

## UMTS Forum response to Rundfunk und Telekom Regulierungs-GmbH public consultation

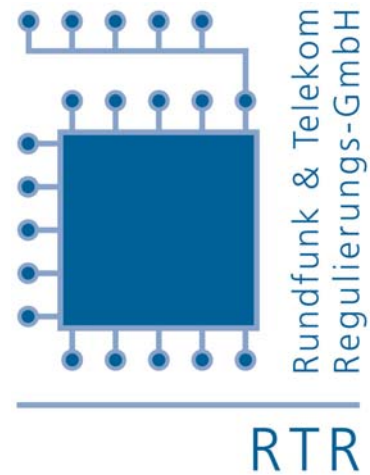
The UMTS Forum welcomes the opportunity to respond to the Rundfunk und Telekom Regulierungs-GmbH public consultation “on the allocation of frequencies in the frequency bands 2010-2020 MHz and 2500-2690 MHz as well as on the future use of the frequency bands 900/1800 MHz”

The UMTS Forum represents a significant group of spectrum users, who are interested in the development of public mobile communication networks including UMTS/IMT-2000 and, especially, its related spectrum topics. The UMTS Forum is a cross sector group with many different players involved in third generation (3G) mobile communication systems, including equipment manufacturers, operators, administrations, service providers and software developers.

The detailed replies are in the Annex but, in general, the UMTS Forum would like to emphasize that the users and the industry get most benefits, when the frequency bands for public mobile service and, especially, IMT-2000/UMTS are used in the harmonized way. This would keep the cost of the more and more complex equipment at a reasonable level and best guarantees the timely availability of equipment.

---

# **Annex**



## **Consultation**

**on the allocation of frequencies in the frequency  
bands 2010 – 2020 MHz  
and 2500 – 2690 MHz**

**as well on the future use of the  
frequency bands 900/1800 MHz**

**Vienna, August 2007**

Rundfunk und Telekom  
Regulierungs-GmbH

## Table of contents

<b>1</b>	<b>Introduction .....</b>	<b>4</b>
<b>2</b>	<b>Allocation of frequencies in the frequency bands 2010 – 2020 MHz and 2500 – 2690 MHz.....</b>	<b>5</b>
2.1	General.....	5
2.2	Market overview .....	5
2.3	Responsibilities in the field of frequency administration.....	5
2.4	Consultation .....	6
2.4.1	Terms and conditions of use .....	6
2.4.2	Division of the frequency band.....	9
2.4.3	Time schedule .....	10
2.4.4	Secondary provisions of frequency allocation.....	10
<b>3</b>	<b>Future use of the frequency bands 900/1800 MHz .....</b>	<b>11</b>
3.1	General.....	11
3.2	Market overview .....	11
3.3	Consultation .....	11
<b>4</b>	<b>Participant .....</b>	<b>13</b>
<b>5</b>	<b>Invitation for comments .....</b>	<b>14</b>

## Introduction

Rundfunk und Telekom Regulierungs-GmbH is holding a consultation on the following subject areas:

- Allocation of frequencies in the frequency bands 2010 – 2020 MHz and 2500 – 2690 MHz.
- Future use of the frequency bands 900/1800 MHz.

The consultation procedure is intended to be an initial approach to the subject areas mentioned. The specified contents are non-binding and do not prejudice the decisions of the Telekom-Control Commission.

To guarantee efficient and market conforming use of the frequencies to the greatest possible extent RTR-GmbH addresses the public with this consultation, putting individual items up for discussion.

## **Allocation of frequencies in the frequency bands 2010 – 2020 MHz and 2500 – 2690 MHz**

### **General**

#### **a) As to 2010 – 2020 MHz**

The frequency band 2010 – 2020 MHz originally intended for so-called self-provided applications due to international requirements is now available for terrestrial digital mobile communications systems in general, according to the Decision of the Electronic Communications Committee (ECC) of the European Conference of Postal and Communications Administrations (CEPT) of 24 March 2006 (ECC/DEC/(06)01).

#### **b) As to 2500 – 2690 MHz**

The frequency band 2500 – 2690 MHz was identified in the course of the World Radio Conference 2000 (WRC 2000) for IMT-2000 systems. Mandated by the European Commission CEPT developed plans for spectrum arrangements. These are reflected in the CEPT Decision EEC/DEC/(05)05, which provides that 2 x 70 MHz can be made available for FDD and 50 MHz for TDD or FDD operation (together with frequencies from other bands). In view of the efforts regarding technology and service neutral frequency allocations, it cannot be ruled out, however, that the frequency band 2500 – 2690 MHz will be also used for applications other than the ones specified in ECC/DEC/(05)05.

In Austria the frequencies at issue are now already available for allocation. These frequency bands are designated for use by terrestrial digital mobile communications systems.

