DTT FORUM BILTEN
BOSNA I HERCEGOVINA

Number 9, July, 2008

Welcome,

With the aim of improving the providing of information for the wider public on the introduction of digital television, DTT Forum of Bosnia and Herzegovina has conducted a series of activities in order to allow for the citizens of Bosnia and Herzegovina to timely receive information on the switch-over from analogue to digital broadcasting. Along with the Bulletin that is published monthly and that publishes brief news regarding digital broadcasting in Europe and around the world, as well as other useful information, a web page (*www.dtt.ba*) dedicated to the switch-over from analogue to digital broadcasting in Bosnia and Herzegovina, and serving to provide the citizens of Bosnia and Herzegovina with useful information in the form of questions and answers concerning the introduction of digital television in Bosnia and Herzegovina, will soon become operational. Also, in accord with the radio and television stations, television shows and interviews, the main topic of which had been the process of introducing digital television in Bosnia and Herzegovina, have been organized. The press statements provided responses to the questions that the citizens of Bosnia and Herzegovina will encounter during the transition to digital broadcasting, dealt with the benefits that the introduction of digital television will bring to the consumer – individual, but also with the global interest for Bosnia and Herzegovina, which is successfully following the accelerated development of technology and market in Europe and the world.

The Activities in June

During the month of June, the Working Groups of DTT Forum worked on the preparation of material that will be integrated into a unique strategy for the switch-over to digital broadcasting and „...that will affirm the cooperation between the operators, the mutual complementing of platforms, the compatibility of decoders, the access to a wide spectrum of contents, as well the rapid transition to digital broadcasting. "(...) (Official Gazette 18/07 dating from the 13th of March, 2007).

The Working Group for Regulations

It has been stated in the draft of the legal framework of the working group for regulations, which will be included in the Strategy, that, as far as the area of DTV regulation is concerned, „the good practice" of EU countries, as well as countries in their surroundings, is that it primarily refers to the technical, content, and economic

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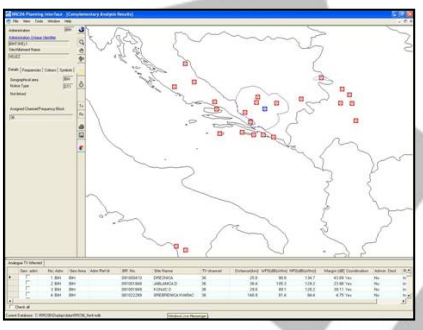
aspect, and not the legal aspect in the constricted sense of that word.

Starting Basis – Regulatory Aspects

The simultaneous transfer and broadcasting (simulcast) of analogue and digital broadcasting signals is a great financial burden for broadcasts in general. It is for that reason that an accelerated switch-over is recommended; and it is expected of countries introducing broadcasting on their territories to adopt adequate legal regulations, as well to adopt favorable economic and technological conditions. Particular attention is directed to local and regional broadcasting systems. It is also necessary to correctly assess the duration of licenses issued to the operators of digital distributional systems, keeping in mind that the operators will require several years to earn back the capital invested in the process of switch-over to digital systems. It is for that reason that a longer duration of licenses to be issued to the operators of digital broadcasting networks, compared to the usual duration prescribed by current legislation, is recommended.
In that regard, the legal framework or by-laws need to clearly define the rights and obligations that will have to be faced by the various actors in this process. In doing so, particular attention needs to be paid to the volume and structure of the needs of the following users: socially endangered population groups, disabled persons and persons with special needs, institutions in the areas of health and education, institutions in the areas of sports and culture.

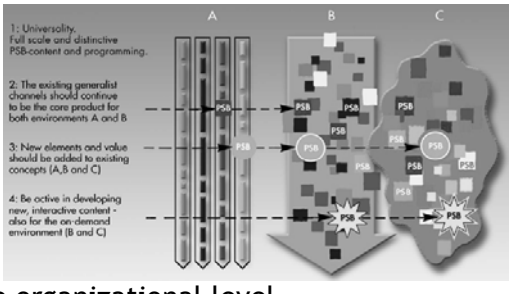
The Working Group for Technology

Keeping in mind the fact that it has been planned for digital terrestrial television to completely replace analogue television within the VHF and UHF spectra it is currently using, from the aspect of availability of the frequency spectrum, this switch-over may be observed within three stages:



1. The introduction of digital terrestrial television, the planning of special frequency resources that will allow for the parallel operation of the existing analogue and new digital transmitters.
2. The continuation of digitalization, which presumes the switch-off of one part of frequencies utilized by analogue television and the continuation of the digitalization process.
3. The complete switch-off of analogue television (ASO) and complete digital broadcasting.

