

# Consultation

## On the allocation of frequencies in the 2500 – 2690 MHz band

**Vienna, January 2009**

Austrian Regulatory Authority for  
Broadcasting and Telecommunications

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## **1 Introduction**

In 2007, the Austrian Regulatory Authority for Broadcasting and Telecommunications (RTR) carried out a consultation on the allocation of frequencies in the 2500 – 2690 MHz band.<sup>1</sup> In light of new technical and business-related developments, the regulatory authority deems it necessary to provide market participants who are interested in or affected by this allocation with another opportunity to contribute comments on the allocation of these frequencies.

In this consultation, the regulatory authority addresses the public with specific points for discussion. The consultation is also intended to help ensure that the frequencies in question are put to use as efficiently as possible and in a way which best suits the needs of the market.

The contents of this consultation are non-binding and without prejudice to the decisions of the Telekom-Control Commission.

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<sup>1</sup> See <http://www.rtr.at/en/komp/KonsultationFqNutzung> and [http://www.rtr.at/en/komp/Konsult\\_FqNutzung\\_St](http://www.rtr.at/en/komp/Konsult_FqNutzung_St) (in German).

## **2 Allocation of frequencies in the 2500 – 2690 MHz band**

### **2.1 General information**

During the World Radio Conference 2000 (WRC 2000), the 2500 – 2690 MHz frequency band was designated for IMT 2000 systems.

The spectrum-related technical conditions for the use of frequency band were stipulated in a decision issued by the European Commission on June 13, 2008 (Commission Decision on the harmonisation of the 2 500 – 2 690 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community; 2008/477/EC<sup>2</sup>).

The Austrian Federal Ministry of Transport, Innovation and Technology (BMVIT) plans to convey the technical terms of use for the 2500 – 2690 band to the Telekom-Control Commission in March/April 2009. Given the ensuing steps in the process, in particular the required duration of the tender submission period, the frequencies could be allocated at the end of the year 2009.

The terms of use with regard to cross-border frequency coordination will be defined provisionally by the Federal Ministry of Transport, Innovation and Technology. This approach already proved successful in the allocation of frequencies from the UMTS core band in the year 2000.

Experience has shown that the period of time required until the relevant operators actually begin to use the frequencies is sufficiently long to finalize the terms of frequency use in areas near national borders.

### **2.2 Market overview**

In Austria, mobile communications services are currently offered by four network operators (Mobilkom Austria AG, T-Mobile Austria GmbH, Orange Austria Telecommunication GmbH and Hutchison 3G Austria GmbH). Hutchison uses UMTS

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<sup>2</sup> See [http://www.rtr.at/en/tk/Spektrum2600MHz/2008\\_477\\_EC.pdf](http://www.rtr.at/en/tk/Spektrum2600MHz/2008_477_EC.pdf)

in the 2,1 GHz band only.<sup>3</sup> The other network operators use both GSM in the 900 and 1800 MHz frequency bands as well as UMTS in the 2.1 GHz frequency band.

### **2.3 Responsibilities in frequency administration**

The regulations regarding responsibilities in the field of frequency administration are based on Art. 54 Par. 3 Telecommunications Act (TKG) 2003, which stipulates that the regulatory authority (the Telekom-Control Commission) is responsible for allocating those frequencies for which a provision pursuant to Art. 52 Par. 3 TKG 2003 has been made in the frequency usage plan (i.e., for a limited number of allocations). The telecommunications authority is responsible for allocating the other frequencies.

As for the frequencies in question, the Federal Minister of Transport, Innovation and Technology has stipulated that the number of allocations is to be limited.

As a result, the Telekom-Control Commission is responsible for the allocation of these frequencies.

### **2.4 Current frequency use**

If you currently use frequencies in the 2.1 GHz (UMTS FDD) band:

When would you expect to start using all of the frequencies (frequency packages) allocated to you in the 2.1 GHz band?

Clearstream Holdings is currently not using frequencies in the 2.1 GHz band and is not planning to.

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<sup>3</sup> For details, see [http://www.rtr.at/en/tk/FRQ\\_spectrum](http://www.rtr.at/en/tk/FRQ_spectrum).

## 2.5 Intended use

Do you intend to use frequencies in the 2.6 GHz band in the future?

Yes

When do you plan to start using such frequencies?

Clearstream Holdings is planning to start using such frequency 3 months after gaining the right to.

No

Why not?

## 2.6 Expected services

In your view, which services/applications would be especially well supported by the 2.6 GHz band?

Clearstream Holdings believes that a full range of mobile broadband services are supported by the 2.6 Ghz band.

## 2.7 Technologies

Which technologies do you plan to use in the 2.6 GHz band (or: in your view, which technologies will be deployed in this band)?

Clearstream Holdings plans to use mobile WiMAX technology in the 2.6 GHz band.

## 2.8 Need for unpaired frequencies

What is your estimate of the frequency requirements of an operator planning to acquire unpaired frequencies? In your view, how much bandwidth would an operator want to acquire as an absolute minimum? How many interested parties would you expect?

Clearstream Holdings' opinion is that 50MHz bandwidth is sufficient for an operator willing to acquire unpaired frequencies. As an absolute minimum ClearStream Holdings

considers 30MHz bandwidth. ClearStream Holdings has no view to express on how many interested parties are expected.



## 2.9 Interest in unpaired frequencies

Are you generally interested in unpaired frequencies?

