**Workshop on**

**SPECTRUM MANAGEMENT: *Economic Aspects***

**Tehran, Iran (Islamic Republic of)**

21 – 23 November 2016

**DRAFT PROGRAM**

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| **Day 1 (9:00 AM – 17:15 PM)** | | |
| 9:30-10:00 | Opening Session | |
| 10:00-10:45 | Group Photo and Café-Break | |
| **Session 1**  10:45-12:00 | **National Spectrum Management and outcomes of RA-15, WRC-15 & CPM19-1**  *The session will provide a summary of the outcomes of the RA-15 and CPM19-1 would help understand the direction of workflow of various BR study groups of the current study period leading up to WRC-19. It will also .attempt to give an explain the overall National Spectrum Management requirements*  ***Speakers:***   * *Mr. Aamir Riaz, ITU* * *Country Presentation: Mongolia* | |
| **Session 2**  14:00-14:45 | **Economics of Spectrum as a resource**  *Radio Frequency Spectrum is a vital input into an ever widening range of uses and with evolution of various commercial services depending on this limited resource, Spectrum has become a valuable economic good. With this widely understood notion, the session would attempt to highlight the fundamental issue of allocating spectrum efficiently i.e. to rely on market mechanisms through coherent economic, technological and regulatory pillars*  ***Speakers:***   * *Dr. Azim Fard, Iran* | |
| **Session 3**  15:15-17:15 | **Spectrum liberalization and Methods of incorporating economic forces and market mechanisms in SM**  *The traditional approach to SM through “command-and-control” regulation (C&C) - has caused artificial spectrum scarcity. With the advent of complex market structures dependent on spectrum as resource/good, spectrum Liberalization together with spectrum trading are seen as a market based regulatory tools that makes it easier for entrepreneurs and innovators to enter the market, deploy new technologies and applications, and compete.*  *The session would look into several ways in which market and price based methods are being utilised in spectrum management so that the participants become aware of these approaches and consider them for application in their jurisdictions on the basis of specific uses and specific bands.*  *Also it will deal with the spectrum management assessment and development of Spectrum Management Master Plan.*  ***Speakers:***   * *Mr. Istvan Bozsoki, ITU* * *Mr. Vári Peter, Hungary* * *Country Presentation: PNG* * *Country Presentation: Indonesia* | |
| **Day 2 (9:00 AM – 17:00 PM)** | | |
| **Session 4**  08:30-09:30 | | **Ways of ensuring access to spectrum**  *A major goal of spectrum management is to ensure that the existing supply is used in a way that maximizes spectrum’s economic value. If we analyze deeply than we can be subdivide this goal into three domains:*   * *Ensuring efficient use of the scarce resource* * *Promoting competition* * *Promoting technological innovation*   *This session would look into the possible ways in which processes to allow access to spectrum can be adapted to achieve these goals including preparation of the National Table of Frequency Allocations*  ***Speakers:***   * *Country Presentation: Cambodia* * *Country Presentation: Maldives* |
| **Session 5**  0945-12:00 | | **Spectrum assignment and the design of spectrum auctions**  *Outside the spectrum bands which are commons, the spectrum regulators have traditionally assigned frequencies within geographical areas to users, often via granting them a license, which has normally been for their exclusive use. In the past 25 years, however, in the case of many assignments, especially for mobile communications, a new method has displaced these earlier methods. This involves the use of auctions, in the course of which licenses are awarded to those offering the greatest monetary sum for the scarce national resource. This session will consider various types of auction, compare them with other assignment methods, such as beauty contests and lotteries etc., and consider case studies where auctions have performed well and others where they have performed otherwise. In summary the session would focus on:*   * *Different methods of assigning spectrum* * *The organization and logistics of auctions* * *Types of auction* * *Additional features of auction design* * *Case study of the spectrum Auctions*   ***Speakers:***   * *Mr. Aamir Riaz, ITU* * *Country Presentation: Bangladesh* * *Mr. Vári Peter, Hungary* * *Country Presentation: Vietnam* * *Country Presentation: Iran (CRC)* |
| 1330 onwards | | **Social Visit** |
| **Day 3 (9:00 AM – 17:00 PM)** | | |
| **Session 6**  08:30-09:45 | | **Setting up rules for secondary markets in spectrum trading**  *In more advanced markets with high demand of spectrum for commercial RF spectrum bands, Spectrum trading is a powerful way of allowing market forces to manage the assignment of radio spectrum rights and associated obligations. This regulatory mechanism is also seen as tool to ensure efficient spectrum utilization thereby providing a vent to counter spectrum hoarding. The session would try to explain:*   * *Spectrum trading: what it is and why it is important* * *Enabling spectrum trading* * *Objections to spectrum trading* * *Spectrum trading in practice*   ***Speakers:***   * *Dr. Ben Freyens, Australia* * *Country Presentation: Pakistan* |
| **Session 7**  10:00-10:45 | | **Re-purposing and re-farming spectrum bands**  *From time to time, efficient Spectrum Management requires a combination of administrative, financial and technical measures aimed at removing users or equipment of the existing frequency assignments either completely or partially from a particular frequency band. The main drivers of such activity are to:*   * *Ensure spectrum is deployed over time in its most productive uses* * *Maintain the possibility of entry by new suppliers* * *Ensure continuity of service for consumers*   *The session would look into different methods to undertake such activities in a successfully efficient manner.*  ***Speakers:***   * *Mr. Pavel Mamchenkov, Megafon, Russia* |
| **Session 8**  10:45-12:30 | | **Spectrum pricing and valuation**  *In traditional spectrum management regimes, RF spectrum is normally assigned to users by an administrative mechanism, rather than by setting a higher price at which the user can but need not buy it. However this approach usually intends to cover the costs of the spectrum management regime rather than to reflect the scarcity of the spectrum as a resource. In this session we shall discuss alternative ways of setting such prices.*  ***Speakers:***   * *Mr. Istvan Bozsoki, ITU* * *Dr. Ben Freyens, Australia* * *Ms. Hend Baklouti , SFM Telecomm* |
| **Session 9**  14:00-17:00 | | **Group Discussion and knowledge exchange**  ***Moderator:***   * *Mr. Aamir Riaz, ITU* * *Mr. Azim Fard, Iran* |