Televes

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DTT is evolving quickly in Europe

Digital Terrestrial Television (DTT) continues to be the preferred formula for watching television accross most countries in Europe. Lately it is sharing more market with increasing IPTV content, but even so it is unquestionable that both DTT services and technology are evolving rapidly.

Although many thought 4G/LTE networks could be a threat to the future development of the radioelectric spectrum for DTT, truth is most advanced countries have bet strongly in favour of its continued growth.

While France, for example has a DTT share around 60% in the households, the country has recently scheduled two new multiplexes exclusively for MPEG4 HD content. In total, the country broadcasts 18 MPEG2 SD and 10 M PEG4 HD channels, including national and local/regional muxes.

Italy has already experienced migration of DTT services below the 790MHz band. They achieved analog switchoff while moving all DTT multiplexes in a single process back in 2012. Since then, the country has maintained

AND ALSO ...



Choosing audio language on COFDM services

all 28 DTT multiplexes and is making a clear stride towards a full DVB-T2 spectrum by the end of 2014, when DTT and LTE signals will coexist.

The scenario is also similar in the UK, where the regulating authority, Ofcom, published in 2012 the strategic plan for "Securing long term benefits from scarce low frequency spectrum", clearly pushing for DTT services by maintaining the full number of multiplexes, supporting evolution to more efficient modulation and compression formats like DVB-T2, MPEG-4 and HEVC and promoting potential migration from SD to HD as a standard format. It is scheduled that as of late 2013 viewers will enjoy the new T2 mux with new content from the BBC, including two HDTV services.

The majority of countries in Europe maintain the view that DTT currently performs a very important role in providing near-universal low-cost access to service broadcast content, whilst also enabling a wider consumer choice of channels, receiver equipment and TV platforms



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FREE EDITION

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NEW PRODUCT

H30 Meter

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PROJEKTA

(Luanda, Angola) 24 - 27 October



Televes was present at PROJEKTA 2013 Fair in Luanda, Angola, through the Serra&Coelho distributor, who has his head office in the Angolan town of Panguila. The multiswitch range of EasySwitch and the H60 field strength meter have been the flagship products.

Paralell to this event, Televes has organized a seminar of solutions oriented towards Angolan Market, using an Application Guide for TVSAT and CATV installations.



Televes has joined SIMAVELEC (Paris, France)

simavelec

syndicat des industries de materiels audiovisuels électroniques

During January 2014, Televes has joined SIMAVELEC (Syndicat des industries de materiels audiovisuels électroniques) in France.

In Juan Virel's words, Televes France Managing Director, "joining SIMAVELEC will allow Televes to participate in the technological evolution of the french marketadapted products"





Selecting the audio language in COFDM services

How can we define the audio language on a TV with COFDM services transmodulated from satellite signals?

THE EXPERT'S OPINION

The choice of the "favorite language" in a TV menu affects the entire list of programmes.

It is certainly a great advantage over PAL modulation, where only one audio was available and there was no possibility of change by the user.



This is a clear advantage especially for large installations (hotels, etc.), where the offer of multi language services is essential for a quality service.

> Televes T.OX equipment has been designed to ensure the maximum available functionality as well as the best quality and reliability to the user



Helder Martins International Technical Assistance



ALWAYS UP-TO-DATE DiSEqC and SID edition on T.OX

DVBS/S2 transmodulators ref.563101, already incorporate a function to edit the SID in order to avoid retunning TVs when making changes in the TV program list.

Until now, this function was only present in ref. 563199.

Moreover, these transmodulators can choose between satellites by means of DiSEqC commands





We all knew that Televes' antennas work to any adversity...

And that sometimes they are installed in not the most traditional way, is also known.

But surely no one had yet tried to leave the dipole in the same position is supplied in packaging, wedged between the directors. Could we be facing an innovative solution which eliminates 100% echoes in DTT reception?



Talking about...

