

# TVC Multimèdia, innovation centre in audiovisual production

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- *This article reviews the activity of TVC Multimèdia in all the phases of the production of interactive audiovisual content, in all its formats, platforms and technologies. TVC Multimèdia supports a future strategic sector by articulating and promoting other players in the multimedia industry, including companies, universities, artists, etc. Since its creation in 1997, TVC Multimèdia has been the driving force behind the multimedia industry in Catalonia, on the horizon of the migration from analogical television to DTT. The results until now have been very positive, with TVC Multimèdia becoming the leader in Spain in interactive services and applications. But in order for Catalonia to continue to be at the vanguard of Europe with regard to interactive services, it is important the government establishes clear references that promote investment in the industry by all players. A general audiovisual Act could thus be a reference in a fairly unstable sector.*

## **Presentation**

TVC Multimèdia is a subsidiary of the Catalan Radio and Television Corporation (CCRTV) created in late 1997, which has been producing interactive content since 1998. The basic corporate aim is to produce digital content and services for television, the Internet, mobile phones, WAP and interactive TV (iTV). The company aims to promote the content and technical and creative abilities of Televisió de Catalunya (TVC) in the context of the new digital media. It can take programmes produced by TVC and distribute them on different platforms, penetrating interactive language. TVC Multimèdia thus paves the way for researching new formats, generates market demand and promotes industry in this sector. With regard to financial data, TVC Multimèdia has a turnover of around three million euros per year and makes a slight profit, a remarkable feat given that many sector companies have still to see their money back on investments.

An initial option considered was to externalise the production of interactive content, but the imminent migration of TVC broadcasts to digital terrestrial technology made it a better idea to create an in-house branch within CCRTV with the purpose of generating internal *know-how*. TVC has been endowed with a structure that makes it possible to develop revolutionary activity. DTT, the replacement technology on a market that already exists, opens the door to new formats, applications and forms of consumption. When TVC Multimèdia was born, the formats and languages produced and distributed today did not exist. The Catalan public TV station therefore chose to open this new market and forge a leadership position on it. But rather than a technological or business option, it was a strategy based on politics: Catalonia would become a centre of excellence in multimedia production in order to guarantee the supply of

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audiovisual content in Catalan.

TVC Multimèdia includes a research and development (R&D) group with experts in audiovisual languages and production techniques. The group is structured as a combination of people who know *what* to do and people who know *how* to do it, opening up production methods where it is important for CCRTV to have a future presence. This is the case, for example, of interactive services conceived from the point of view of public services, e.g., weather, traffic and airport information, etc. TVC Multimèdia has three areas of activity: the audiovisual weather service (AWS), interactive TV and Automatic TV.

### Audiovisual weather service (AWS)

The AWS is the weather content division of TVC Multimèdia. Since its creation in 1997, the AWS has become one of the main weather content companies in Europe, with clients in Spain, Portugal and Italy and is currently in the process of consolidating its international expansion to Europe and Latin America.

The biggest novelty, which dates back to its early days, is the multiplatform conception of the AWS, which produces content and has solutions for the following platforms and environments: Internet, broadband Internet, WAP, SMS, PDAs, the press, television and interactive television. The AWS makes the figure of the multimedia journalist able to work indistinctly in any media a reality. To that end, the AWS has a television studio, a highly automated broadcasting centre, a newsroom equipped with the most modern systems for receiving, editing and organising data, multimedia production platforms, platforms that generate graphic information and a laboratory for developing interactive applications for interactive television.

The AWS produces multimedia information services for broadband networks using Flash, RealVideo, Windows Media and QuickTime. It also offers the possibility of focussing weather reports on particular geographic areas. The AWS can provide information on the situation of golf courses, ski resorts, beaches, particular mountain areas and forecasts for particular events or tourist destinations. All these AWS services have 80% of the market share in the marketing of weather information in any format.

**Table 1. AWS. “Made-to-measure” weather services (2003)**

<i>Format</i>	<i>Medium</i>
Canal Météo (issue-based channel)	Canal Satélite Digital
Interactive service	Vía Digital and TV Cabo (Portugal)
Technical data and assistance	Canal Sur
Production of weather bulletins	TV Castilla La Mancha, NTV (Porto)
Internet	Wanadoo, Grupo Correo Prensa Española, La Vanguardia, El Mundo, La Caixa, MSN
Press	Grupo Correo Prensa Española, Metro
Broadband	Ono
SMS and WAP	Telefónica Móviles, Vodafone, Amena

As well as preparing and presenting content with the aim of forecasting the weather and climatic phenomena, the AWS has a climatic database with international statistical information and the possibility of forecasting more than 3,000 geographic spots around the world. These continent-, country- and regional-based forecast maps use analytical forecast models (ECMWF, MASS, AVN, MRF). This means the AWS is not just a groundbreaking centre with regard to the interactive audiovisual industry but is also a collection centre, digitalised archive and processor of data obtained by satellite, something which gives it the nature of a centre of scientific excellence. We can therefore say that the AWS is an innovation centre that unites science, technology and business from a public-service perspective.

