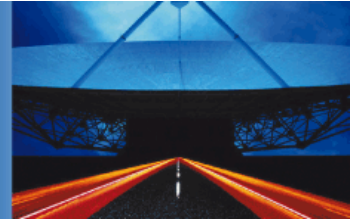




## Workshop on Market Mechanisms for Spectrum Management



ITU Headquarters, Geneva – 22 to 23 January 2007

### **Workshop Information Document**

#### **Table of Contents**

Call for Papers .....	2
Practical Information for Participants.....	3
Wireless Internet Access at the ITU .....	5
Annex: Workshop Concept Document .....	7

## Call for Papers

ITU Member States, meeting participants and other interested parties are encouraged to send in their spectrum related contributions to the meeting. All contributions will be posted on this website. Contributions can be submitted to [spectrum@itu.int](mailto:spectrum@itu.int) or using the [online application form](#).

### Suggested topics

- Some areas of interest include the following: liberalisation of spectrum usage, transfer and trading of spectrum usage rights, competition issues, interference prevention, specific spectrum management issues, mobile communication specific spectrum policy, broadband wireless access, country experiences.
- Possible keywords include: tradability, technology neutrality, service neutrality, spectrum rights, transparency, and spectrum trading.

### Key Dates

- Paper submission deadline: December 31, 2006
- Notification of acceptance: January 10, 2007
- Final camera-ready version of papers: January 12, 2007
- Workshop: January 22 and 23, 2007

### Requirements

- All submissions must be in English.
- Papers may be of one of two types: short papers (two pages plus bibliography) or full papers (fifteen pages plus bibliography)

### Accepted Papers

Accepted papers will be made freely available on the web, and will be considered for publication in the published proceedings after the workshop. Authors will retain copyright of their work.

## **Practical Information for Participants**

### **Forum venue**

The workshop on Market Mechanisms for Spectrum Management will be held in **Room B, ITU Headquarters**, Place des Nations, 1211 Geneva, Switzerland.

### **Registration of participants**

Registration will begin at 8.45 am on Tuesday 22 January 2007, Montbrillant Building, 2 rue de Varembé, Geneva. Late arrivals are welcome to collect documentation at the entrance and join the workshop.

### **Documentation**

Three background papers have been commissioned, and will be posted on the website: <http://www.itu.int/spectrum>, along with other voluntary contribution papers. A background resources website containing a wealth of resources on the topic has been created and is accessible at <http://www.itu.int/osg/spu/stn/spectrum/resources.html>. The Chairman's report will be posted on the website after the workshop.

### **Seating arrangements**

Seating is informal; participants are free to sit where they choose.

### **Languages**

All presentations and discussions will be in English.

### **Working hours**

The hours of the workshop will be as set out in the programme.

### **Hotel accommodation**

A list of hotels in Geneva and the surrounding area that accord special rates to participants of ITU meetings is available at <http://www.itu.int/travel/>.

Bookings should be made directly with the hotels themselves. Booking forms are available at: <http://www.itu.int/travel/BookingForm.html>

### **Bank**

A UBS bank at which currency can be exchanged is situated across from the ITU Tower building (17bis rue Louis Dunant) and is open continuously from 0830 to 1630 hours on weekdays.

### **Electrical appliances**

The electric voltage in Switzerland is 220 V/50 Hz.

## **Post Office**

A Post Office is situated about 200m to the right as you exit the ITU Varembe building, and then left around a bend. It is open on weekdays from 0730 to 1200 and 1345 to 1800 hours.

## **Restaurants**

The ITU Montbrillant cafeteria (level 1), ITU Tower cafeteria (level 15) as well as the ITU Tower basement café (level -2) will be open during the day. There are many restaurants within walking distance of the ITU.

## **Swiss entry visas**

Participants requiring a visa in order to enter Switzerland are reminded that they must obtain the visa before travelling to Switzerland. Delegates from countries in which Switzerland is not represented (by an Embassy or Consulate) must obtain their visas in a third country.

The Swiss authorities have introduced new measures concerning visas. Visas are no longer issued at the airport. The ITU is unable to intervene to assist with requests to have entry visas to Switzerland issued at the airport.

## **Transportation to the ITU Tower building**

To call a taxi, please dial 022 33 141 33. Bus routes 5 (direction "Palexpo") and 8 (direction "OMS") run from the city centre (bus 5 from Place Bel Air, bus 8 from Rive) and the square in front of the railway station (Place Cornavin, buses 5 and 8). Passengers should get off at the stop named Vermont (for route 5) or at UIT (for route 8). A standard ticket for the Geneva city area costs 2.20 Swiss francs and can be purchased from the orange machines situated at each bus stop. It is necessary to have the correct money when using these machines. The above-mentioned ticket is valid on the entire network for duration of one hour. No special ticket is required in order to transfer from one bus to another within that time period.

Parking restrictions are in force in the streets adjacent to the ITU. To avoid fines, participants are advised to respect these restrictions, particularly in the area adjacent to the ITU Varembe Building main entrance.

## **Travel Agency**

The Carlson Wagonlit Travel Agency (office T.1108 on the 11th floor of the ITU Tower Building, telephone extensions 5168, 5169 and 5170) is at the disposal of delegates for booking excursions, making hotel reservations, confirming flights, etc.

## Wireless Internet Access at the ITU

### Wireless LAN

ITU has installed IEEE 802.11 wireless networks in its headquarters' conference rooms. Mostly it is a IEEE 802.11b based wireless network, with some limited coverage of 802.11a wireless also available in some places. The client card must be Wi-Fi compliant, which assures interoperability between vendors. For client configuration, setting the SSID to "ITUdelg" (or selecting it) should be sufficient for majority of cases. There are no other special requirements for connecting to the ITU wireless facility on the ITU External network. The SSID of the ITU wireless LAN is "ITUdelg" with no encryption or identification requirement. The external LAN, which includes the wireless LAN at ITU, is not meant to be a secured environment, so the users should take their own measures to protect his or her data.