Yes

In what amount? (minimum/maximum bandwidth in MHz)

Clearstream Holdings is interested in unpaired frequencies and considers 30MHz as minimum and 50MHz as maximum bandwidth amount required to provide compelling broadband services.

No

Why not?

## 2.10 Need for paired frequencies

What is your estimate of the frequency requirements of an operator planning to acquire paired frequencies? In your view, how much bandwidth would an operator want to acquire as an absolute minimum? How many interested parties would you expect?

Clearstream Holdings' opinion is that 2x21MHz / 2x28MHz bandwidth is sufficient for an operator willing to acquire paired frequencies. As an absolute minimum Clearstream Holdings considers 2x14MHz bandwidth. Clearstream Holdings has no view to express on how many interested parties are expected.

## 2.11 Interest in paired frequencies

Are you generally interested in paired frequencies?

Yes

In what amount? (minimum/maximum bandwidth in MHz per duplex direction)

Clearstream Holdings is interested in paired frequencies and considers 2x14MHz as minimum and 2x28MHz for maximum amount required to provide compelling broadband services.

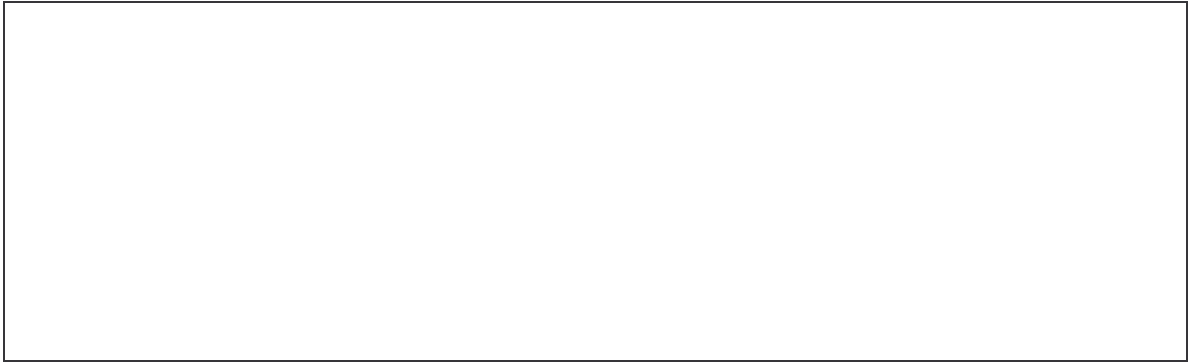
No

Why not?

## 2.12 Expected rollout

What rollout scenario do you expect or plan for the 2.6 GHz band? In what regions will these frequencies primarily be used? Do you expect comprehensive network coverage or joint use with other frequency bands (e.g., at hot spots?)

No response.



## 2.13 Subdivision of frequency band

In your view, what subdivision of the frequency band would be most reasonable? How many frequency packages (in what size) should be put up for allocation?

In order to be ensured flexibility in using the frequency band, Clearstream Holdings recommends subdivision in 2x14MHz, 2x21MHz and 2x50MHz which could be used both for FDD and TDD /3 FDD packages or 6 TDD packages/.

## 2.14 Arrangement of frequency packages

How important is it that the frequency packages allocated to an individual bidder are directly adjacent to one another? Why?

Clearstream Holdings believes it is important from a different bidder perspective to have a significant guard band between the frequency packages of the different bidders. That will prevent from frequency interferences and will ensure flexible frequency optimization. However there would not be any problem assigning two adjacent frequency blocks to an individual bidder if using TDD. Though, this would not find an application for FDD.

## 2.15 Differences between frequency channels

In your view, are there significant differences between the individual 5 MHz frequency channels? Does this apply to all frequency channels, or only to certain ones?

Yes

Please indicate precisely which frequency channels you mean, and please describe the differences as well as their significance.

No response.

No

From a technical/economic perspective, are the differences between the individual frequency packages so significant that it would be absolutely necessary to account for them in the allocation procedure, even if this would involve a far more complicated auction procedure?

Yes

Why?

No response.

No

## 2.16 Duration of use

In your view, what minimum duration of use would be necessary? What should the maximum duration of use be?

Clearstream Holdings considers that generally 10 years of use minimum is appropriate.

## 2.17 Coverage obligations

Coverage obligations may be imposed in order to ensure the effective use of frequencies. In your view, what specific

coverage obligations would be most appropriate for this purpose?

No response.



## 2.18 Schedule

As mentioned in the introduction, the frequencies could be allocated at the end of the year 2009. In your view, is that a reasonable time for allocation, or would allocation a later time (at the end of 2010) be more sensible? Please provide reasons for your response.

Auction at end of 2009

Reason(s):

Clearstream Holdings' opinion is that auction should be arranged sooner than the end of 2009 because any delay harms the interests of the public in Austria.

Auction at end of 2010

Reason(s):

Clearstream Holdings' opinion is that auction should be arranged sooner than the end of 2010 because any delay harms the interests of the public in Austria.

X Auction at another point in time

When? Reason(s):

Clearstream Holdings encourages the Austrian administration to start the award process as soon as possible, because mobile WiMax is already certified and

several vendors have already deployed mobile WiMax networks.

### 3 Contact information

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#### 4 Request for comments

Please e-mail all comments to the following address by **February 23, 2009**:

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

RTR will publish an anonymized summary of all comments received.

In addition, your individual comments will be published if desired.

To this end, please indicate whether you are willing to allow the full publication of your comments:

- Yes, with an indication of the company's name
- Yes, but without any indication of the company's name
- No