will or will not happen.

- However, for instance AOL[76] announced that it will sell video ads using gross ratings points provided by Nielsen, the same currency used to buy TV. Converting to GRPs[77] will be a first among publishers, which mostly sell video based on views or impressions.

According to the analysis before, the following hypothesis was validated:

The main characteristics of the future Smart TV advertising are:

- It makes use of Smart TV as core device and **other devices** as a complement. It crosses offline TV with **online video**, **webpages** and **apps** in all devices.
- It increases the delivering of relevant and **engaging** addressable ads in a fully **interactive**, collaborative and **social** way.
- It uses latest online advertising features to increase the **targeting**, **effectiveness** and **measurement** capacity of the campaigns.

Thus, it's considered that, despite the agreement of all, there are the necessity and the material to further investigations in order to see all the doubts clarified. Also, it's very much proposed that in the next months and years many developments will allow stronger and more consistent conclusions. These was the questions were there was more insights and comments despite the total agreement with the questions. That can be considered an indicator of the relevancy of the theme.

[76] AOL Inc., previously known as America Online, is an American global Internet services and media company.

[77] Gross rating point (GRP) is a term used in advertising to measure the size of an audience reached by a specific media vehicle or schedule.

5.5. Implications to the market players

The fourth and last hypothesis to test was created in order to understand the implications of Smart TVs in the market players' roles. To do so, it was first asked the specialists' opinion about the possibility of such change taking place. There was a general agreement that a change will certainly happen with few exceptions. One of the exceptions gave the following insight: "(…) *this will impose changes in advertising, but NOT in advertising market. The companies will adapt as they have been adapting through the times to technology changes and consumer trends".* The proposition here was that the market players will evolve and adapt maintaining the installed powers and influences. In other hand the smart TVs' capabilities in terms of bidirectional interactions and the need for some market players to be more proactive in their roles to sail after the major paradigm's change were the most pointed reasons to validate the scenario of change.

Thus, when asked to refer witch roles will be more affected, the majority mention agencies and suppliers, and consumer electronics manufacturers with 67% of selections in the first and 100% in the second. Advertisers and Media were both mentioned at least once, but there was more hesitation about how those players will be affected. To better understand the respondents perceptions about that, four statements about the future roles of the main intervenient in TV advertising[78] were proposed.

The first, "***Advertisers**' role will keep the same benefiting from better advertising."* gather almost all the respondents' agreement. However, those who didn't agree, showed their perception that the advertisers' role will also adapt and change over time, suffering more implications than what was proposed. It was mentioned that due to the several improvement in the advertising options, their success advertising will increase. They were considered in fact, one of the players that will suffer less consequences being the most predictable changes, good for their purposes. In fact, and according to the previous conclusions, because of the growing level of screen that could complement the experience of TV advertising, the number of points of contact with the consumers is huge being able to reach the right people in the right moment and not only in front of a TV screen as they did before. To the purposes of advertisers there are several

[78] Advertisers / Announcers, Agencies / Suppliers / Producers or other intermediaries, Media / Networks / Developers, Consumer Electronic Manufacturers.

opportunities rising in terms of advertising and many of them are directly dependent of the Smart TVs evolution.

The second, *"**Agencies and Suppliers** will keep mainly the same role"* collect a negative appreciation from the specialists. There was a collective perception that the agencies' role will change a lot due to the entrance of new market players. It was mentioned also that the agencies will have not only to adapt but to change drastically their core services to new media and technologies in order to face the new standards of advertising planning and time / space buying. A relevant point presented by one respondent from the technology industry was that artificial intelligence[79] that is present by 2012 is many human activities will increase in importance in what has to do with advertising. Knowing so, the agencies and intermediaries will have to better understand how to collect and use the data from the advertising campaigns to create better advertising solutions. There a big lack of knowledge in the actual agencies about that theme and that's can be dangerous for them since online advertising providers such as Google are entering in the video advertising market with innovative tools that will soon spread to the TV environment.

The third, ***"Media** will lose influence, having online developers and the "prousers" as competitors."* had most of the specialists against it. Most of them agreed with the developers and the "prousers" as competitors because of the raising importance of the applications, social networking groups and online video. Also, the incredible quality and length gaps between web video and TV is about to collapse, what will share the revenues and the industry power with companies like YouTube or even Hulu or Netflix that are creating their own origin content online. This is a clear try to compete with the BBC, NBC, etc for the Billion dollar of the TV advertising industry. However the perspective of the media losing importance was largely disapproved with almost all the respondents disagreeing. They mostly consider that media and networks will adapt very fast and will begin the diversification of their content and on-air space in order to save the sponsors' investment in advertising. A very probable way to do it is through live shows that are harder to produce and stream with high quality, are protected by

[79] **Artificial intelligence** (**AI**) is the intelligence of machines and the branch of computer science that aims to create it. AI textbooks define the field as "the study and design of intelligent agents" where an intelligent agent is a system that perceives its environment and takes actions that maximize its chances of success. John McCarthy, who coined the term in 1956, defines it as "the science and engineering of making intelligent machines." (Wikipedia, 2012)

copyrights and only have relevancy when are watched in live (for instance, a soccer match).

Fourth and last, "***CEM** will enter in the advertising market with strong importance.*" Got a very strong approval with about 100% of the respondents suggesting that, in fact, CEMs such as Google (from Google TV), Apple (from Apple TV) or Samsung (from Samsung Smart Hub), will raise in importance being very much likely to be one of the most important player in the TV advertising market. Aside from Samsung or LG that are creating a apps' data base, results measurement tools or specific places in the Smart TV operative system to allow different and creative kinds of advertising, there are other very strong players about to enter in the market. Google is, according to the respondents' opinion, one of the most important. The reason is because that company already dominates the online advertising market with the state of art of the advertising on text and video (with YouTube) being the largest online media aggregator ever. Also the Android platform is a competitive advantage because of the access to other devices and application. It is proposed that Google will turn into a very strong player in the CEM industry, however, when asked about it, many respondents had difficult to explain if the influence of companies such as Google will end up in CEM. Many are expectant to see if Google will turn around the Media industry, powered by the open source code to apps and the user generated contents in YouTube or Blogger.com.

For all the reasons mentioned before there are several believe that a strong change will happen but is very soon to fully understand it perfectly. This is one of the main reasons why these conclusions are very important. They delimitate the need for further studies, initiating the study of the theme and suggesting areas of evolution to future researches.

Moreover the answers were related in a different approach, in order to verify the possibility of a relations between the conviction of a change in certain role and the own role of each respondent. To do so, the following table was created. In the horizontal axe, there are the respondent's and in the vertical the roles that are proposed to change. For instance in the cell B1, the word "change" means that the opinion of most of the specialists that were from advertisers companies (cell 1) thinks that the role of the Agencies and suppliers (cell B) will change.

Table 10 - relation between the respondents' perceptions and their own roles

		Respondents				
		1 Advertisers, Announcers	**2** Agencies, Suppliers, Producers or other intermediaries	**3** Media, Networks, Developers	**4** Consumer Electronic Manufacturers	**5** Total changing
What roles will change significantly?	**A** Advertisers, Announcers	Change	Same	Same	Change	2/4
	B Agencies, Suppliers, Producers or other intermediaries	Change	Change	Same	Change	3/4
	C Media, Networks, Developers	Same	Same	Change	Change	2/4
	D Consumer Electronic Manufacturers	Change	Change	Same	Change	3/4
	E TOTAL changing	3/4 change	2/4 change	1/4 change	4/4 change	

The conclusions possible to be taken from the table are the following:

- As shown in the underline words, all specialists think that their own role will change in the following years (A1, B2, C3 and D4).
- The most revolutionary perspective is from the CEM specialists since in their opinion all the roles will change (E4) and the most conservative is from the Media (E3) that only recognize a possible change in the their own role.
- Agencies and CEM's roles are those who gather more consensuses about the changing (B5 and D5).

The conclusions made from the table are useful to strength the results from the previous questions and also to precipitate possible areas of further studies like: "Are the CEM the most revolutionary and the Media the most conservative? Why?" Or "Why are the specialists agreeing that their own roles are changing?" a possible explanation to this last one is that there are more aware of their own roles.

In resume, from the conclusions before, it's reasonable to consider disapproved the following hypotheses:

The implications of the smart TV advertising in the industry players are:

- **Advertisers**' role will keep the same benefiting from better advertising.
- **Agencies and Suppliers** will keep mainly the same role.
- **Media** will lose influence, having developers and the "prousers" as competitors.
- **CEM** will enter in the advertising market with strong importance.

There are strong evidences about the changes in the future TV advertising market, even more than what the proposition made was expecting. It was anticipated that approximately half of the market players could continue mainly the same roles (Advertisers and agencies) but it was finally considered by the specialist that all the players will change, unlike the hypothesis, and in different ways.