### **Market overview**

In 2000 six licences for the provision of mobile communications services using UMTS/IMT-2000 technology were allocated in Austria; each operator was assigned approx. 2 x 10 MHz from the frequency bands 1920 – 1980 MHz / 2110 – 2170 MHz (paired) or up to approx. 10 MHz from the bands 1900 – 1920 MHz and 2020 – 2025 MHz (unpaired), respectively.

At present, the situation is as follows: four operators are active in the frequency bands mentioned, each operator (Mobilkom Austria AG, T-Mobile Austria GmbH, One GmbH, Hutchison 3G Austria GmbH) having frequencies totalling approx. 2 x 15 MHz. Mobilkom Austria AG and T-Mobile Austria GmbH have additional 2 x 10 MHz from the unpaired frequency band, Hutchison 3G Austria GmbH has 5 MHz.

### **Responsibilities in the field of frequency administration**

The provisions governing responsibility in the field of frequency administration are laid down in Art. 54 Par. 3 TKG 2003. Accordingly, the regulatory authority (Telekom-Control Commission) shall be responsible for allocation of the frequencies that have been specifically designated in the frequency usage plan pursuant to Art. 52 Par. 3 TKG (restriction in number). Responsibility for allocation of the remaining frequencies lies with the telecommunications authority.

As regards the frequencies in question, the Federal Minister of Transport, Innovation and Technology designated the frequencies in so far as the maximum number of allocated frequencies will be restricted.

This means that the Telekom-Control Commission is responsible for allocation of the frequencies at issue. In the run-up to such planned allocation by the Telekom-Control Commission, Rundfunk und Telekom Regulierungs-GmbH is now holding a consultation.

# Consultation

## Terms and conditions of use

- The CEPT/ECC Decision ECC/DEC/(05)05 provides for the following channelling arrangements in the frequency band 2500 – 2690 MHz for FDD and TDD:

2500 MHz	2505 MHz	2510 MHz	2515 MHz	2520 MHz	2525 MHz	2530 MHz	2535 MHz	2540 MHz	2545 MHz	2550 MHz	2555 MHz	2560 MHz	2565 MHz	2570 MHz	2575 MHz	2580 MHz	2585 MHz	2590 MHz	2595 MHz	2600 MHz	2605 MHz	2610 MHz	2615 MHz	2620 MHz	2625 MHz	2630 MHz	2635 MHz	2640 MHz	2645 MHz	2650 MHz	2655 MHz	2660 MHz	2665 MHz	2670 MHz	2675 MHz	2680 MHz	2685 MHz	2690 MHz
UL 01	UL 02	UL 03	UL 04	UL 05	UL 06	UL 07	UL 08	UL 09	UL 10	UL 11	UL 12	UL 13	UL 14	TDD / FDD Downlink (External)								DL 01	DL 02	DL 03	DL 04	DL 05	DL 06	DL 07	DL 08	DL 09	DL 10	DL 11	DL 12	DL 13	DL 14			
FDD Uplink Blocks														FDD Downlink Blocks																								

Do you consider these channelling arrangements useful?

Yes

Reasons:

The UMTS Forum supports the harmonized band as defined in ECC/DEC/(05)05. Harmonized band plans support best the IMT-2000 objectives of interoperability and seamless usage of different modes and frequency bands in the same equipment. Harmonization enables sufficient economies of scales, which facilitate cost efficient equipment despite the added complexity of new bands.

No

Reasons, alternative proposals:

- **Is it useful to allocate the frequency band 2010-2020 MHz at the same time? If so, what should the terms and conditions of use be?**

Yes

Reasons:

The band can be made available at the same as 2.6 GHz band in order to facilitate operation of the 2010-2020 MHz band together with external DL at 2.6 GHz band.

No

Reasons:

- **Do you consider it useful to use the band 2570 – 2690 MHz also as FDD downlink together with the frequency band 2010-2020 MHz not yet assigned?**

Yes

Reasons:

Based on market demand, i.e. if there is an operator that is interested in FDD external DL at 2.6 GHz, this should be possible.

No

Reasons:

- **It cannot be ruled out the frequency bands 2500-2690 MHz and 2010-2020 MHz will be assigned according to the principle of technology and service neutrality, provided that in-band and out-of-band compatibility can be guaranteed. Which aspects do you think should be considered here?**

A harmonized band plan is one essential element. The band is the only identified extension band for IMT-2000 and the possible other technologies should be compatible with IMT-2000/UMTS and its evolutions like LTE.

- **Against the background of technology neutrality, do you think it will be sufficient to define a field strength value or spectrum masks, or is advance coordination with preferred frequencies/preferred codes absolutely required?**

Yes

Reasons:

A commonly agreed spectrum mask (and the harmonized band plan) is a good basis for coexistence. The regulatory requirements should be harmonized within CEPT and national requirements should be avoided.