Another remarkable feature is the AWS multi-language service. With the collaboration of the MLIS project from the European Union, the AWS co-runs a project for presenting textual weather information in eight languages (Catalan, Spanish, Galician, Basque, French, English, Portuguese and Italian). Users not only choose the geographic area but also the language they want the weather reports in. The fact that scientific terminology is very specific means the AWS has been able to develop the linguistic option, a possibility

that further enriches its services. This is relevant from a sales point of view, but also goes beyond that to become proof that the new digital society can promote cultural diversity instead of restricting it. TVC Multimèdia works to ensure that Catalan features strongly in the new digital and interactive services. The other partners in this project are TV Cabo (Portugal), Worldonline (Holland/Italy), Weather World Prod. (France) and Alice Prod. (Belgium).

### Interactive TV (iTV)

TVC Multimèdia produces and publishes interactive applications on digital TV for cable, satellite and DTT platforms. Since the launch of digital satellite platforms in Spain in 1997, TVC Multimèdia has worked with Canal Satèlite Digital and Vía Digital on the design, programming and publishing of interactive channels and services. It is also a pioneer in Spain in the development of interactive services and develops applications on all the technologies used in Europe, such as Open TV, Mediahighway, Microsoft TV and Liberate.

TVC Multimèdia is used by different international consortiums that work on researching technical solutions for interactive television (e.g., Liberate Pop TV and MHP Implementers Group). The research carried out with regard to MHP (Multimedia Home Platform) is particularly interesting, as MHP is the open programming standard with which digital TV platforms are scheduled to converge and is developed by more than 300 companies. In fact, TVC Multimèdia was the only company in Spain present at an international meeting about MHP by the EU Commissioner for Enterprise and the Information Society, Erkki Liikanen, in Brussels in December 2002. One of the main aims of the meeting was to show that the MHP standard allowed international interoperability from the consumer's perspective. Together with TVC Multimèdia, a further 20 companies presented applications, including ARD, ZDF, RAI, Mediaset, Panasonic, Philips, Premiere, RTL TV, Siemens, Sony and Sun Microsystems.

With regard to the supply of services, TVC Multimèdia produces applications throughout the whole activity cycle of interactive content, from conceptualisation to technological development, publishing and content maintenance. TVC

Multimèdia is different from most companies in that it is experienced in the television medium, something which provides a prior *know-how* that is essential to researching and producing new audiovisual formats.

Furthermore, it has a great deal of experience in accessing external databases and maintaining constant updates (e.g., the AWS). The newsroom and technology and production centre operate 365 days per year, allowing information to be continually updated. There is also an interactive laboratory where the latest advances in interactive television can be seen and proposals and creations assessed.

With regard to format, TVC Multimèdia creates applications in all spheres, including electronic programming guides (EPGs), TV sites, enhanced TV, T-commerce (television commerce), and T-banking. iTV is a new sector, but TVC Multimèdia already has a market share in Spain of around 40%.

TVC Multimèdia has established agreements with Catalan universities to create synergy in research. These include an agreement with the La Salle Centre at the Ramon Llull University to promote R&D on digital television and new possibilities. As part of this collaboration, in 2003 La Salle, CCRTV and the Government of the Generalitat launched a pilot test, the first in Spain, on digital terrestrial television with the new Multimedia Home Platform (MHP) system.

The pilot will consist of creating the necessary technological infrastructure, choosing a representative sample of Catalan society and installing decoders (set-top boxes) in selected homes. It will also involve running test broadcasts and synchronised applications with TVC programming and is scheduled to include the participation of different TV set manufacturers. The aim is to promote the Catalan production industry, develop content and strengthen business models linked to the sector, with a

**Table 2. TVC Multimèdia iTV services. (2003)**

<i>Medium</i>	<i>Service</i>
<i>Via Digital</i>	<i>Airport and highway info</i>
<i>Canal Plus Technologies France</i>	<i>OK Plus, OK Info</i>
<i>The Mediaset Grup (Italy)</i>	<i>DDT Services</i>
<i>TVC</i>	<i>DDT Services</i>

subsequent assessment of the performance of these new types of interactive digital television.