6. Conclusions – "*Season Finale*"

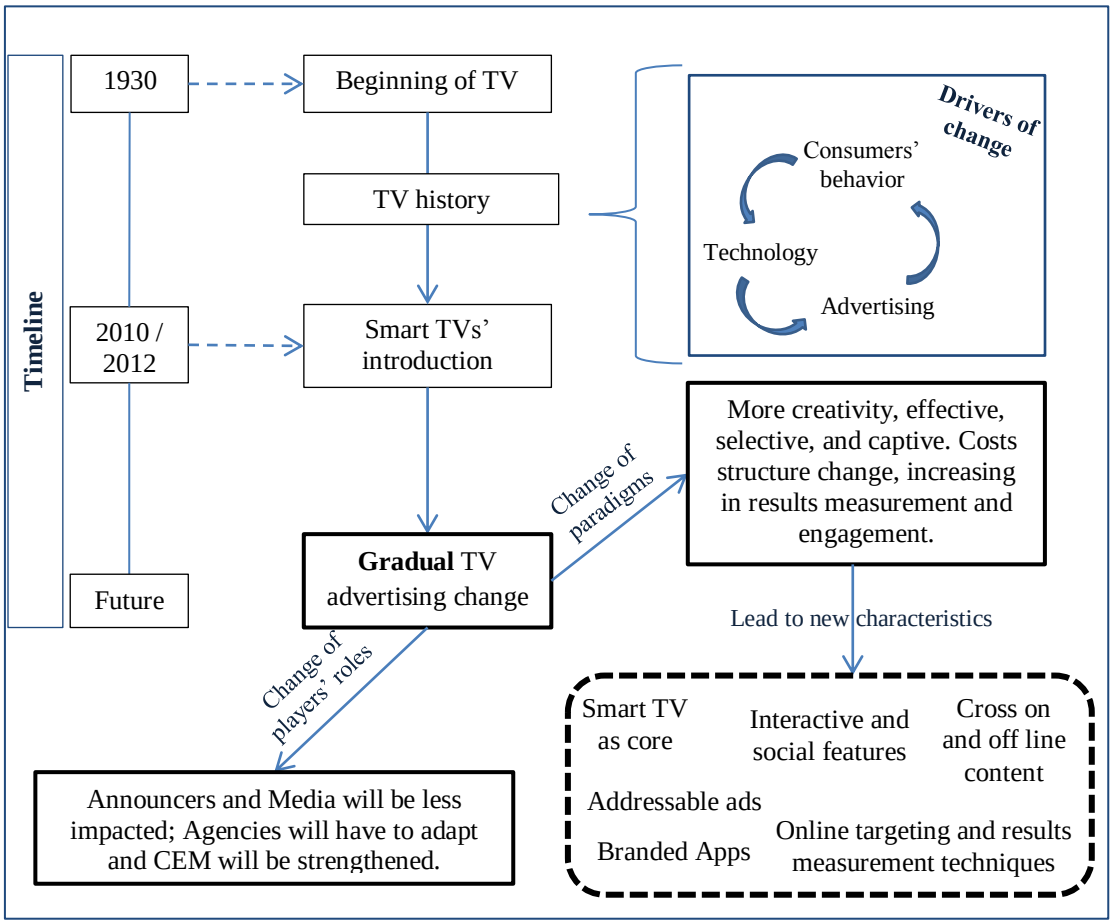
During the last decades, television has been the most important media in the world. It has created a market of entertainment and advertising with an audience of millions. The television was, like it is now, an obligatory element of every house in the planet. However, during its history, several changes and improvements in television and in television advertising revolutionized the way companies promote their products and the way audience is impacted. In its path along the years, TV advertising was driven by the consumers' behavior, the technology and advertising. By 2012 the state of art of this media – Smart TVs – brought together everything that made the television and the internet proud. The advantages of both are now in the same device and the very first to take advantage of this will be advertising.

In order to find out more about the future of TV advertising after the arrival or Smart TVs, this study was conducted, having in its genesis, secondary data review, hypotheses formulation and an exploratory qualitative research. The next topic will provide the summary of the conclusions taken from the whole study, as well as the limitations and the proposition for further researches.

6.1. Main conclusions

To demonstrate the root from where the conclusions were taken, facilitating its understanding, Figure 19 is summarizing the knowledge gather along the study. In the left side of it, there is a timeline from 1930 (introduction of TV), to the present (2010 to 2012 – introduction of Smart TVs) finishing with the future (gradual change in TV advertising). At the right side of it there are the descriptions of the main events. Thus, the drivers of changes of TV advertising in top right, studied in the literature review before. The knowledge collect about them motivated the definition of the hypotheses. Those hypotheses were tested and the conclusions are outlined, in the bottom of the illustration. First, the change in TV advertising will be gradual, in terms of roles and paradigms. Those paradigms lead us to the definition of the characteristics of the future TV advertising. The events illustrated in the figure, will be next detailed.

Figure 19 - Summary of the main conclusions



Starting in 2010, Smart TVs entered the market and began to change some of the old standards of television advertising. By 2012 some changes are already taking place but, most important, is that there are evidences of more relevant and deeper changes to happen in a short and long time period.

According to all the study conducted, the first conclusion is that there will be a change in TV adverting. The industry specialists are aware of that, and are already preparing them self's and their companies to face the next era of TV. However, such era will begin in "slow motion", since the paradigms, characteristics and market roles of today (2012) will adapt over time, determining their new identities. The change will not be dramatic in terms of time, since will happen along the next years, but will be profound in term of what will in fact change.

Thus, the paradigms' revolution will contemplate several areas, but the most affected ones will be *targeting* and results *measurement*. The reason to that is the fusion between TV and internet. The second has the very best capacity in terms of selectivity, targeting,

data collection and results measurements features that will be adapted and applied to Television advertising. Also the *cost effectiveness* of the advertising in TV will be improved as well as the *captivity* and *attention* thought *personalized* content. Consequently the ads will be more *relevant* and *engaging*, but the brands will have to pay *high prices* for it.

Having in mind such changes in the paradigms of TV advertising, the commercials in the future will have specific characteristics. The first is that they will make use of *several devices* and not only the Smart TV to advertise, crossing *online* and *offline* contents as well as *apps*. That means that TV advertising will be, in other words, much more then only TV advertising. In fact, ads will deliver much more relevant contents making use of the addressable ads and the collaborative and social features that are so much requested by the audience.

The last main conclusion to make is that the whole change in TV advertising will impact the market in terms of its players' roles. The most affected role will be the agencies' because of the need to adapt to new media and devices' technology in order to provide mode adequate services. Also the appearance of new players such as affiliation platforms, apps developers or CEM companies will increase the competition in the sector. The other player that will be more affected is the CEM. Their influence and power in the advertising market will be reinforced with the ownership of the apps' databases and operative systems which will allow them to provide innovative advertising solutions. Finally, advertisers' role will change over time, benefiting of better advertising solutions and the media and networks will adapt to the new paradigms, maintaining their influence despite the new online media competitors.

The media landscape will change in the future and TV advertising will evolve into a new concept. That concept will represent an improvement in the capacity of a brand to advertise its products despite the changing roles of the advertising industry. An adaptation process will take place, benefiting also the audience who will be impacted by more relevant and engaging ads through interactivity, personalization and socialization.

A new era is about to begin; get ready and enjoy it.

6.2. Limitations

Along the study conducted, there were some limitations as well as during the interview and the conclusions to make. First, the very newness of the theme, precipitated the use of several online sources from author with recognized credibility, however there wasn't always the same level of certainty about their wisdom as those from the classic books.

Therefore, during the interviews there were some limitations to the respondents' contribution due the lack of specific knowledge about Smart TVs and about the others players' roles. Also some of the respondents notoriously increase their understanding about the theme during the interview what can affect their answers and insights. Other times they were not able to express their convictions in a structured way due to the lack of habit to talk about the theme. Finally, some of the proposed scenarios were hard to imagine to some respondents since it were about future paradigms and conditions that are not common practice in the market by 2012.

Finally, players such as Google and Apple entered the market two years after Samsung and LG, which means that the consequences of their entrance are not yet known, so their contribution to the paradigms' change wasn't taken into account.

6.3. Further Studies

There were along the interviews and the collected data in internet a common perception that further studies about the future of TV advertising have to be conducted. There are several questions that this thesis had not taken into account since the research limits had to be defined for better outputs. This study has also created the conditions for further investigations such as:

- Definition of the periods of time each change will take.
- Receptivity of the consumers to this new kind of advertising.
- Witch kind of brands and products are more likely to be successful in the new advertising landscape?
- What are the new businesses models raised from the Smart TVs advertising?

Other relevant questions can be found to held quantitative or qualitative researches.