No

Reasons:

- **What term of use do you consider practicable for the frequencies in question?**

10-15 years is a practical minimum. Evolution of technology needs to be possible.



## Division of the frequency band

- **Do you consider it useful to divide the spectrum into individual abstract 5 MHz blocks (or pairs of 2x5 MHz with FDD) or shall the regulatory authority identify specific – larger – packages?**

Yes

Reasons:

2x5 MHz seems to be a practical unit for the spectrum licenses. Operators should be able to get a minimum of 2x20 MHz blocks to facilitate the implementation of LTE.

- No (What kind of spectrum division do you consider useful and why?)

Reasons:

- **It is planned to restrict the maximum number of frequency packages a bidder may acquire. Which spectrum restrictions (in MHz or 5 MHz packages) do you consider appropriate?**

A minimum spectrum/operator is 2x20 MHz to facilitate the implementation of LTE.

- **It is planned to assign the packages on a nationwide basis (i.e. not regionally). Which aspects shall be considered here?**

Nationwide licenses are supported.

- **How do you rate the demand for and the availability of equipment in these frequency bands? Which technologies and services do you want to use or provide?**

Harmonized band plans ensure timely availability of equipment.

## Time schedule

- **The regulatory authority plans to start the allocation procedure in mid-2008. Do you think this time schedule is suitable to take account of the future spectrum requirements and the technological development?**

Yes

Reasons:

Licensing should take into account the operators' demand. 2008 was originally the time when more frequencies will be needed. The time may differ in different countries.

No

Reasons:

## Secondary provisions of frequency allocation

- **Do you consider a newcomer's (attempt at) market entry in connection with allocation of the frequencies at issue realistic?**

Yes

Reasons:

All applicants should be handled in the same way – noting, however, that the 2.6 GHz band is the only identified extension band for IMT-2000/UMTS.

No

Reasons:

- **Which measures shall be taken to facilitate market entry by newcomers (see e.g. national roaming obligation as on the occasion of IMT frequency allocation in 2000)?**

National roaming should be encouraged, based on the fees negotiated in the market.

- **Against the background of technology and service neutrality, what should the coverage obligations be like?**

Competition should take care of coverage.

## Future use of the frequency bands 900/1800 MHz

### General

The European Commission is currently preparing a decision regarding harmonisation of the frequency bands 900 MHz and 1800 MHz (Decision on the harmonisation of the 900 MHz and 1800 MHz frequency bands for terrestrial systems capable of providing pan-European electronic communications services in the Community). The objective of this decision is to open the frequency bands 900 MHz and 1800 MHz, which are currently reserved for GSM technologies, for use by other mobile communications technologies. The annex to the planned decision makes explicit reference to UMTS. However, Art. 3 No. 3 of the planned decision goes even further and aims at facilitating also technologies not listed in the annex, provided that they can co-exist in the same frequency band with the systems listed.

### Market overview

In Austria the frequency bands 900 MHz and 1800 MHz have been assigned for the provision of mobile communications services by means of GSM technology. The frequencies are held by Mobilkom Austria AG (approx. 32 MHz), T-Mobile Austria GmbH (approx. 38 MHz) and One GmbH (approx. 32 MHz). The frequency allocations are limited in time until the end of 2015, 2017 and 2019, respectively.

### Consultation

The activities at the European level also raise questions at the national level regarding the further course of action in respect of the use of the frequency bands at issue.

- **How do you expect GSM to further develop? In your estimate, what will the lifetime of GSM be?**

Operators want to upgrade their GSM networks to UMTS900. This should be encouraged and facilitated.
---

- **In which of the frequency bands listed here will it be useful to use new technologies (“refarming”)?**

- **How do you rate the availability of equipment for IMT in the frequency bands 900/1800 MHz?**

Operators in many countries are planning to implement UMTS900/1800 in the near future. Equipment will be available based on operators' plans.

- **Where do you see critical aspects of a possible refarming solution? What kind of solution could satisfy all market participants?**

## Participant

Name/company (address):

UMTS Forum  
c/o Intellect  
Russell Square House  
10-12 Russell Square  
London WC1B 5EE  
United Kingdom  
  
www.umts-forum.org

Are you interested in 2500 – 2690 MHz spectrum use?

Yes  
 No

Are you interested in 2010 – 2020 MHz spectrum use?

Yes  
 No

Are you interested in 900 MHz and 1800 MHz spectrum refarming?

Yes  
 No

## Invitation for comments

Comments shall be sent no later than 28 September 2007 per e-mail to

[Konsultationen@rtr.at](mailto:Konsultationen@rtr.at)

in a common format suitable for electronic processing (e.g. text, pdf). Unless requested otherwise, the comments will be published on the website of RTR GmbH.

I/We agree that the comment will be published in full.

- Yes, by stating the name of the company
- Yes, without stating the name of the company
- No