Interview with: Manuel Martínez, Televes Corporation Sales General Manager

International subsidiaries: "An international presence we are proud of"

Televes Corporation Sales General Manager shows the international Televes subsidiaries deployment in depth.

How did Televes' international deployment begin? When and for what reasons was it decided to start up the first multinational subsidiary?

It started in Portugal in the late 70s, to attend the TV deployment in that market. The first subsidiary was founded in the early 80s, Televés Electrónica Portugesa, in Maia, Oporto. At that moment Portugal was part of the EFTA and the general belief was that it would join the CEE sooner than Spain, and for that reason it would simplify our access to European markets. Taking this into account, we were the first company in the sector to formalise an exportations department in 1985.

The setting-up of a international subsidiary follows a rigorous and gradual process of settlement which begins with the exportation, distribution agreements and consolidation of reliable costumers. Finally, the subsidiary is settled and its target is to make Televes a local brand in that market's development.

Televes Corporation has nine international subsidiaries established in the main/ leading European markets, besides USA, Arab Emirates and China. Is this the best structure to bring Televes' products near in almost 90 countries?

Televes must always be associated with European manufacturing, technological development, quality and service, but also for the proximity to the professional installer and his market. For that reason, when we talk about the main makets of exposure of our brand it is essential to count on "on-site" commercial and technical resources. This local presence is adequately complemented with the exportations department, to fully attend more than 100 countries throughout the five continents. The deployment has been such that we now consider Europe a domestic market.

Would you say that Televes is a multinational company by vocation or as a result of the market circumstances? We love to compete. A company like this, which bases its success in the technological design and development and its own manufacturing processes wouldn't be the multinational firm that it is nowadays if it hadn't started from a clear international vision and with the will to compete with the best brands in other markets. So, I would say that thanks to this analysed vision of internationalisation and to a strategic organic growth we can continue our expansion plans without an influence of current market conditions.

Televes must always be associated with European manufacturing, technological development, quality and service, but also for the proximity to the professional installer and his market

Under which criteria does Televes Corporation decide, in a particular moment, to start up a subsidiary in a specific market?

Mainly decided on market potential and the ability to develop products, but also to the technological standards of that particular market, which gives our industrial capacity. Not least important is to provide the human resources needed, since we consider the local human resources a key part of this.

How does Televes compete with local companies that are already established in these international markets?

Televes is capable of not only competing in uneven technological markets, but with very heterogeneous competitors. For example: the case of the German market. Our subsidiary shares the market with the most innovative companies at global level. The high technological knowledge we have accumulated on robotised manufacturing processes, electronic miniaturisation and industrial automatisation generate a supply capability, flexibility in the evolution of products and a attention to market needs that is very valued by our local customers. Example of this are the numerous recognitions and awards that our flagship products are gathering up, such as the H60 and H30 field meters, OSD dishes of the DAT HD BOSS antennas



in the American, German and Polish markets.

It has been pointed out lately the possibility of starting up a subsidiary in Russia. How far is this project now?

We have been working in the former Soviet Union countries. Russia has a huge potential market where the main stages of the creation of a subsidiary are being carried out in the previously determined deadlines. Televes' international plans fit perfectly with this specific market and we can expect the setting up of the Russian subsidiary in the short-term.

What about Latin America? Are the projects to increase the corporation presence in that region, so close to us from a cultural and idiomatic point of view?

We are naturally united by a common language and culture, but not so from a technological point of view. However, we had encountered similar differences in other markets as the USA, where we already have a subsidiary since 2005. We are evaluating different possibilities in Latin America, where we have been positioning the Televes brand for some time with various operators throughout the continent.

Televes UK has recently achieved a great success for having become the first supplier of RF filters to ensure the good "coexistence" between DTT and 4G. Which commercial achievements of the other subsidiaries would you point out?