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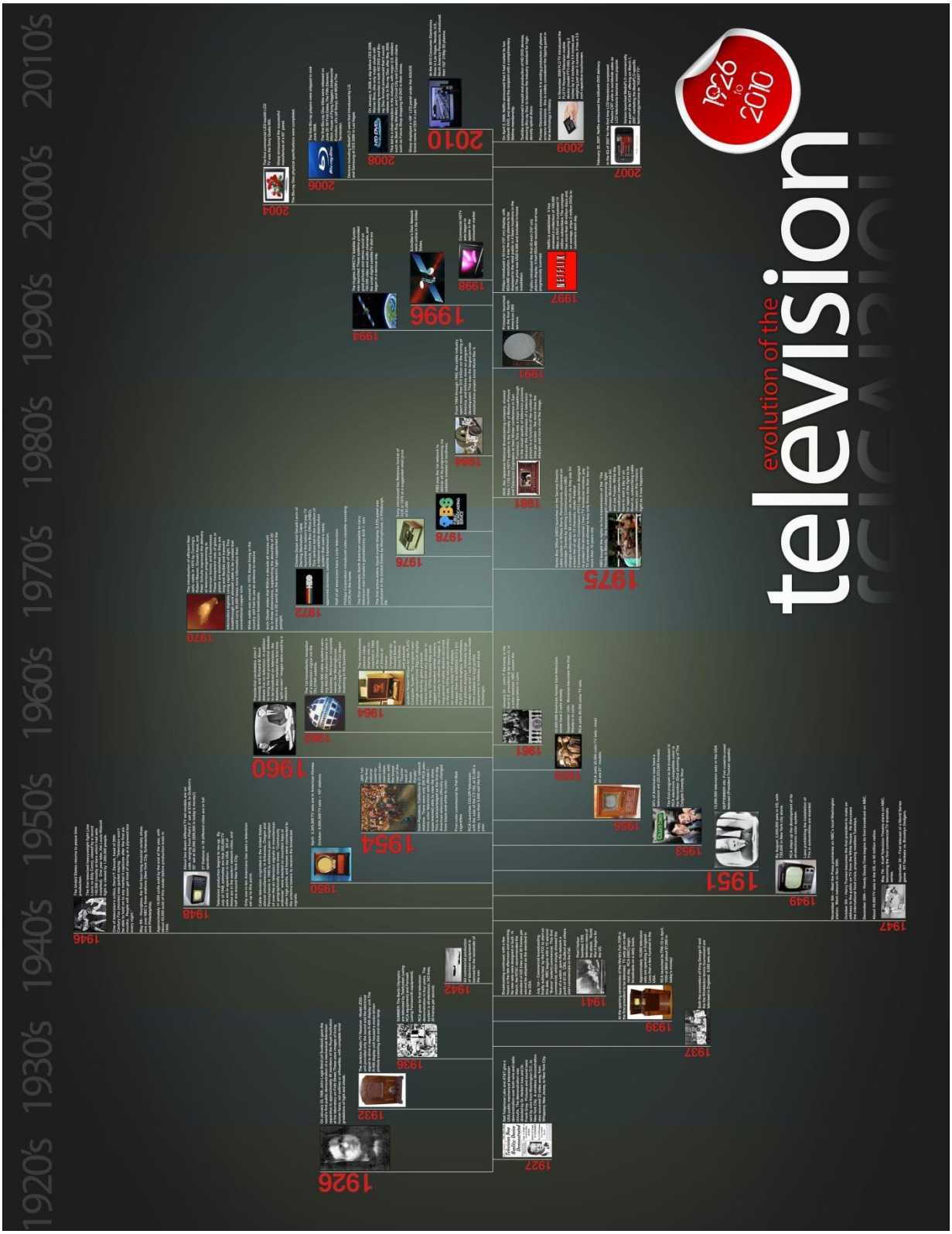
Appendix 1: Tvinfographics – Hitory of TV



Source: http://ustelevision.com/misc/tvinfographics/large/history-of-tv-2-lg.jpg

Appendix 2: TV Selling Prices from 30's to 50's

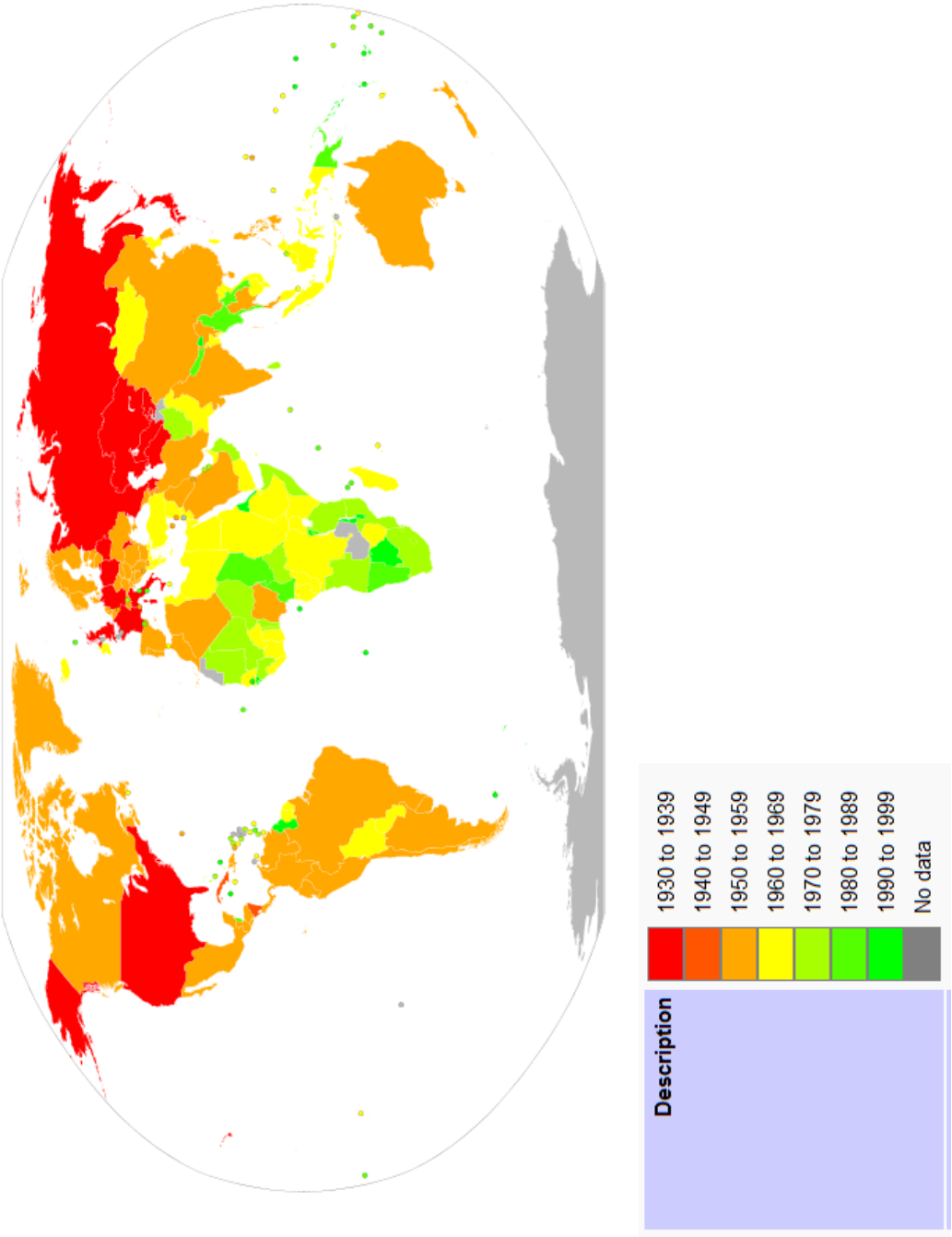
AMERICAN TV PRICES		
1930s	Mechanical (Scanning Disc) Kits '30 ICA: $58 '32 SeeAll: $13 (w/o radio receiver) '32 Hollis Baird: $39	Mechanical (Scanning Disc System) Factory-made Sets '31 Western Television: $150
	Pre-war Electronic Kits '39 Andrea: $79 (5") (tubes cost $55 extra)	Pre-war Electronic Factory Sets '39 Andrea: $189 (5") '39 Du Mont: $445 (12") '39 RCA: $600 (12") '39 RCA: $450 (9")
1940s	*Post-war* Tabletop Models '48 Freed-Eiseman: $795 (16") '48 Du Mont: $445 (12") '48 GE: $325 (10") '48 RCA: $325 (10") 1948: (16) Set Summary	*Post-war* Console Models '48 Admiral: $499 (10") '48 Du Mont: $2495 (20") '48 Stromberg-Carlson: $985 (12") '49 Admiral: $695 (16") '48 GE: $2100 (Projection TV) '49 Emerson: $599 (Projection TV)
1950s	B&W: Tabletop '51 GE: $289 (17") '54 RCA: $189 (17") '54 Capehart: $299 (24") '55 Zenith $149 (17") '56 GE $129 (14") B&W: Console '50 Philco: $499 (12") '52 GE: $299 (20") '55 Magnavox $249 (24") '55 Admiral: $149 (21")	Color: Tabletop '56 RCA: $495 (21") '59 RCA: $495 (21") Color: Console Models '51 CBS Mechanical System: $499 '54 CBS-Columbia Electronic: $1000 '54 Admiral: $1175 (15") '54 RCA: $1000 (15") '54 Westinghouse: $1295 (15")
1960s	B&W: Tabletop '60 Philco: $249 (17") '61 Zenith: $259 (19") B&W: Console '61 Zenith: $575 (23") '69 Muntz: $125 (22")	Color: Tabletop '60 RCA: $495 (21") Color: Console Models '68 Admiral: $349 (23") '69 RCA TV-Phono: $975 (23")
1970s	B&W: Tabletop '70 Muntz: $65 (12") '70 Motorola: $89 (12") '70 Sony: $154 (12") '77 GE: $90 (12")	Color: Tabletop '70 Motorola: $349 (16") '72 Emerson: $358 (18") '72 Muntz: $260 (21")

