



DTT FORUM BILTEN

BOSNA I HERCEGOVINA

Issue 16, March 2009

Dear readers,

In the last year digital terrestrial television went through a significant development. New services that digital terrestrial television offer increase users' needs for additional contents, better, advanced and faster services. Although in European countries all DTV platforms show significant growth, in the process of transition to digital broadcasting, it is necessary to extract terrestrial platforms which are expected to, with the transition to the digital broadcasting, grow in the period of 12 to 24 months before termination of analogue signal. DTT platforms play an important role in providing universal television services and excel by the genres and variety of channels they offer.



DTT FORUM

BOSNA I HERCEGOVINA

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DTT FORUM ACTIVITIES

Strategy delivered to the Council of Ministers

In the last month we announced the information that was related to the Strategy, the process of public consultations which began on January 14 2009 and successfully finished on February 14 2009.

The Strategy of transmission from analogue to digital terrestrial radio-diffusion in Bosnia and Herzegovina was delivered to adoption to the Council of ministers on March 17 2009.

The Strategy goal is specification of optimal solution for fast and effective transmission from analogue to digital terrestrial radio-diffusion in frequency bands from 174-230 MHz and 470-862 MHz.

The Strategy is based on the promotion of information society principles in Bosnia and Herzegovina, further actuation of communication development, simulation of creating conditions for continuous development of media liberties and protection of all users and operators in communication sector in Bosnia and Herzegovina, in the sense of non-discriminating service access, quality and price.

Creation of Action plan for realization of tasks on implementation of Strategy and successful transmission to digital terrestrial radio-diffusion is in the process of development.

On the web page www.dtt.ba you can find the Strategy scheme of transition from analgue to digital radio-diffusion in Bosnia and Herzegovina.

DVB-T INFO

The transition process in B&H

In this issue we are briefly going to look back on the current state in the process of introducing digital television to the European Union member states. Digital radio-diffusion represents one of the main platforms of access to information society in accordance with the eEurope 2005 Action plan. The eEurope 2005 plan stimulates the development of information society, advances the productivity of economy and improves life quality.

Strategy i2010

At the begining of 2005, the European committee has started the new policy frame, the initiative called "i2010 - the European information society for development and employment". The initiative ranges all aspects of information, communication and audio-visual sector with the goal of merging individual policies into a unique strategy.

Technologies known as *information and communication technologies* (ICT) positively contribute to the growth of economy, opening new work places and improving life quality. Strategy i2010 provides political guidelines for which we refer as making of "the information society" in years by 2010 and it consists from three chapters:

- unique European information space;
- inovativness and investment in research;
- connection and better life quality.

To remind, the European comission in its Announcement COM(2003) 5412 in 2003 recognized the advantages of transmission from analogue to digital radio-diffusion systems and gave the states the basic guidelines for conducting transitional process. The group for surveliance of radio frequency spectrum EU Radio Spectrum Policy Group (RSPG) published in the same year its opinion on introduction of digital systems and their influence on spectrum usage, and pointed out to obstacles in the fast transition process:

-The politics area - there is an absence of



political decisions which would refered to termination of analogue signal on national level, specification of deadlines for termination and the European approach and policy

-Economic and market area - there is a need for settling large transmitters, low level of consumer demand based on the shortage of initiative for change and resistance of operators caused by the financial risk.



The radio frequency spectrum surveillance group (RSPG) has initiated a certain number of meetings of EU state members, with the purpose that based on a previous researches of transition process conducting in some states acheive certain level of adjustment with the dynamics, deadlines, regulations and adopted technical solutions. Hastening the transition process and the deadline defining on the EU level have had for its goal to contribute to the overcoming of the current inconsistency of the digital television market.

Time deadline in the EU countries

The European Union members started with the experimental digital terrestrial broadcasting at the end of the 90s and at the begining of the 2000. From the member countries that announced the date of termination of analogue signal we differ three types of countries:

In the first group are the countries where the process of transition from analogue to digital broadcasting is completed (Germany, Belgium(Flanders), Finland, Luxembourg, Holland and Sweden).