The Working Group for Content



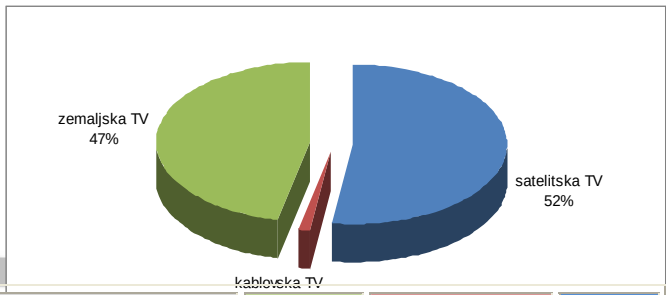
The Working Group for Content developed a document focusing on the specific circumstances under which the system of public radio and television broadcasting in Bosnia and Herzegovina exists. With the adoption of the law on the public broadcasting system, organizationally speaking, the system needs to be shaped in a new fashion. It has been stated in the document that this new organizational structure, primarily referring to the Corporation as the service provider, suits the future strategic developments on the organizational level.

The forming of a new organizational structure will also signify a path towards the planned consolidation of the technological infrastructure of the system. In order to open up a path towards the digital transition of the system, such a system should implement the existing practices and operational flows. The overall financial capacity of the system most probably does not allow for a complete digitalization of the system in the period of 5 years. However, within that time period, changes may be made that will significantly increase its efficacy utilizing new technoligies and means of work.

The main product of public broadcasters has been and will continue to be: program content. Public broadcasters must always focus on the production of high quality content with the lowest costs possible. The balance of company resources must always be oriented towards this goal.

The Working Group for Socio-Economic Aspects

According to the estimate made by the Statistics Agency of Bosnia and Herzegovina, there are approximately 1.100.000 households, of which 94,4% own a television set (Statistics Agency of Bosnia and Herzegovina, 2004). Although there is an evident trend of growth in the number of households that also receive the signal via alternative platforms, via satellite and cable systems, terrestrial television remains the only mean in which approximately half of the total number of households receives the signal and the basic source of reception of television programs, particularly those of local character.



Ukupno TV domaćinstva	terrestrial	cable	satellite
1.110.000	475.956	10.244	532.800

The share of various platforms in the reception of TV programs

The Working Group for Promotion

The Working Group for Promotion proposes two two-month stages of intensified PR activities. The time period between December 2008 and September 2012 will be used to educate the citizenry via sponsored TV and radio shows, joint activities of public advocating with the campaign partners, and ad hoc events.

The promotion of digital television on the train in Sweden

The aim of the first stage of the campaign is to introduce the citizens to the concept of digital broadcasting. To present the term, the advantages it offers to its users, introduce them to the details of (possible) national subsidies, clarify what requirements this obligation of Bosnia and Herzegovina, for which there is no alternative, poses before them.

The second stage of the campaign should provide answers to the questions/problems that are the result of the analysis of the second stage of public opinion research (January-February 2010) , which will research the citizens' experiences during the first two months of pilot DTT broadcasting, as well as inform and prepare the citizenry for the beginning of *simulcast.*

DTT News

Great Britain

The Parliamentary Committee of Public Accounts has issued a report on digital switchover which criticizes the government for

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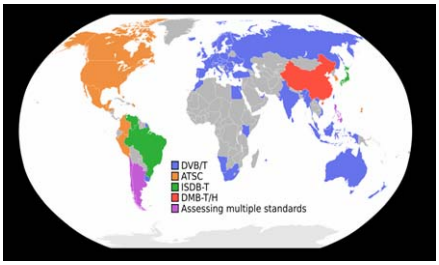
allowing the sale of analogue TV sets.



Edward Leigh, chair of the parliamentary committee, stated that many viewers do not seem to understand the implications of the analogue switch-off and are still buying analogue televisions, unaware that they have built-in obsolescence.

Half of all new TV sets sold in the first seven months of 2007 were analogue. In addition, of the 530,000 TV sets sold in April 2008, approximately 105,400 were analogue-only.