B&W: Console '77 Sears: $230 (22") '77 Sylvania: $240 (22") '77 Motorola: $260 (22") '78 GE: $230 (22") [1978 last year for B&W Consoles]	'74 Sony: $590 (19") Color: Console Models '70 Motorola: $479 & $599 (23") '72 Muntz: $360 (23") '75 Admiral: $370 to $740 (25") '77 Sylvania: $530 to $850 (25")
1980s B&W: Tabletop '80 Panasonic: $130 (12") '82 GE: $105 (12") '82 Zenith: $110 (12") '82 Zenith: $170 (19") '88 Samsung: $70 (12") B&W Mini - Handheld '86 Casio: $100 (2" LCD) '87 Sony Watchman: $180 (2") '89 Sony Watchman: $150 (3")	Color: Tabletop '80 JVC: $560 (19") '82 Sylvania: $430 (19") '86 Toshiba: $490 (19") '88 Sony: $550 (4" CRT) Color: Console '82 Sony: $1000-$1400 (26") '86 Sylvania: $540 (25") Color: Mini - Handheld '85 Casio: $300 (3" LCD) '89 Casio: $160 (2" LCD)
1990s B&W Tabletop '90 Magnavox: $80 (12") '93 Sony: $130 (5" CRT) B&W Mini - Handheld '90 Casio: $80 (2" LCD) '96 Sony Watchman: $110 (3")	Color: Tabletop '90 Samsung: $290 (9" AC-DC) '91 RCA: $770 (27") '93 RCA: $350 (13") '93 RCA: $1200 (31") '96 Samsung: $340 (19") '97 Samsung: $750 (28") Color: Console '91 RCA: $660 (26") '92 Philco: $2300 (35") '94 RCA: $2000 (35") '99 RCA: $1400 (36") Color: Mini - Handheld '99 Casio: $140 (2" LCD)

BRITISH TV PRICES		
1930s	Mechanical Kits '34 "Daily Express" - Mervyn £5 9s 6d	Mechanical Factory-made Sets '28 Baird Model "A" £20.00 ($100) '28 Baird Model "B" £40.00 ($200) '28 Baird Model "C" £150.00 ($750) '30 Baird Televisor: £26 ($130) '33 Plew Model #1 10 Gns. ($53) '34 Bush Mirror Drum 75 Gns. ($394)
	Pre-war Electronic Kits (no examples known)	Pre-war Factory Sets '36 Baird: 85 Gns. ($446) 15" '36 Marconi: 80 Gns. ($420) 9" '37 GEC: £35 ($175) 9" '37 HMV: 120 Gns. ($630) 12" '37 Marconiphone: 120 Gns. 9" '37 Pye: 75 Gns. ($394) 12" '37 Ultra: 70 Gns. ($368) 12" '37 Ultra: 38 Gns. ($199) 9" '38 HMV: 35 Gns. ($184) 9" '38 Murphy: £45 ($225) 9" '39 Cossor: 48 Gns. ($252) 15" '39 Cossor: 70 Gns. ($368) 13.5"
1940s	*Post-war* Tabletop Models '48 Baird: 35 Gns. ($184) 9" '48 Baird: 55 Gns. ($289) 12" '49 Ekco: 49 Gns. ($236) 9"	*Post-war* Console Models '48 Baird: 72 Gns. ($378) 12" '48 Baird: 85 Gns. ($446) 12" '48 Ekco: 50 Gns. ($263) 9" '49 Cossor: £95 ($475) 10" '49 Dynatron: 125 Gns. ($656) 12" '49 Etronic: 67 Gns. ($352) 12" '49 Ferranti: £74 ($370) 12" '49 Masteradio: £79 ($395) 12"
1950s	B&W: Tabletop '51 Pye: 51 Gns. ($268) 12" B&W: Console '51 Pye: 76 Gns. ($399) 12" '51 Valradio: £148 ($740) Projection	Color: Console Models (None until 1967)

Source: http://www.tvhistory.tv/tv-prices.htm

Appendix 3: Date Timeline of the introduction of television in countries



Source: http://en.wikipedia.org/wiki/File:TV-introduction-world-map.svg

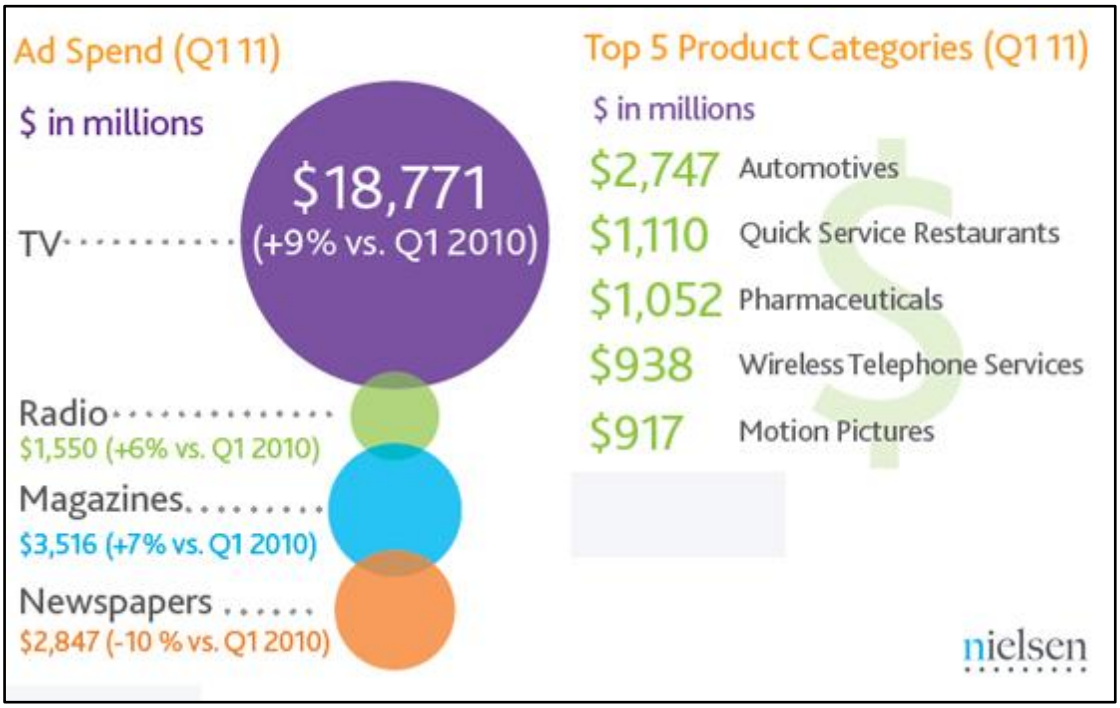
Appendix 4: TV main providers in UK

Provider	Years	Free orpay	No. broadcast channels	Households	Transmission	VOOD	HD
(Unbranded analogue terrestrial)	1964–2012	Free	Up to 5	2,600,000[1] February 2009	Analogue terrestrial	No	No
BT Vision	2006–	Pay	3 **On-demand content** via Vision On-Demand	433,000[2] October 2009	IPTV and digital terrestrial	Yes	No
Freesat	2007–	Free	115 (TV) 38 (radio)[nb 3]	1,700,000 May 2011	Digital satellite	Yes	Yes
Freesat from Sky	1998–	Free +PPV	240+ (TV) 80+ (radio)[3]	597,000[1][nb 4] Q4 2008	Digital satellite	No	Yes
Freeview	2002–	Free	50+ (TV) 24 (radio)	9,700,000[1] Q4 2005	Digital terrestrial	No	Yes[nb 5]

Sky TV	1998–	Pay	400+ (TV) **On-demand content** via Sky Anytime 160+ (radio)	8,900,000[1] August 2006	Digital satellite	Yes	Yes
Top Up TV	2004–	Pay	10 **On-demand content** via TV Favourites	490,000[4] Q3 2009	Digital terrestrial	Yes	No
Virgin TV	2006–	Pay	250+ (TV)[5] **On-demand content** via Virgin Central 35+ (radio)	3,672,000[1][nb 6] Q2 2009	Digital cable	Yes	Yes

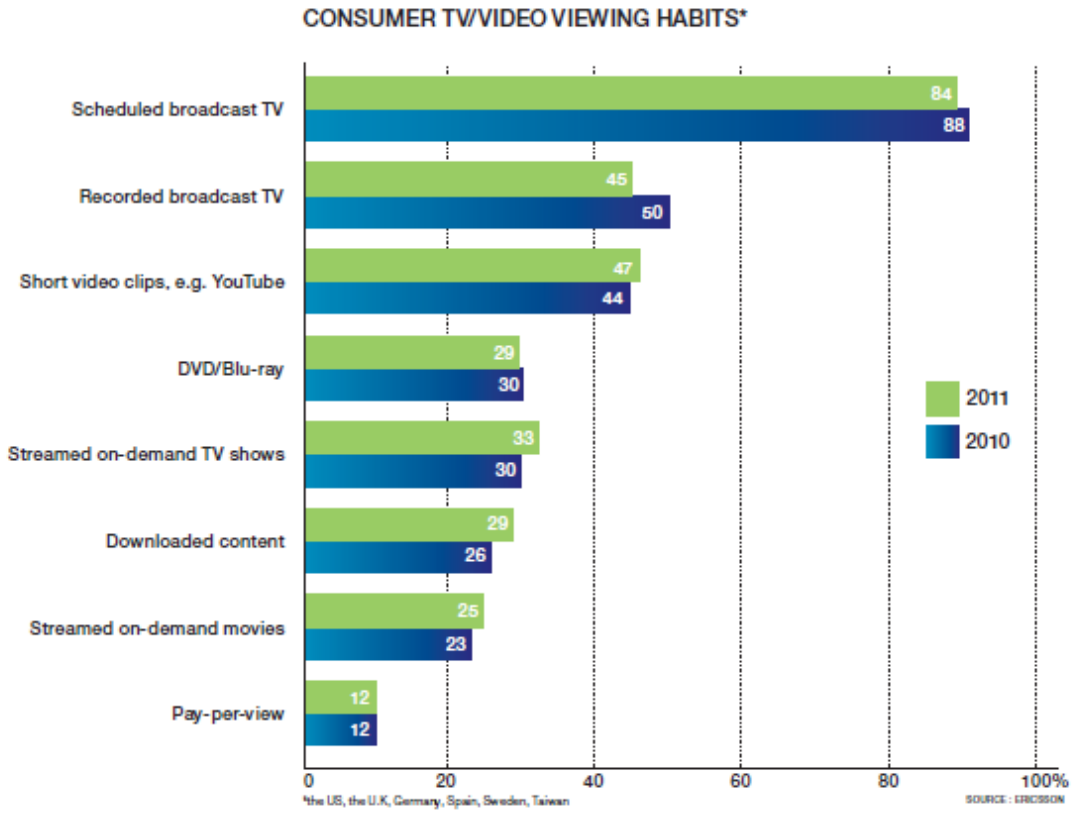
Source: http://en.wikipedia.org/wiki/Television_in_the_United_Kingdom