Another important agreement is the one between CCRTV and the University of the Balearic Islands (UIB), promoting the exchange of multimedia technologies in the area of digital television. CCRTV will enter into the collaboration through TVC Multimèdia and the UIB through the Department of Computer Science, which in recent years has obtained a degree of excellence in teaching and researching animated production. This agreement is extremely important technologically and politically because it consolidates a research community in a technologically advanced, economically emerging and culturally domestic field. It establishes an alternative audiovisual production to the centralised one from Madrid.

TVC Multimèdia also has an important international projection. It is a groundbreaking enterprise in Europe with a renown that allows it to sell and export its services. One example is Mediaset. The Italian group bought the interactive weather station applications and EPG. TV Cabo (Portugal) uses the interactive applications developed by TVC Multimèdia in the Microsoft TV system. Canal Plus Technologies France paid for TVC Multimèdia to create and manage an OK Info application. This service provides supplementary onscreen information about any channel in the group's platforms (in France, Spain, Italy or Poland). TVC Multimèdia designed the software, presentation, interface and browser for the OK Info application.

The final example of TVC Multimèdia's international projection is its presence at the MIPTV (International Television Programmes Market) fair, a leading industry event held in Cannes each March, where TVC Multimèdia has presented the first experiment on the European market to combine SMS and MHP technology, in a project that opens the possibility of interactivity based on mobile phones as the return channel, instead of only fixed phones as occurs now.

## **Interactive advertising**

As part of iTV in general, we would particularly like to mention interactive advertising as it involves a specific genre and format. Interactive advertising also has its own

economic logic within the new digital applications, even though it is not very significant for now.

According to the definition by Pere Vila, the former technical manager of TVC and currently the CCRTV general-secretary, an interactive advertisement is a combined video, audio and data broadcast. The associated data, which are broadcast simultaneously and only during the transmission of the advertisement, are the truly interactive part, as the video and audio parts have the same format as in conventional advertisements. They are usually very minor applications (with a very limited amount of data) and provide information on the product or offer games based on the brand. Spectators can interact through the telephone return channel. The most interesting facet to them from a business point of view is that the return channel can also be used to provide the company who pays for the ad with information on the users who interact with it. Interactive advertising is thus a novelty in terms of audiovisual production, television consumption and corporate marketing strategies.

TVC Multimèdia produced an interactive application for an advertising campaign for Renault cars, for broadcasting on the two digital satellite platforms in Spain, Vía Digital and Canal Satélite Digital. The ad simultaneously broadcast the video, audio and a set of interactive games. If the user opted to enter the applications, he could then browse a set of product information screens. The last screen asked for permission to provide his personal details to Renault, with the incentive of taking part in a competition.

## **Automatic TV: presentation**

The third branch of activity at TVC Multimèdia is Automatic TV, a hardware and software platform installed on (analogical or digital) television channels and connected to the production or continuity controls. The system generates graphic images on PAL or SDI video on a full screen or on top of another screen.

The interesting thing about this application is that it provides television channels with the possibility of publishing content without human intervention upon receiving it. This automatic content feed can either be through an Internet connection source at the channel itself

or from data proceeding from external sources, e.g., as for mobile telephone SMS messages. Automatic TV allows the real-time publication of audience participation and the automatic production of interactive applications via SMS, e.g., chat forums, voting procedures, games, etc. The hardware is based on standard equipment and is easily integrated into the continuity of any channel with a very simple operation.

With regard to publishing content, TVC Multimèdia has agreements with a number of sources, e.g., general or local news broadcasts, real-time sports results, traffic and transport information, financial news, the stock exchange, fashion, local 'what's on' guides, cinema listings, etc. TVC Multimèdia receives the information from the different providers, formats it and supplies it to the Automatic TV system so it is ready to be broadcast or printed on top of a programme. If the channel has a deal with other content suppliers, TVC Multimèdia can integrate them with Automatic TV.

There are a number of possible Automatic TV formats. Tickers or banners show up-to-date content on the screen and can be activated by the editor at the channel on will or at pre-determined times. News capsules are full-screen programmes that combine photos and text.

## **Automatic TV: SMS + TV**

As we said earlier, Automatic TV makes it possible to immediately and automatically show on the screen the viewers who are participating through SMS messages. This means that TVC Multimèdia offers the first market solution to incorporate mobile phones to television interactivity.