Source: Rapid TV News http://www.digitag.org/

Spain - Impulsa TDT donates 1000 set-top boxes

Impulsa TDT, the DTT promotions organisation, will distribute 1000 set-top boxes to low-income families in the region of Soria.
The set-top boxes will be distributed through the aid organisations Caritas and the Red Cross.
Soria and its surrounding region are participating in a digital switchover pilot project. The analogue switch-off will take place on 23 July.
A total of 18,550 households will be affected by analogue switch-off.

Source: El Mundo http://www.digitag.org/

Croatia

Novi List reports that in the coming two years, Croatia will completely switch-off the analogue signal for the reception of television broadcast, which is why the owners of television sets that only receive analogue signal will either have to purchase new digital televisions or receivers to transform digital into analogue signal.

According to estimates, only 10 percent of households own televisions for the reception of digital broadcast. The Ministry of Sea, Traffic, and Infrastructure will distribute vouchers that will enable the purchasing of necessary receivers. Considering that the cost of receivers varies, and their price ranges from 350 to even 2000 Kunas, national assistance to the HRT TV tax payers in the amount of 200 Kunas will not cover the costs of switch-over to digital signal.

Source: Business.hr
http://business.hr/Default2.aspx?ArticleID=7b51cc1c-8627-44a9-8e6a 0e603096d8e5&readcomment=1&open=sec

A Glossary of Digital Terminology

Back channel

Back channel is a channel of a smaller frequency spectrum or capacity that serves to provide communication between the user and the central network. The user receives the television signal, and is, at the same time, connected to the central network via another communication channel with a dial-up modem or a telephone line. That way the user can communicate with the service provider, send them comments, etc.
The possibility of a back channel is enabled through interactive services that allow the user to receive data and give feedback, like order services, or send comments. It serves for communication between the user and a service provider. For example, the user receives and

watches a television signal, and is, at the same time, connected with the modem to the internet via another communications channel.

LCD TV (Liquid Crystal Display)

LCD is a television with a flat screen of 15 to 65 inches that uses the „liquid crystal display". This technology had been formerly used in cell phones, computer monitors, etc. LCD crystals do not produce their own light, which is why an external source of light, such as a fluorescent light bulb, transfers the light forming an image. LCD monitor does not contain phosphorus that glows, it is thinner, and requires less energy than a plasma TV, or traditional TV sets. Also, LCD technology excludes radiation that the TV monitors emit.

Plasma TV

Plasma television technology is based on the light of a fluorescent light bulb. The display itself consists of cells. Within each cell two glass panels are separated by a narrow gap in which neon-xenon gas is injected and sealed in plasma form during the manufacturing process.
The gas is electrically charged at specific intervals when the plasma set is in use.
The charged gas then strikes red, green, and blue phosphors, thus creating a television image.
Although plasma television technology eliminates the need for the bulky picture tube and electron beam scanning of traditional televisions, because it still employs the burning of phosphors to generate an image, plasma televisions still suffer from some of the drawbacks of traditional televisions, such as heat generation and screen-burn of static images.

The Advantages of Plasma TV over LCD TV

1. Larger screen size availability
2. Better contrast ratio and ability to render deeper blacks
3. Better colour accuracy and saturation
4. Better motion tracking (little or no motion lag in fast moving images

The Disadvantages of LCD TV over Plasma TV

1. Lower contrast ratio
2. Weaker motion tracking
3. The screens are rarely larger than 42 inches
4. Also, although LCD televisions do not suffer from burn-in susceptibility, it is possible for individual pixels on LCD televisions to burn out, causing small, visible, black or white dots to appear on the screen. Such individual pixels cannot be repaired or replaced, and the whole screen would need to be replaced at that point.

The Advantages of LCD TV over Plasma TV

1. No burn-in (ghosts) of static images
2. Better cooling
3. Increased image brightness over plasma
4. Longer expected lifespan of display
5. Lighter compared to plasma TV

The Disadvantages of Plasma TV over LCD TV

1. Plasma TV is more susceptible to burn-in of static images
2. Plasma TV generates more heat than an LCD, due to the need to light of phosphors to create the images
3. Does not perform as well at higher altitudes
4. Shorter expected lifespan of display

Simulcast - simultaneous broadcast

The broadcasting of programs via numerous media, or the broadcasting of the same program over two different channels or frequencies.

Planned Activities

- July – Meetings of working groups – the development of Strategy Draft

THE SECRETARIAT OF DTT FORUM OF Bosnia and Herzegovina – Mr. Emir Vajzovic, Secretary of DTT Forum of Bosnia and Herzegovina – Ms. Indira Vaskovic Assistant of Secretariat of DTT Forum of Bosnia and Herzegovina