Appendix 5: TV on top and still growing



Source: Nielsen

Appendix 6: TV on top and still growing



Source: Ericson

Appendix 7 - Competing platforms for connecting TVs to the internet

Platforms	Companies
TV set, Blu-ray player	• **Sony**: partnering with Google TV for Web-on-TV service • **Toshiba**: using Yahoo Connected TV (which has deals with seven of the top 10 TV manufacturers) for TV apps
Retail set-top box	• **Apple TV**: streaming media player for Apple iTunes store
Cable, satellite and IPTV pay-TV	• **Liberty Global cable and satellite TV (18m subscribers in Europe, Chile, Australia):** next-generation set-top box will access Web content and incorporate social networking, 2011 rollout starts with Netherlands, Germany and Austria • **DISH Network satellite TV (14m subscribers in USA):** offering discounted set-top box for subscribers to access Google TV services • **Verizon FiOS IPTV (3.2m subscribers in USA):** integrates Facebook and Twitter apps with television viewing
Game console	• **Microsoft Xbox Live** and **Sony PS3** deliver movies, other video content and some interactive services
PC-to-TV link	• Living room media centre PCs, such as the Dell Inspiron Zino HD desktop

Source: Futurescape

Appendix 8 - Connected TV content and services

Content and services	Examples
Video-on-demand libraries	• TV shows and movies, typically from major broadcasters and studios
Web video	• Programming via aggregators (eg YouTube) • Content from independent producers, often for niche audiences
Audio	• Pandora online radio • iTunes music store
Information services	• Content such as news and weather, typically presented on screen via iPhone-style apps
Interactive services	• Apps that blend services such as Twitter and Facebook with the TV viewing experience
Video communications	• Skype video calling via Panasonic and Samsung TV sets (with additional Web cams)
Web-on-TV	• Google TV, offering viewers enhanced video search and access to Web sites

Source: Futurescape

Appendix 9 - IRIS by ZON new features (in Portuguese)

IRIS by ZON FIBRA

PRÉMIO INTERNACIONAL INTERFACE TV MAIS INOVADOR
TVOT 2011
TV OF TOMORROW

NOVAS FUNCIONALIDADES JÁ DISPONÍVEIS NA SUA TV

Há uma linha que separa a sua televisão das outras televisões e a IRIS by ZON Fibra, galardoado com o prémio para o melhor Interface de TV do mundo, tem novidades para si.

- Navegação mais rápida
- Duas gravações em simultâneo
- Restart TV (brevemente)
- Criação de lista de favoritos no Videoclube
- Relógio no ecrã

Experimente a nova versão e comece ainda hoje a tirar partido de todas as funcionalidades.

Para actualizar o software deixe a box em *stand by* por um período superior a 15 minutos ou vá ao menu da sua ZON BOX e seleccione Opções > Configuração Técnica > Actualização de Software.

O upgrade para a nova versão não terá qualquer impacto sobre as gravações existentes, gravações agendadas, listas de canais favoritos ou qualquer outra definição da IRIS.

NOVIDADES IRIS BY ZON FIBRA

MAIOR RAPIDEZ
O zapping entre canais e a navegação nos menus está ainda mais rápida.

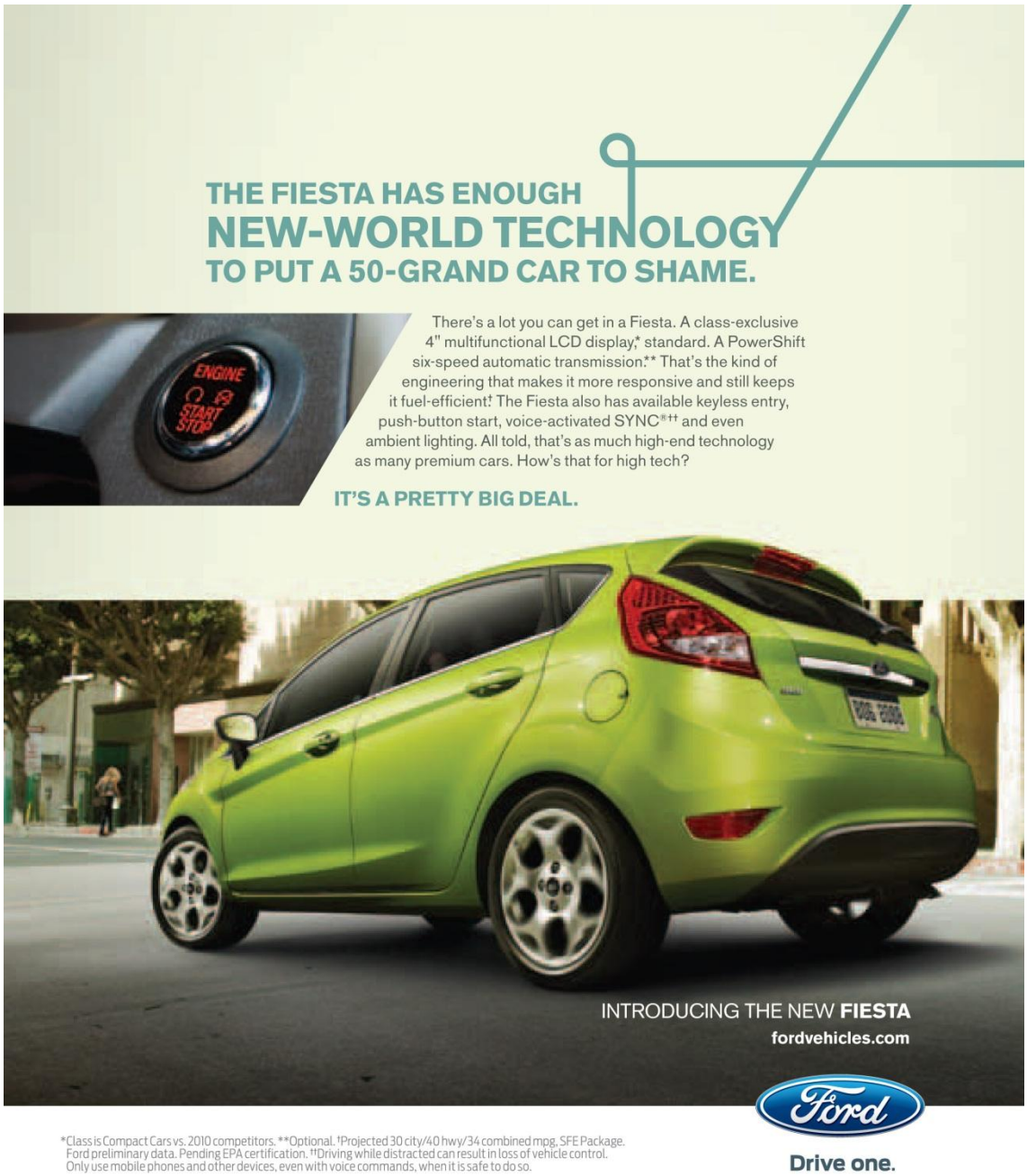
GRAVAÇÃO EM SIMULTÂNEO
Duplique as suas gravações. Faça duas gravações em simultâneo e garanta que nunca perde os seus programas favoritos.

RESTART TV (brevemente)
Reinicie a visualização de um programa que já tenha começado. O Restart TV está disponível em todos os programas assinalados com .

FAVORITOS NO VIDEOCLUBE
Crie uma lista de favoritos no Videoclube com os filmes que pretende ver mais tarde.

Source: zon.pt

Appendix 10 - Ford using technology to attract customers in its commercial



Source: cartype.com

Appendix 11 – Comparison – Smartphone, tablet, netbook and tablet

From**:** (electronicsbus, 2012)

< (…) The features to be compared among these four mobile devices are basic phone features (phonebook contacts, calling features, sms, mms, etc.), screen size and display resolution, computing performance, mobile video games, size and weight, battery backup time, wireless internet connectivity, memory for data storage, operating system and software applications, keypad for typing convenience, web browsing, camera features for video recording and video calling, etc.

Smartphone

A smartphone is the simplest of the four mobile computing device types. Smartphones offer the usual mobile phone service, enhanced with other, computer-like functionality. They run programs called "apps" and use a mobile web browser to access the internet. Apps are designed by third parties, which means you can find a tool for just about anything at this point. Smartphones can access the internet using wireless signals from mobile phone carriers, although they can also use the wireless signal from your home internet.