ITU has installed a 802.11b based wireless network, providing shared 11 Mbps access to the ITU External LAN from the following locations:

- **Tower:** Salle A, B, C, D and Salle des Pas Perdue (practically the whole area of SS2) and Salle T101, T103
- **Montbrillant:** Cybercafe area on the 2nd floor; 1st floor (covering all the rooms H1, H2, K1, K2, M1, M2, L1 and L2)
- **CICG:** Almost all areas are covered. The service is provided by FIPOI (CICG). The procedure to access the facility is the same as described above
- **Varembe:** TIES helpdesk area, V45, V49 and Salle E.

ITU has also installed 802.11a based wireless network, providing shared 54 Mbps access to the ITU External LAN with limited coverage in the following locations:

- **Tower:** Salle A, B, C and Salle des Pas Perdue
- **Montbrillant:** Cybercafe area on the 2nd floor; 1st floor (covering the rooms H1, H2, K1, K2, M1, M2, L1 and L2).

When buying a new card, be sure to mention that you need "Wi-Fi compatible 802.11b wireless card with 128-bit encryption" (although encryption is not used at the moment in ITU, it may become mandatory in future and most cards come with it anyway). Please check that your card's exact model number is mentioned at <http://www.wi-fi.com> Certified Products List before you buy the card.

The installation and use of non-ITU Wireless access points without prior authorisation from the IS Department is prohibited.

### Buying Wireless Cards

Delegates are required to use their own cards. Please ensure that the card is compatible with "Wi-Fi compatible 802.11b wireless card with 128-bit encryption" (encryption is optional at the moment in ITU, but it is likely to become mandatory in future and can minimise problems and facilitate troubleshooting). The ITU's bookshop has a limited quantity of wireless cards for sale.

### Configuration Parameters for the ITU's Wireless LAN

Please follow the installation instructions delivered with the card. You may need to login with administrator privileges depending on your PC's operating system and the card purchased.

The following parameters should be set in order to connect to the ITU wireless network:

- Set the case-sensitive SSID as **ITUdelg**.
- Set WEP Encryption to Off. WEP encryption is not used at the moment.
- Set Operation mode to Infrastructure (not Ad-Hoc).
- Enable DHCP so that your laptop will obtain the IP address and other network parameters automatically.

Most cards are able to search for the radio channel automatically. If your card does not support this function, try channel 1, 6 or 11. You may have to change to another channel if you move to another part of the building.

## **A Few Useful Reminders**

If you are concerned about security, please use personal firewall software.

Ensure that your Internet browser's proxy is either removed or set to `www-proxy.itu.int:3128`

Set up `smtp.itu.int` as your Outgoing (SMTP) server

Please note that wireless network connections are good for web browsing but fair for FTP downloads or for TELNET applications. Some ITU meeting rooms are equipped with fixed network Ethernet access points that allow delegates to overcome potential problems. Before taking out your wireless card (or any other PC Card from its slot), you should first properly stop it, or risk re-installation of OS.

Wireless cards do drain power from your laptop (sometimes quite significantly) – so recharge your laptop's battery more frequently.

## **Support**

Delegates can obtain support from the ITU Service Desk on Ext. 6666 (Office V.29). ITU Staff should remember to disable the wireless connection when they are connected to the ITU LAN. For more information, please contact the Service Desk on 6666.

## **Annex: Workshop Concept Document**

### **Abstract**

The information and communication technologies (ICT) sector has recently been experiencing renewed growth. Notwithstanding the highly volatile market conditions of the past decade, long-term technology drivers suggest that tomorrow's telecom market demand will not be measured only in terms of increased bandwidth and quality of service, but will also offer truly pervasiveness access: "anytime, anywhere, by anyone and anything". Tomorrow's networks will have to provide the necessary flexibility, coverage and transparency to immerse users in a total connectivity universe. The deployment of such infrastructures can only be feasible by capitalizing on spectrum-based resources in new and innovative ways.

This new environment presents technical, commercial and policy challenges, none more so than in the field of spectrum management and trading. Traditional "command and control" spectrum management techniques are slowly being replaced by market mechanisms; and services operating in unplanned spectrum bands are becoming just as economically significant as those in planned bands. This raises the question of how centralized spectrum management agencies will need to adapt and whether techniques for rationing spectrum (e.g., licences, auctions) can coexist alongside unlicensed uses.

### **Workshop proposal and scope**

While the need for change in traditional spectrum management is clear, there is nevertheless no single approach that is universally applicable. Some economies are experimenting with secondary spectrum trading, while others are using generic, technology-neutral licensing as a way of embracing change. But how can the goals of spectrum efficiency and equitable allocation be reconciled? Can spectrum be regarded as property, to be bought and sold, or as a public resource that can only be leased for particular purposes? Is it possible to have different spectrum management approaches among neighbouring countries and still maintain a harmonized approach at the regional and international levels?

In line with the stated objectives of the *WSIS Tunis Agenda for the Information Society* (November 2005), that "... *ITU and other regional organisations should take steps to ensure rational, efficient and economic use of, and equitable access to, the radio-frequency spectrum by all countries ....*", ITU and Italy will jointly organize a workshop to identify global trends and good practice in radio spectrum management and trading.

The workshop will examine, *inter alia*, the use of market mechanisms for both primary allocation of spectrum (e.g., auctions) and for secondary trading. It will look at recent trends in ITU Member States, the increasing demand for spectrum and will examine future challenges in developing policies for access to radio spectrum.