In the second group are the countries that plan the transition to digital broadcasting the latest until 2010 (Austria, Denmark, Estonia, Spain, Malta and Slovenia).

In the third group are the countries that plan to switch-off the analogue broadcasting until the end of 2012 or earlier (Belgium (Bruxelles area), Bulgaria, Cyprus, CzechRepublic, Greece, France, Hungary, Italy, Latvia, Lithuania, Portugal, Romania, Slovakia and Great Britan). It is necessary to complete the development of the EU countries economy as it will reach its peak when all member countries switch-off the analogue and switch to digital broadcasting.

The chart is showing the process of transmission to digital broadcastin in the EU countries

Grupa	Time deadline	Member states
A	The states that already transfered to digital broadcasting	Germany, Belgium (Flandrers), Finland, Luxembourg, Holland, Sweden
B	The date of transition was set before 2010	Austria, Denmark, Estonia, Spain, Malta, Slovenia
C	The date of transition was set for the end of 2012 or earlier	Belgium (Bruxelles area), Bulgaria, Cyprus, Czech Republic, France, Hungary, Romania, Slovakia, Great Britain

Sourc:http://ec.europa.eu/information_society/policy/ecomm/current/broadcasting/switchover/national_plans/index_en.htm

To have in mind the strenght of analogue receivers and analogue receiver sensitivity to

interference is of grat importance, and according to this coordination of the

transition process to digital radio-diffusion systems of the neighbouring countries must be managed. The European commission published in May 2005 the Information COM(2005) related to quickening of the

transition process. The Information is followed by a work document which contains detailed information on transition process to digital radio-diffusion systems of the state members.

Introduction of the digital television in Bosnia Herzegovina

Taking into consideration the commitment of Bosnia and Herzegovina to the European integration, it is important to respect the recommendation of the European commission (COM(2005)204) - that all member states completely transfer to digital terrestrial radio-diffusion the latest until the end of 2011.

The Communication Regulatory Agency in 2008 transferred to the new mode of publishing licence in broadcasting, for the purpose of adjusting the procedure of licence granting in B&H with the approach which is being used in the countries of EU about which we were writing in one of the previous Newsletters (DTT Newsletter 11).



The Strategy suggests that DVB-T standard with MPEG (H.264/AVC) is used in the introducing of digital terrestrial radio-diffusion in Bosnia and Herzegovina .

There are some discussions in Europe about whether to use the MPEG-2 or MPEG-4 compression standard. All countries that have begun with the digital television introduction later, immediately begin with the DVB-T MPEG-4 (H.264) standard, and that way they take one step further and reduce costs of inevitable technology switch.

As one programme requires the standard picture quality 2-2.5. Mbit/s, if the MPEG-4 compression is used, through one DTT MUX it is possible to transmit 8 to 10 TV channels of standard picture quality (SD), depending on the other contents (audio, TTX, EPG, MHP, additional services).

The advantages of introducing MPEG-4 standard in relation to MPEG-2 are the enabling of further system advancing in the future, providing double larger usage of the frequency spectrum and providing more usage of the distribution network capacity. By using the MPEG-4 the demands for larger byt protocol are compensated, which is important for introducing the HDTV. It is important to mention that MPEG-4 is compatible with the new DVB-T2 standard which has recently been adopted, and enables the DTTMUX capacity increase for some 30% (two-three extra TV channels of standard picture quality).

Specifications for DVB-T receivers in Bosnia and Herzegovina

For the purpose of protection of the market and consumers in Bosnia and Herzegovina, before the beginning of transitional phase is necessary to make the decision on minimum technical conditions and characteristics that will be used in digital terrestrial radio-diffusion.

It is necessary to devise a plan for consumers education about DTT, as well as for the manner and types of subvention plan for purchasing only those receivers that satisfy regulated technical standards. All that is mentioned should be in accordance with the Law on consumers protection in Bosnia and Herzegovina ("Official Gazette of



Great Britain - one of the examples of consumers protection is the "Digital Tick" logo which marks products and services for the purpose of work prior to, during and after transition to digital broadcasting.

B&H“, NO.26/06).