Pros: Smartphones are as mobile and convenient as you can get. Most smartphones fit effortlessly in a man's shirt pocket. They can carry a charge for 4 to 8 hours, depending on how much you use your phone. The variety of apps created by third parties means you can find hundreds of games, productivity tools, and other gadgets. Most smartphones can access web tools like Google Docs, allowing you to stay productive even while on the road.

Cons: The small size and portability of a smartphone is also its drawback. Smartphones have capabilities that emulate keyboards and mice, but the built-in functionality isn't as comfortable for long-term use. Obviously, the screen on a smartphone is much smaller than that of a computer monitor. You'll get a lot of mileage out of smartphone, but when you're really doing head-down work, you'll find a smartphone somewhat inconvenient. Also, many smartphones require a full home computer to sync and manage their content, which means smartphones can't be a stand-alone solution to your computing needs.

Tablet PC

Tablet PCs are very similar to smartphones but on a larger scale. A tablet computer can slide easily into most bags and weigh only a few pounds. Think of tablets as bigger, more powerful smartphones.

Pros: Tablets are great for doing light work on the road because you can access all the same tools you use with a smartphone. Because a tablet is larger, though, it offers a more comfortable viewing experience than your smartphone.

Cons: Tablets are more capable and comfortable than a smartphone but are still restricted by the design of their manufacturers. You can't just plug in an installation disk and run any program. And while tablets are comfortable for more work than a smartphone, you might still find touchscreen keyboards troublesome for marathon sessions. Like smartphones, many tablets still require a home computer to manage content and apps, so you may not be able to use a tablet computer as a stand-alone solution.

Netbook Computer

Netbooks were designed as ultra-portable versions of laptops, focusing on accessing the internet and doing basic computer functions. They work very much like laptop computers but save a lot of weight and size by not using CD or DVD drives. Netbooks look like small versions of laptops and weigh only a few pounds.

Pros: A netbook can do almost all the same things that a Windows laptop can do. You can install programs, respond to email, and do the majority of your home computing work. And because netbooks are basically lightweight computers, you could use one as a stand-alone home computer solution if you wish.

Cons: Netbooks are great as ultra-portable laptops, but they don't actually do anything better or faster than laptops. If you want a fast computing experience, you might find netbooks to be slow or clumsy. And while the keyboard is very comfortable, you may still find the screen small for long-term viewing.

Laptop Computer

Laptops are the flagship of mobile computing. Modern laptops sport the same power and functionality as full desktop computers but do so in a mobile form. While most people keep laptops in special, protective bags, laptops can pretty easily go on the road with you without needing much additional setup.

Pros: Many laptops are as powerful as a regular desktop computers and still conveniently fit in a backpack. They can access the internet, play CDs and DVDs, and run most popular programs.

Cons: The downside of laptops is the price. Laptops aren't as expensive as they were 10 years ago, but they're still no light expense. Also, laptops are relatively easy to carry around, but most tend to weigh at least 5 pounds. They're not as convenient to carry on your person as a smartphone, for example.

Choosing the best mobile computing device requires knowing what you want out of it. **Smartphone** is the best choice for more phone features, and **Laptop** is the best choice for running powerful and high performance computer applications.>

Appendix 12- Smart TV Summit - London, 2011 Insights from industry leaders

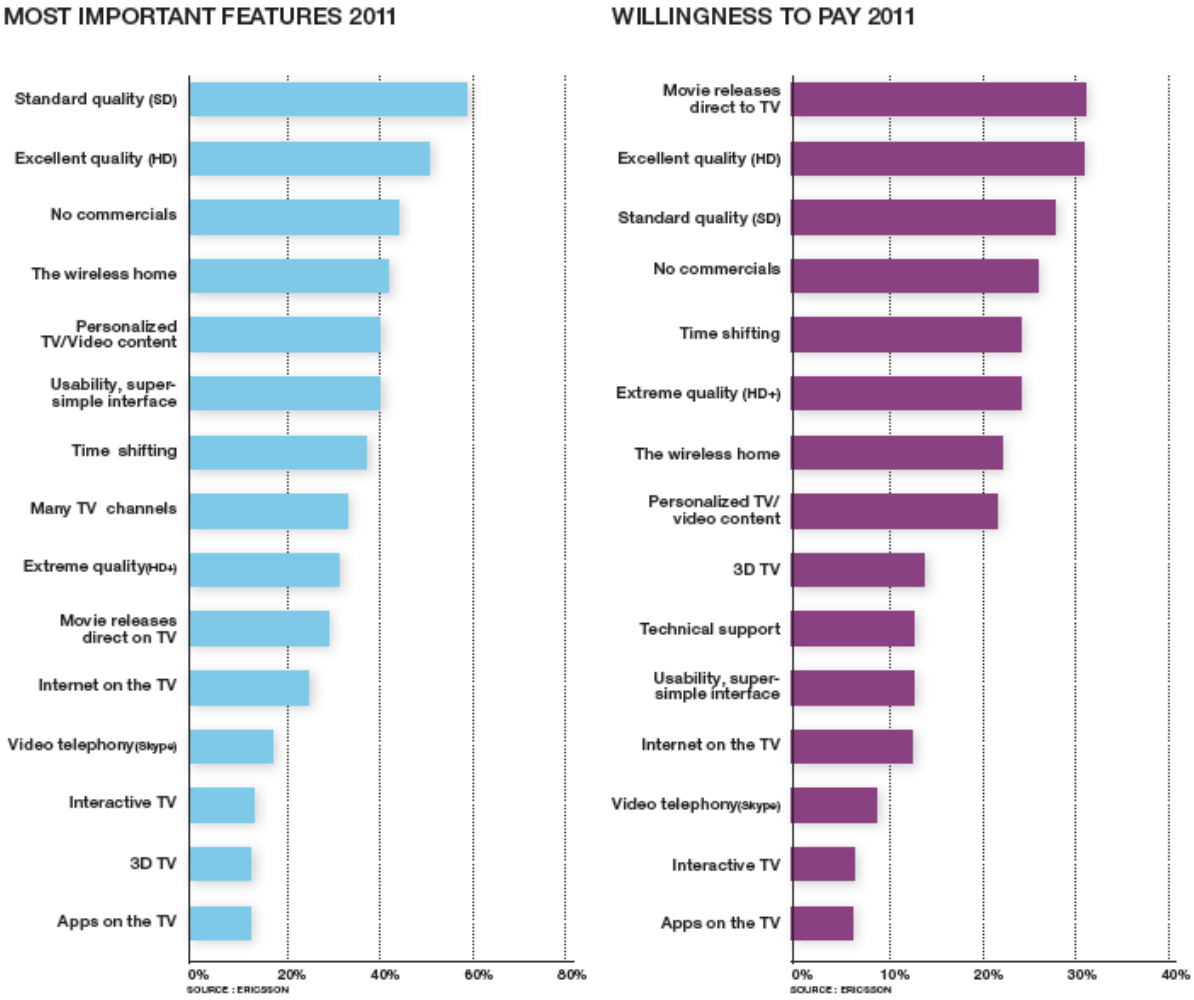
"Content Provider and Broadcaster Perspectives": Broadcasters are embracing the Smart TV launching new services using this new technology. The distribution of content will be cheaper with the IP tech but the production costs still a barrier to create professional contents. The key to the success is in the creation of social experiences; even so, they're not predicting the end of the linear broadcasting.

"Companion Devices and TV Applications": The focus will probably be in the second screen engagement towards a smartphone or a tablet. Also the operative systems and its user friendly characteristics are opportunities to convince the user to adopt the Smart TV's. The experience has to be simple and easy.

"The Rise of Social TV and a Revolution in TV Advertising": Interactivity is the biggest challenge facing TV advertisers. It's crucial to the TV manufacturers to design and build frameworks prepared to the TV advertising world; "It's going to be the hottest space around in the next two years" Anthony Rose, 2011. Anyone will be able to do an app without the previous gating factors (broadcaster, Telco, CE manufacturer permissions). Some production companies are now beginning to develop new types of TV programs that are brought to life by the people watching them on companion apps.