Definitively, I could mention milestones such as the LTE filters supply in the UK in 2013 to the consortium formed by O2, Vodafone and E&E, as well as other ones prolonged over time, such as the deployment of a considerable part of the relays, gap-fillers and low power DTT network in France, or even such as global benchmark installations as the football stadiums Juventus Arena or the Giuseppe Meazza in Italy. However, I would mainly highlight the sustained contribution all the subsidiaries make to consolidate Televes as one of the most recognized and reputable brands worldwide



Protection against 4G/LTE



The number of 4g/LTE emitters keep growing. After the settlement of LTE in several cities, LTE at a global level is about to come. This technology makes use of the higher frequencies at the UHF band and therefore affects to the DTT TV systems.

A TV installation can be divided in three stages: reception, amplification and distribution. Interference protection must be implemented in every stage.

TRAiNiNG

RECEPTION: The aerial is the first element to minimize the LTE/4G interference in the system.

There are two different ways of implementing an interference protection: Using an specific antenna or a new element in the system to filter these frequencies.

The first solution can be implemented using a VZENIT antenna. Modifying the geometry of its reflectors you can filter Ch. 58, 59 or 60.

The second solution can be done by using a Q-BOSS device, which implies not to change the aerial. This device filters the interference signal from any antenna and also incorporates an AGC with QBOSS technology.

■ AMPLIFICATION: Wide band amplifiers need filters in their inputs to filter out the LTE signals.

The most efficient way to do so is using a filter that cannot affect any other frequencies, for example, TELEVES microcavities filter.





DISTRIBUTION: Filtering is not taking into account in the passive elements of the TV distribution because they need to be transparent to IF frequencies.

These elements contribute to minimize the LTE/4G provided that it is guaranteed that its shielding is not acting as an open gate to these interference signals.

On the other hand, it is required a high quality coaxial cable, with the best shielding possible, as it is the main element of a TV distribution system. A bad cable could Vzenit antenna: variable cutoff frequency depending on the opening angle of the directors.

wreck any action to prevent LTE. So it is not worth to use devices which remove LTE signals if there are any coaxial cable which deficient shielding.

For that reason, 431001 and 431002 cable leads have been launched, to provide the entire system of LTE prevention.

LTE prevention must be implemented in every stage of the system. Not doing so is a risk not worth taking





IDEAS

2 satellite reception with a QSD 750 Antenna + LNB Monoblock 6°

Signal reception from more than one satellite was invented by Televes back in 1988.

You can receive services from several satellites through just one set-top-box using two or more LNBs installed in the same reflector system and connected to a DiSEqC switch.

Televes has a set of accessories which provides multisatellite reception with the high quality QSD dishes. 790901 and 790902 brackets adapt the antenna to multisatellite reception of satellite spaced at max 20 degrees.

Usually, *Astra 19 2E* and *Hotbird 13 1E* satellites are the most required ones, and they are spaced by 5.8 degrees.

Monoblock LNB Ref 7611 has been optimized for multisat reception, space at max 6 degrees, in 800mm dishes.

Despite ref 79002 QSD dish is a little smaller, it has been tested in real installations that this set can receive multisatellite signals with exceptional quality parameters.

The main advantages of this setup are the easiness of installation, the reduction of the equipment needed and also the system simplicity



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Created in 1956, the Calouste Gulbenkian Foundation is a international distinguished Portuguese institution. The TV distribution system in its Lisboa subsidiary has recently been reformed.

With the purpose of having several internal channels from A/V and HDMI sources, the implemented Televes solution provides the best quality to distributed services.

The existence of old TVs without DTT reception forced the implementation of an hybrid system with contents modulated both in PAL and COFDM.

So, T.0X A/V Twin modulators of Vestigial Side Band (ref 5806) provide 6 analog programmes whereas the 3 DVB-T DigiSlot Modulators (ref. 554611) equipped with A/V and HDMI encoders (ref 554811 and ref 554813) provide the digital contents.

In the main TV distribution system outdoors equipment was used: power supply unit ref 5546 and hybrid amplifier remotely powered ref 4513



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