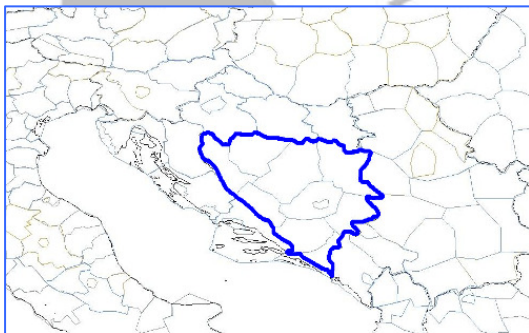
For the purpose of consumers protection from the purchase of inadequate appliances, and thereby not disturbing the competition relations on market, one of the following steps is to clearly define technical specifications and standards of the equipment that have to be satisfied.

The programm contents of HDTV quality demand transmission capacity which is approximately four times bigger than during the transmission of standard quality digital broadcast programme (SD). Because of that the standards that allow resizing of necessary capacity for broadcasting are developed, and at the same time they do not decrease the quality, so that the programmes can efficiently transmit to digital terrestrial broadcasting network.

After the complete transmission to digital terrestrial radio-diffusion it is necessary to predict the space for broadcasting of content into the high quality resolution (HDTV).

Interactive multimedia

One of the most interesting services enabled by digitalization is interactive multimedia. If a viewer is allowed in some way to communicate with the content that has been offered to him, we are going to get interactive TV, i.e. interactive multimedia. For something like that a two-way interaction is needed which is reached by the return channel between STB and content. The return channel can be for example the simple 56 kbps modem connection or the broadband like ADSL. According to the information CRA for 2006, 10% of citizens use broadband networks. However, already at the beginning of 2008 the number of these users amounted to 20%.



Digital television for Bosnia and Herzegovina means:

- greater efficiency of frequency spectrum usage;
- the use of released part of the spectrum for new services;
- new market possibilities midst the releasing spectrum part;
- creating new economic possibilities and employment;
- promotion of new technologies development;
- increasing of competition for service providers;
- abetting of the development of media pluralism;
- possibility of increasing the local content pluralism;
- contribution to the broadband services and information society development ;

After adoption of the Strategy, the Ministry of Transport and Communication, CRA and DTT Forum will propose to the Council of Ministers the Action plan for task realisation on the implementation of Strategy and successful transition to complete digital terrestrial radio-diffusion.

NEWS

AUSTRALIA INVESTS 23 BILLION EUROS IN THE INTERNET

Australia
April 07, 2009

The Australian government will build national broadband internet network of great speed, which will cost 43 billion Australian dollars or 23 billion euros. The Prime Minister Kevin Rudd said that this is the biggest state project which will provide 37,000 work places and help the weakened economy.

The Prime Minister Kevin Rudd called for private companies to join the new firm and build network with the transmission speed of 100 Mbit/s, fast enough to download several movies at the same time. Australia has slower and more expensive internet service than most of developed countries, which endangers her business competition. The plan is that almost every house should be connected by the optic cable is the biggest infrastructure project in history.

Source:
http://www.nytimes.com/2009/04/08/technology/internet/08broadband.html?_r=1&ref=technology

SUBREGIONAL SEMINAR ITU AND ROUND TABLE FOR CEE

Serbia
April 03, 2009

Subregional seminar ITU and round table on the theme of transmission process from analogue to digital terrestrial broadcasting in Central and East Europe, will be held from 27 to 29 April in the National assembly of the Republic of Serbia. This meeting was organized by the ITU and the Ministry of telecommunication and information society of the Republic of Serbia.

The seminar and the round table are the chances to develop the dialogue on the theme of transition from analogue to digital broadcasting, organized with the goal to take into consideration the most important

technical, regulational and economic aspects. The main goal of the meeting is the discussion on following subjects:

- Challenges of the digital broadcasting (technical, economical and regulational aspects);
 - Experience and trends of the transmission to digital television and radio broadcasting;
 - Harmonisation of technical, economical and regulational themes related to transmission to digital broadcasting.
- The round table is the part of the Seminar programme, in which the ministries from Central and East Europe participate. The chairman will be Dr. Hamadoun Toure, Secretary general of ITU, and the N.J.E. Jasna Matic Ministry for Telecommunications and Information society of Republic of Serbia.

