

Keynote Address

**Regional Seminar on Digital Terrestrial Television Broadcasting
(Singapore, 16 June 2008)**

**István BOZSÓKI, Senior Telecommunication Engineer, ITU/BDT
istvan.bozsoki@itu.int**

Distinguished guests, Ladies and Gentlemen,

It is my great pleasure to be here today at this seminar on Digital Terrestrial Television Broadcasting. I wish to take the opportunity on behalf of ITU to welcome you all.

ITU and AIBD have been holding seminars on digital broadcasting since 2001 and contributing to information sharing and training of engineers and policy makers. ITU and AIBD have been jointly assisting the ASP broadcasters on their initiatives for migration from Analogue to Digital broadcasting for the last 5 years and have implemented a series of regional training workshops in Brunei, Iran, Vietnam, Indonesia, India and Pakistan. About 145 engineers from 27 Asian countries have benefited from these workshops.

The benefits of DTT broadcasting are clear. Improved picture and sound quality and reduced problems such as ghosting and interference that affect viewers in a hilly environment or areas with high-rise buildings. In comparison with analogue broadcasting, digital broadcasting makes more efficient use of the available spectrum. The same bandwidth for transmitting one analogue programme channels can accommodate at least four digital standard definition television (SDTV) programme channels.

The switchover from analogue to digital broadcasting will create new distribution networks and expand the potential for wireless innovation and services. The digital dividend accruing from efficiencies in spectrum usage will allow more channels to be carried across fewer airwaves and lead to greater convergence of services.

The inherent flexibility offered by digital terrestrial broadcasting will support mobile reception of video, internet and multimedia data, making applications, services and information accessible and usable anywhere and at any time. It opens the door to new innovations such as Handheld TV Broadcast (DVB-H) along with High-Definition Television (HDTV) while providing greater bandwidth to existing mobile, fixed and radionavigation services. Services ancillary to broadcasting (wireless microphones, talk back links) are also planned on a national basis and need to be extended.

But there are also disadvantages of the digital terrestrial broadcasting. New equipment is required (transmitting and receiving), new antenna installation may be required, analog television requires lower signal strength to get a watchable picture and in addition digital does not degrade as gracefully as analog so fringe reception is no longer possible etc.

120 countries in Europe, Middle East and Africa made an important step towards the introduction of digital broadcasting when they signed a treaty agreement in June 2006 at the conclusion of ITU's Regional Radiocommunication Conference (RRC-06) in Geneva, heralding the development of 'all-digital' terrestrial broadcast services for sound and television. The digitalization of broadcasting in Europe, Africa, Middle East and the Islamic Republic of Iran by 2015 represents a major landmark towards establishing a more equitable, just and people-centered Information Society. The digital switchover will leapfrog existing technologies to connect the unconnected in underserved and remote communities and close the digital divide.

The GE06 Agreement provides a flexible regulatory framework that makes possible the introduction of new broadcasting technology and also other service other than broadcasting in the GE06 frequency bands.

For example, because DVB-H had not yet been standardized at the time when planning for GE-06 began its spectrum requirements could not be taken into consideration as part of the plan. However, because DVB-H is based on the DVB-T physical layer, it is possible to introduce DVB-H services into the frequency bands where DVB-T allocations are given so long as such services adhere to the obligations of GE-06 for protection of other services.

Situation is similar with T-DMB which can be used in the bands allocated for T-DAB.

The World Radiocommunication Conference (WRC-07), held in the autumn of 2007, also dealt with the regulatory aspects of the usage of the spectrum for these services.

Broadcasting is not only a set of technologies, but a set of social, cultural and commercial practices. Broadcasting develops on the basis of many factors and reciprocally, it influences various aspects of society from industry to welfare.

According to an ITU report, administrations of industrially developed countries, which have already approved the program of migration and declared the date of analogue terrestrial broadcasting switch off, have at least three main reasons for switch over. The first reason is the optimization and more efficient use of the spectrum; second, potential for raising revenue through spectrum auction to new ICT services bidders; and finally, revitalization of the broadcast services market through user's access to a wide variety of programs and services.

Digital Terrestrial Television Services have already been rolled out in many parts of the world including the Asia–Pacific region. However, the progress is slow in some developing countries of the region. Failure to adopt digital broadcasting may deprive the broadcasters of the opportunity to remain integrated with the worldwide broadcasting fraternity in terms of technological compatibility and advancement. This is in fact widening the digital divide. Therefore, to bridge the gap between digital developments and existing analogue technology, it is essential to plan for seamless migration to digital broadcasting.

Especially in developing countries, it also should not be ignored that DTT could be a basis for education, health-care and other socially valuable ICT services and eventually contribute to connecting the world, bridging the digital divide and expanding the information society. But for most developing countries, switchover from analogue to digital broadcasting is something feasible but not driven by urgent necessities. It can be seen that the transition process is not progressing evenly amongst all countries and is still at the early stage of implementation in most developing countries. The uneven migration of technology is mainly due not only to the lack of expertise and financial resources but also to an immature economic situation in developing countries.

There are ongoing projects in ITU to support developing countries in overcoming these problems and moving together toward the digital transition. I'll speak about them in my presentation this morning.

It is important for ITU and broadcasting organizations to cooperate more actively and systematically. This seminar would be a good opportunity to provide more opportunities to understand and prepare the digital broadcasting transition with its roadmaps and roadblocks.

On behalf of ITU I wish to thank to AIBD, MDA and CFI for their efforts in organizing the seminar as well as the host country for its support and hospitality. In addition, I wish to express my gratitude to our distinguished speakers who will share with us their valuable experiences and knowledge.

Thank you very much for your kind attention and have an enjoyable and productive seminar.