Source: Smart TV Summit - London, 2011

Appendix 13 - Most wanted TV features



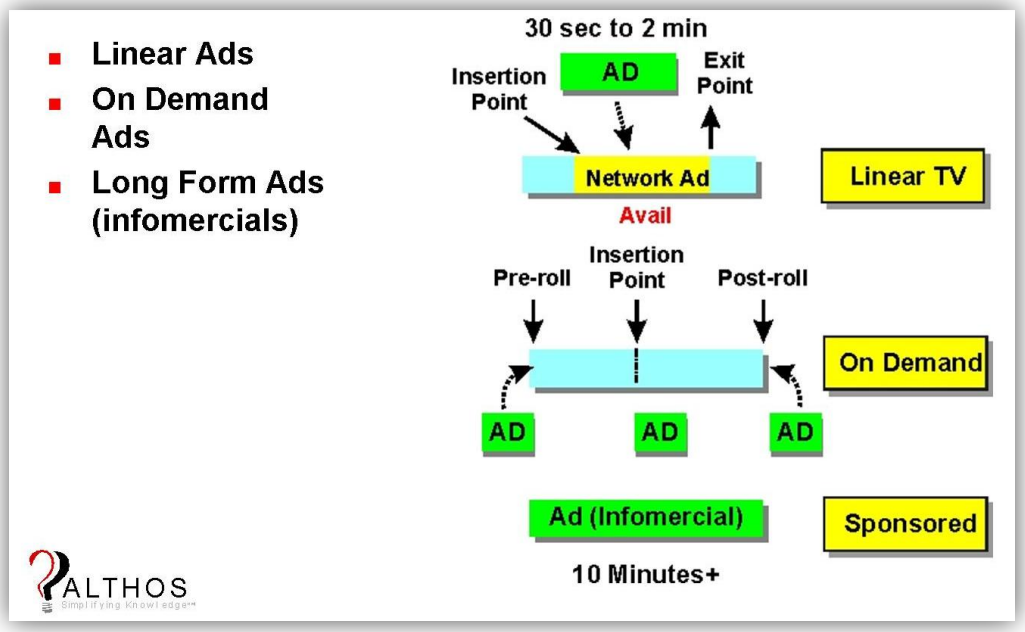
Source: (Ericsson, 2011)

Appendix 14 - Samsung Promotion in IFA 2011 consumer technology trade fair, Berlin

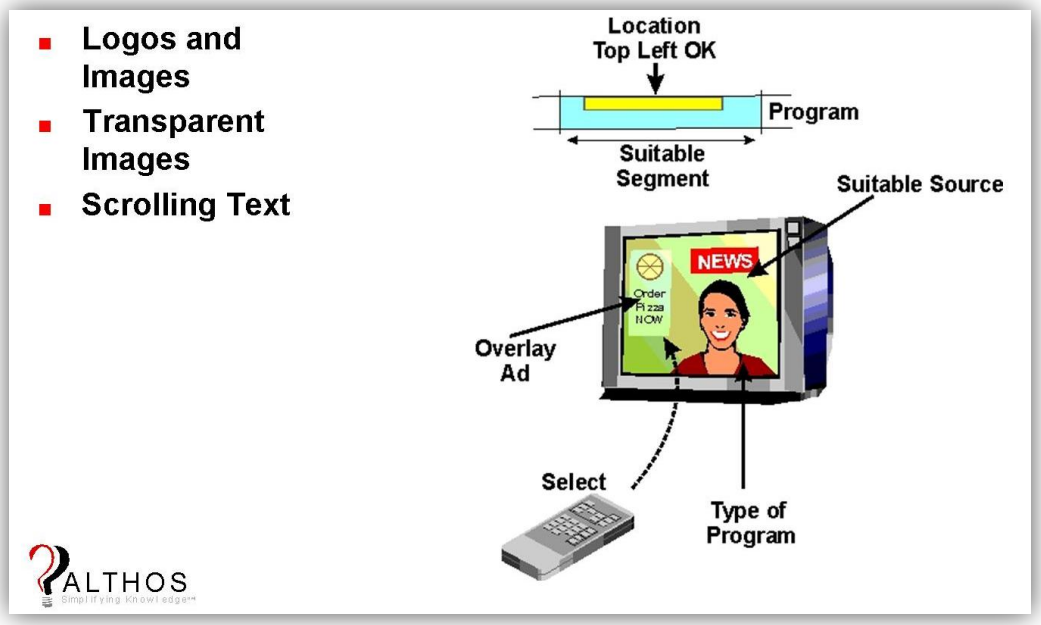
Source: Samsung.com

Appendix 15 – Visual examples of the Types of TV ads

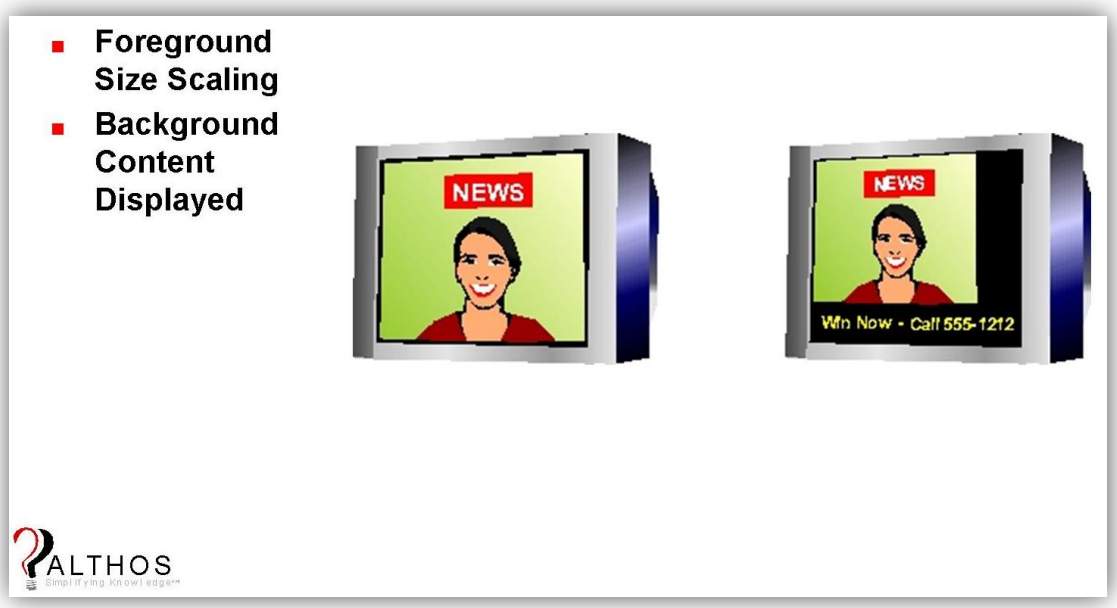
Standard TV Ads:



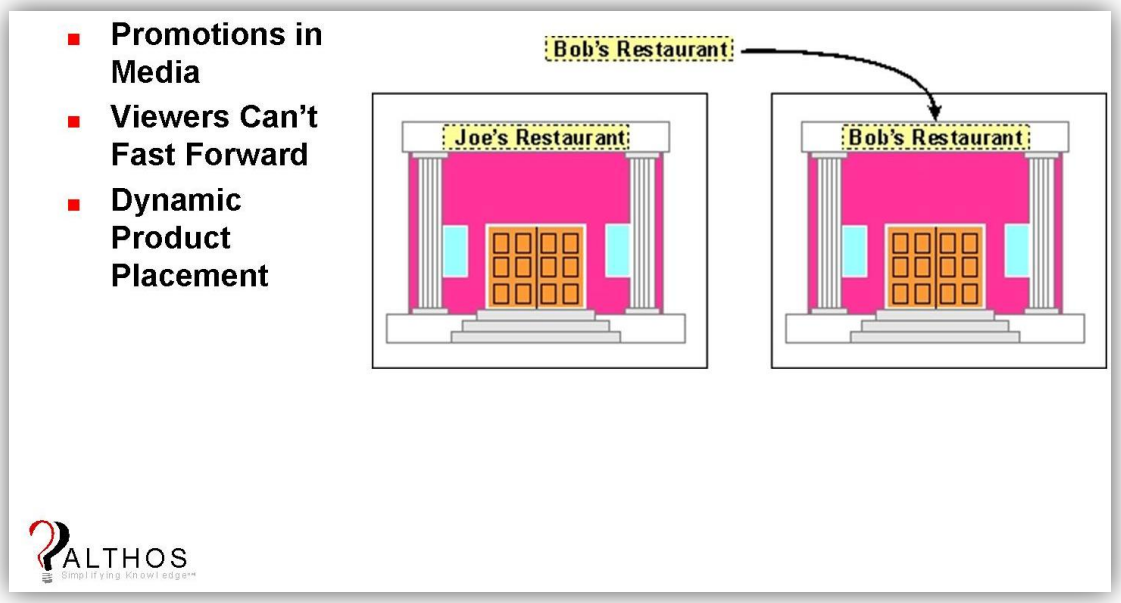
Overlay Ads:



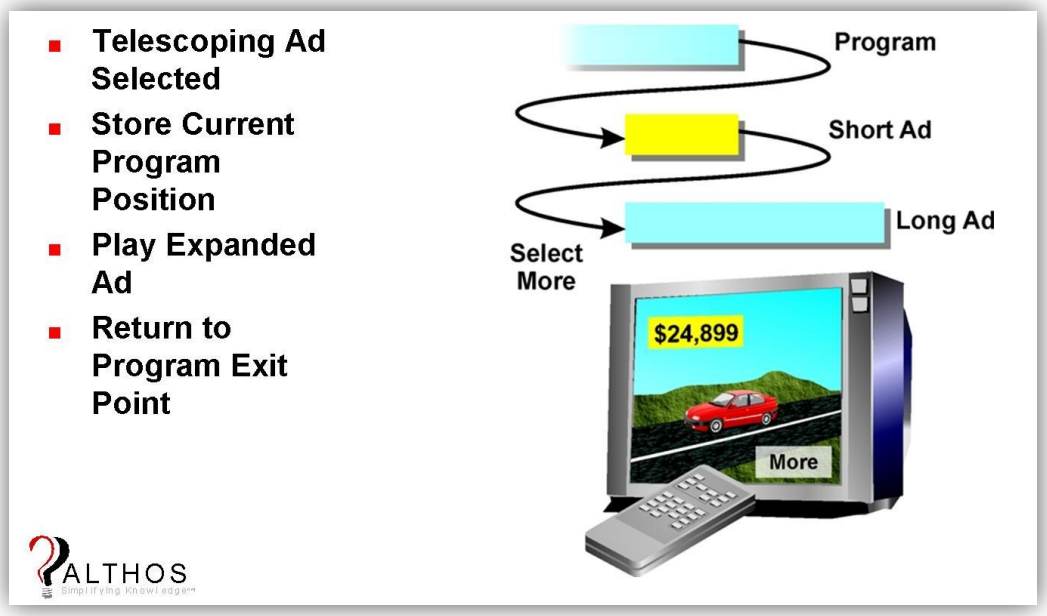
Squeeze Back:



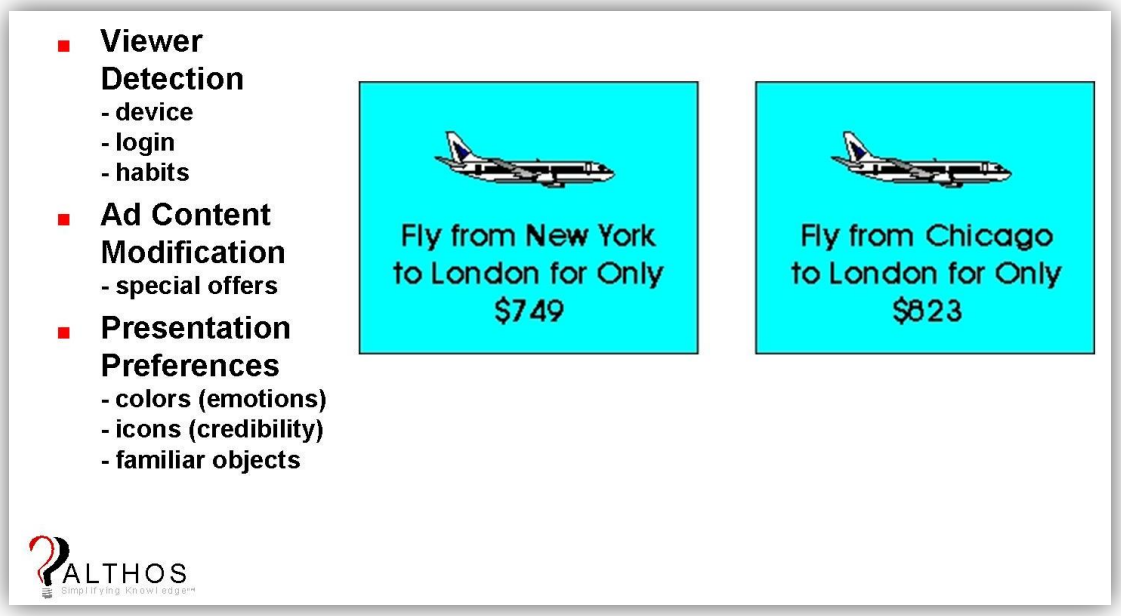
Embedded Ads:



Expandable Ads:



Personalized Ads:



Source: (Harte, 2010)

Appendix 16 - Interview guide

Interviewer:_____Date: _____ Time: _____

Respondent:_____Country / City:_____

Company:_____Company title:_____Years of experience_____

TV Industry player: Announcer ☐ / Agencies and Suppliers ☐ / Media and Networks ☐ / CEM ☐
Other ☐ _____

Introduction:

Welcome to this exploratory research about "the future of TV advertising with the advent of Smart TVs". The study will be conducted as a component of a Master Thesis to the Master in Science in Marketing from the Lisbon University Institute. All the respondents represent one of the players in TV advertising Industry considered to be part of the proposed revolution.

The interview will have six parts that pretend to ascertain you knowledge and opinions about the market, the Smart TV's and the future of TV advertising. Feel free to comment and answer outside the matter of the questions. All the contributions are crucial in an exploratory research.

The identity of the respondents will be kept in secret, only their role in the industry will be revealed. All the answers will be exclusively used to academic means.

A. CHARACTERIZING THE RESPONDENT'S KNOWLEDGE ABOUT THE MARKET

1. For how long do you work in the TV advertising industry?

2. What's the role in the market of the company where you work?

3. What's your role inside the company?

B. CHARACTERIZING THE RESPONDENT'S KNOWLEDGE ABOUT SMART TV'S

In 2010 the first Smart TVs entered in the market by Samsung as a "normal" television set with several more features that come from the internet connectivity. Like a smartphone, a smart TV offers a number of "internet connected services" that normal televisions can't offer. Aside from lacking productivity functions, such as email and word processing, a Smart TV is a lot like a computer. It enables web browsing, YouTube watching and catch up on social networking. Some of the TVs support flash and cloud storage as well, which means a better web browsing experience, as well as the control features such as "facial and vocal recognition" and "motion control".

4. Have you ever had contact with the Smart TV concept before this interview?

5. Were you already familiar with the new features and do you comprehend its utility?

C. DEFINING THE POSSIBLITY OF A DRAMATIC CHANGE IN TV ADVERTISING

Based in your knowledge and experience about the characteristics of actual TV advertising in terms of impact, coverage, costs, targeting, captivity, engagement and results measurement (among others that you find relevant), answer the following questions:

6. Do you think Smart TVs will have any kind of impact in TV advertising? What impact?

7. In your own criteria, do you think that impact can be considered as a drastic / dramatic change?

8. Do you think that there will take place a dramatic change in TV advertising, similar to the biggest historical revolutions on TV advertising such as the "single sponsor era", "magazine concept", "30s spots" or "cable / DVR era"?

D. DETERMINING WHAT WILL CHANGE WITH SMART TV ADVERTISING

9. Consider that it will take place a change in TV advertising, it's crucial to understand what exactly will change. From the following paradigms of TV advertising, which do you think will suffer a change? (Indicate with an X)

Creativity and impact	
Coverage and Cost effectiveness	
Selectivity and targeting	
Captivity and attention	
Costs	
Measurement	
Engagement and relevancy	

10. From the following sentences, state with which do you agree or don't. Please comment about "why and what are the consequences" in those you have relevant knowledge / opinions.

- *There will happen a significant improvement in the advertisement's **creativity** and **impact**.*

Agree	☐	**Comments:**
Disagree	☐	

- *TV advertising will have larger audience **coverage** and better cost **effectiveness.***

Agree	☐	**Comments:**
Disagree	☐	

- *TV advertising will adapt to use the **selectivity** and targeting capacity of online advertising.*

Agree	☐	**Comments:**
Disagree	☐	

- *TV advertising will improve in **captivity** and attention using personalization of commercials.*

Agree	☐	**Comments:**
Disagree	☐	

- *TV advertising will have more **costs** flexibility to different announcers and objectives.*

Agree	☐	**Comments:**
Disagree	☐	

- ***Measurement*** *and data collection will be one of the most significant improvements.*

Agree	☐	**Comments:**
Disagree	☐	

- ***Engagement*** *and relevancy will dramatically increase.*

Agree	☐	**Comments:**
Disagree	☐	

E. DETERMINING WHAT ARE THE CHARACTERISTICS OF THE FUTURE SMART TV ADVERTISING

Now, considering that certain paradigms will change, the next research topic has three statements that pretend to characterize how the Smart TV advertising will look like in the future.

11. Like the previous question, point with which do you agree or don't. Please comment about "why and what are the consequences" in those you have relevant knowledge / opinions.

- *Smart TV advertising makes use of the Smart TV as core device and* ***other devices*** *as a complement. It also crosses offline TV with* ***online video, webpages*** *and* ***apps*** *in all devices.*

Agree	☐	**Comments:**
Disagree	☐	

- *Smart TV advertising delivers relevant and* ***engaging*** *addressable ads in a fully* ***interactive****, collaborative and* ***social*** *way.*

Agree	☐	**Comments:**
Disagree	☐	

- *Smart TV advertising uses the latest online advertising features to increase the* ***targeting****,* ***effectiveness*** *and* ***measurement*** *capacity of the campaigns.*

Agree	☐	**Comments:**
Disagree	☐	

F. DETERMINING WHAT ARE THE CONSEQUENCES TO THE INDUSTRY

It is now proposed that the Smart TV's will cause a change in the TV advertising TV industry. Based in your knowledge and experience about the players' roles in the market, answer the following questions:

12. Smart TVs will impose changes in the advertising market. Do you agree? Why?

13. What market players do you think will be more affected? (Indicate with an X)

Advertisers / Announcers	
Agencies / Suppliers / Producers or other intermediaries	
Media / Networks / Developers	
Consumer Electronic Manufacturers	

14. The following statements describe the proposed change of roles for the TV advertising industry players. Point those with which do you agree or don't. Please comment about "why and what are the consequences" in those you have relevant knowledge / opinions.

- ***Advertisers*** *role will stay the same, however they will benefit from better advertising solutions.*

Agree	☐	**Comments:**
Disagree	☐	

- ***Agencies and Suppliers*** *will keep mainly the same role but having the necessity of improve they know-how about new media to survive in the market.*

Agree	☐	**Comments:**
Disagree	☐	

- ***Media*** *will lose influence, having content / apps developers and the "prousers" as competitors.*

Agree	☐	**Comments:**
Disagree	☐	

- ***CEM** will enter in the advertising market with strong importance due to its capacity of control the TV operative systems and providing advertising solutions.*

Agree	☐	**Comments:**
Disagree	☐	

15. Further relevant comments and opinions about the theme.

Thank you very much for participating in this study, your help was crucial.

If you want to receive the full study after it's finished,

Leave your email in the following space: _____

Best Regards,

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