Source: <http://www.itu.int/ITU-D/eur/europe/2009-MRT-Broadcasting/index.html>

THE CROATIAN TELECOM - DTT CALL FOR BIDS

Croatia
March 31, 2009

Croatian Telecom (T-HT) expressed its intention to be included into analogue to digital transition broadcasting process. According to Business.hr, HT has decided to participate in



calls for bids for two multiplexes (A i B), which is organized by Croatian telecom and the Agency for electronic communication (HAKOM) for digital terrestrial television. The ultimate deadline for delivering offers was March 30 2009. Permissions for two multiplexes will be assigned for the ten year period, and will be consigned on April 28. Each permit separately covers 95% of the population.

Source: <http://www.broadbandtvnews.com/?p=16059>

75th CONFERENCE OF THE COUNCIL OF MINISTERS



Bosnia and Herzegovina

The Council of Ministers of Bosnia and Herzegovina has adopted the Statement of Expert group for following the digitalisation projects with the analyses of possible solutions of digital radio-reley connection of Public RTV system in B&H, on the 75th conference held in Sarajevo on February 5 2009. The public RTV system of B&H is in charge of delivering detailed project of digital-relay connections of the Public RTV system of BIH, with the evaluation of expences and time of realization, through the Ministry of Transport and Communication. The Council of Ministers of BIH has charged the Public RTV system of BIH, that in cooperation with Communication Regulatory Agency, ensures all necessary agreements and permissions that are needed for realization of this project. The Council of Ministers of B&H will, based on the delivered project and gathered opinions, bring the decision on conduction of project of digitalisation of transmission system JRTVSBiH and the manner of its financing in accordance with the Law on

RTV system and Policy of the broadcasting sector, taking care on international obligations and deadlines which Bosnia and Herzegovina as a member of the International Telecommunication Unity (ITU) and European Conference of Postal and Telecommunications Administrations (CEPT) is due to respect. The Council of Ministers of Bosnia and Herzegovina has adopted, on a Ministry of Transport and Communication's suggestion, the Instruction on creating and maintenance of the official internet pages of the Bosnia and Herzegovina institutions.

LOGOSOFT SUPER TV

Bosnia i Herzegovina
March 11, 2009

Logosoft d.o.o., began with the providing services of IP television under the name SUPER TV. SUPER TV is the television of new generation and presents the IP television which is based on xDSL technology, introduces broad interactivity and high personalisation of television contents. The SUPER TV activity reflects in possibilities of creating its own content and variety of choice for usefull extra services.

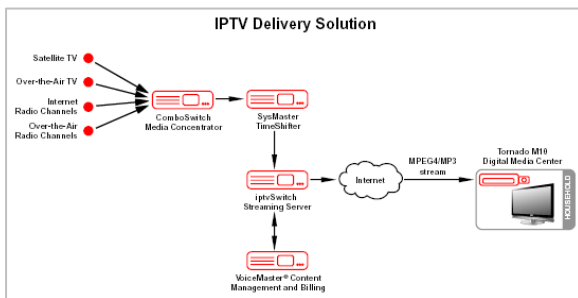
Source:

<https://www.lol.ba/v4/PrivatniKorisnici.aspx?usluga=b6a46910-6226-4a08-b460-de38d266c701>

GLOSSARY

Strategy i2010

i2010 is the political frame of EU for information society and media, which promotes positive effect of information and communication technologies (ICT) on economy, society and the quality of life. It has been presented in Jun 2005 as the new initiative for the period until 2010.



IPTV

Internet Protocol television (IPTV) is sometimes described as a broadband digital television. Digital television services are being transmitted using the Internet protocol. The infrastructure is usually logically separated from the Internet traffic, which means that the special equipmet is needed as well as by the distribution network and by the viewer.

DTT Forum Secretariat issues the Newsletter once a month in order to inform the interested sides. All data published in the Newsletter are exclusively of the informative character and DTT Forum doesn't bear any responsibility for the eventual consequences appeared by their use.
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