Viewers can participate in programmes by sending their votes (yes/no, a/b, etc.), opinions, chat messages and so on. Messages are automatically updated upon reception and can appear on the TV screen continuously or every so often. Furthermore, Automatic TV provides a filter for unwanted messages, either automatically, through a glossary, or manually, through a moderator. Applications on offer range from voting on a question or discussion topic (with A/B/C/D type answers), quizzes (shows based on yes/no type answers), "thermometers" (with a small banner permanently showing the results of real-time voting),

rankings, games (guessing games, sinking ships, etc.).

Automatic TV is a platform with diverse configurations according to each channel's requirements. In terms of hardware, TVC Multimèdia provides titling and communication equipment, RDSI/ADSL modems and, optionally, video servers and selectors. In terms of software, Automatic TV makes it possible to receive and store data from external or internal sources, automatically create PAL or SDI video quality graphic effects, manage news bulletin orders, edit bulletins and manage SMS messages with automatic or manual filtering, remote control, system monitoring and graph publishing.

Finally, the advanced Automatic TV PRO+ configuration improves the on-screen presentation of content and includes a video server that stores, reproduces and records video in MPEG format. Examples of ATV PRO+ are the videos featured in weather reports or the storage of videos for Juke Box applications.

TVC programmes that use the Automatic TV system as an added value include *Coses que passen*, *Àgora*, *L'entorn* and the cartoon series *Karekano*, on *3XL.net*. TVC Multimèdia also sells these products to third parties, e.g., the programme *La Academia (Operación Triunfo)* on TVE and Canal OT at Canal Satélite Digital. Canal OT also features a new message delivery service called photochat, whereby viewers can send an SMS message with their photo incorporated. All these services make TVC Multimèdia the leader in this sector and ensure it a market share of 70% in Spain for this type of audiovisual production.

With regard to international projection, TVC Multimèdia produced the first interactive television experiment in Switzerland, through the Automatic TV platform. The project, which combined television, SMS messages and MP3 musical archive e-commerce, was carried out by Lausanne television station TVRL. The initiative allowed viewers to enter a competition, have a live chat and buy songs over the television or by mobile phone.

## **Final considerations about interactive television**

Firstly, it is important to remember that iTV is a television language that is very interactive but which will not absorb other formats. It is also unlikely to integrate other activities,

such as purchases or banking operations. Having got over the initial euphoria of both the Internet and iTV, it is important to bear in mind that television is linked to leisure, both because of its location in the home rather than the workplace and for its necessarily fairly inactive format. This frame of reference should not be forgotten when it comes to new applications and new business models in the sector. Interactivity in television is a format to explore, but it should not be allowed to become the stuff of legends.

Interactive television is one thing and interactive TV sets another. iTV is a medium provided with a language, i.e., it is already created but lacks maturity, while interactive TV sets are devices that allow you to do more than just watch TV from the sofa. Many of these promised activities (purchases, banking, etc.), will probably not be established on this medium because, at the end of the day, a TV set is used to watch TV. In order for iTV to be a profitable business model, it needs to be a useful tool for users. Viewers have learnt to flick between channels but today's television habits only allow for limited interaction.

We can see with the experience of TVC Multimèdia that viewers want to interact in particular areas, e.g., getting extra information on what they are watching (especially football and movies) and other very visual services, such as weather reports or participation in leisure activities. This latter aspect is important because it has been shown that a large part of the public is keen to take part in and feel involved with the action. This can be seen in the voting procedures used on programmes like *Gran Hermano* or *Operación Triunfo*. The desire to take part in television is as old as the medium itself, but there are new formats that allow new ways of doing so. For example, viewers can participate and alter televised action (by voting, etc.) and can appear on screen ("I am writing this to give my opinion...").

iTV also offers the possibility of playing with television formats, in the sense of getting more involvement from the "analogical public" but without losing sight of what is on offer in television programming. For example, a competition is no longer a unidirectional space and viewers can now enter from home, taking part at any time of the day in an action that contains continuity.

Having looked at these considerations, which are necessary in order not to be blinded by a euphoric but empty

rhetoric, we can see that TVC Multimèdia is leading Europe in the production of new interactive formats. The company's strong points include the international renown of the brand, but there is also good university coverage in training requirements. And, if there is a certain amount of business fragmentation in this sector in Catalonia, it is likely that market dynamics will lead to concentration or associations that obtain economies of scale while the iTV business is being consolidated. As far as the government goes, it is essential to establish a technical and legal map of the audiovisual situation that assures investors in a sector which, as we have said, is still immature. We are referring here to the need for a general audiovisual Act that establishes a reliable future, with a view to ensuring Catalonia's leadership in this sector.