

**Outcome of the ITU-D Regional Development Forum for the Arab region:
“Access to spectrum, including broadcasting services trends and technologies”
Tunis, 1-3 June 2009**

Opening and contributions

The ITU-D Regional Development Forum for the Arab region on “Access to spectrum, including broadcasting services trends and technologies” was held under the patronage of the Minister of Communication Technologies of the Republic of Tunisia, in Tunis, on 1-3 June 2009. The forum was generously hosted by the National Frequency Agency and attended by some 120 participants from 15 Arab Member States, in addition to international experts from ITU, European regulatory bodies and frequency management systems manufacturers.

The forum was opened by Mr Jawhar Farjawi, Director of the Office of the Minister of Communication Technologies, on behalf of the Minister, Mr El Haj Gley, and chaired by Mr Mohammed El Banqi, Director-General of the Tunisian National Frequency Agency.

The forum was divided into ten sessions, interspersed with panel discussions and several presentations on country experiences. The sessions focused on the following issues:

1. Spectrum management: theory and practice
2. Ensuring access to spectrum and spectrum management processes
3. Spectrum sharing opportunities
4. Spectrum management automation
5. Spectrum management aspects for different services (except terrestrial broadcasting)
6. Future trends/techniques in spectrum management
7. Regional spectrum management and developing country experiences
8. Introduction of digital TV and radio broadcasting technologies and services
9. Transition from analogue to digital TV and radio broadcasting.

On day one of the forum, the Director of the ITU Arab Regional Office (ARO) reviewed Arab regional projects and initiatives being implemented by ARO, as follows: reports and statistics on Arab ICT indicators, formulation of a telecommunication regulatory framework for Arab States and sector regulators, the Arab Digital Documentation Centre, connecting Arab States’ telecommunication networks and lastly, the translation and Arabization of ICT terminology. Further, he summarized the ARO 2009 operational plan for ITU-T, ITU-D and ITU-R, particularly in relation to human resources development and spectrum management activities.

Experts from ITU presented contributions on the tasks and activities of ITU, in particular the Radiocommunication Bureau, in addition to reviewing ITU regulatory and procedural provisions, particularly those relating to national frequency planning. The experts further provided an overview of the main topics which will be addressed at the forthcoming World Radiocommunication Conference (WRC-11), including

issues relating to the use of radiocommunications in aviation, amateur services, maritime radio services, scientific issues, satellite technologies and global broadband multimedia international mobile telecommunication systems (IMT).

The afternoon sessions on day one addressed the issue of ensuring access to the spectrum and spectrum management processes, as well as spectrum sharing among services and opportunities for modern technologies. There were contributions on international frequency allocation, interference management systems, the Radio Regulations, orbit/spectrum management basics for satellite systems, spectrum harmonization for high-speed mobile broadband, dynamic spectrum management in relation to cognitive radio technology and ways of funding spectrum management authorities, in the context of which the Swiss approach was reviewed. The work of the European Union working groups on the 790-862 MHz band, one of the main points on the agenda of WRC-11, was reviewed.

On day two of the forum, the following topics were addressed: spectrum management automation tools, aspects of spectrum management for different services (except terrestrial broadcasting), future user trends/techniques in spectrum management and, lastly, regional spectrum management and developing country experiences. Within this framework, contributions were made on the following: the SMS4DC spectrum management system for developing countries, the role and importance of spectrum management, spectrum monitoring requirements and workflow, trends in satellite communication development, relevant ITU regional agreements and the Radio Regulations governing terrestrial services (other than TV and radio broadcasting), placing on the market and spectrum access (need for complementary regulations), the advanced IMT system, spectrum management for the future, regulatory and procedural aspects of radio and case studies of spectrum management in developing countries. The technologies of software defined radio (SDR) and cognitive radio (CR), which have enormous potential in respect of spectrum sharing and re-use, were reviewed.

The third and final day of the forum was devoted to digital radio and TV broadcasting and dealt with the introduction of digital broadcasting technologies and services and the transition from analogue to digital broadcasting. In this context, contributions and presentations were made by experts from ITU, regional bodies and private companies on the following topics: relevant ITU regional agreements and the Radio Regulations governing the introduction of terrestrial digital broadcasting, digital TV in the Arab region, mobile TV, ITU Telecommunication Development Bureau (BDT) assistance in the transition from analogue to digital broadcasting, the current status of the transition from analogue to digital broadcasting within the relevant ITU regulatory procedures and regional agreements, different technologies and delivery systems for digital TV and radio broadcasting, experiences with the transition process and, lastly, the Tunisian experience of transition to terrestrial digital television broadcasting.

Recommendations

1. The importance of monitoring publications and the outputs of meetings of ITU working groups and making use of them for optimum spectrum planning, management and monitoring

2. To call for thorough planning for the World Radiocommunication Conference, by coordination at national and Arab level
3. To encourage the readjustment of certain frequency bands to keep pace with modern technology, while providing adequate protection for current services and monitoring laws and the Radio Regulations
4. The importance of conformity and harmony in respect of spectrum access, by adopting successful and fruitful approaches based on regional coordination and subsequently applying these nationally
5. The importance of training in the field of radiocommunications, particularly in respect of management, working mechanisms and spectrum monitoring
6. To call for follow-up to the training programmes developed by the Telecommunications Institute of Oran, Algeria, immediately after their launch, and to study the possibility of including training programmes on spectrum definitions and allocation, well as management
7. To step up collaboration between Arab States in respect of assistance for and evaluation of good spectrum management
8. To call upon ITU to provide support and assistance for determining spectrum charges
9. To call for the creation of study groups to address SDR and CR, and to organize workshops and forums for the exchange of views and experience;
10. To call for the establishment of smart partnerships with academic and research institutions in the field of new technologies for spectrum management, monitoring and sharing
11. To call upon ITU/ARO to provide support and assistance for the transition from analogue to digital broadcasting
12. To call upon ITU/ARO to organize specialist training workshops on digital broadcasting technology, planning techniques and strategies for the transition from analogue to digital broadcasting
13. To call upon Arab States to coordinate in formulating unified plans and strategies for the introduction of digital broadcasting
14. To call upon Arab States to launch awareness campaigns providing information on digital broadcasting services
15. To call upon ITU/ARO to request international experts to submit their contributions in at least two languages in order to increase the benefit.

Conclusion

The forum concluded at 1600 hours on Wednesday, 3 June 2009, following the expression of gratitude to the National Agency of Frequencies for its generous hosting of the forum and to the Tunisian Administration for its continued support for the activities of ITU/ARO.