

Translation¹

**Demand identification proceedings
for the frequency bands at 900 MHz and 1800 MHz**

(BK - 1-11/003)

Also the Bundesnetzagentur's Official Gazette No. 23/2011

¹ In case of divergent interpretation only the German text shall prevail.

IDENTIFICATION OF DEMAND FOR SPECTRUM in the bands from 880 – 915 MHz, from 925 – 960 MHz, from 1725 – 1785 MHz and from 1820 – 1880 MHz for wireless access for the provision of telecommunications services as from 1 January 2017

- BK 1-11/003 -

The frequencies in the bands from 880.1 – 914.9 MHz (lower band), from 925.1 – 959.9 MHz (upper band), from 1725 – 1730 MHz, 1735.1 – 1752.5 MHz, 1752.7 – 1758.1 MHz, 1763.1 – 1780.5 MHz (lower band) and from 1820 – 1825 MHz, 1830.1 – 1847.5 MHz, 1847.7 – 1853.1 MHz, 1858.1 – 1875.5 MHz (upper band) have been assigned to the network operators E-Plus Mobilfunk GmbH & Co. KG (E1 licence), Telefónica Germany GmbH & Co. OHG (E2 licence), Telekom Deutschland GmbH (D1 licence) and Vodafone D2 GmbH (D2 licence) for their GSM licences for a limited period expiring on 31 December 2016. Consequently these bands, with a total of about 160 MHz spectrum, will become available for assignment again as from 1 January 2017.

In its decision on the flexibilisation of frequency usage rights for wireless access in the bands at 450 MHz, 900 MHz, 1800 MHz, 2 GHz and 3.5 GHz (Bundesnetzagentur Official Gazette No 20/2009, Order 58/2009, p 3575 ff (BK 1a-09/001)), Ruling Chamber 1 (the President's Chamber, hereafter "the Chamber"), announced that it would decide ex officio on the future grant of the frequency usage rights in the 900 MHz and 1800 MHz bands in timely manner, ie approximately three years before the end of the current time limit. After an initial assessment the Chamber basically sees two options: extension under section 55(8) of the Telecommunications Act (TKG), or (re)assignment of the frequencies under section 55 subsections (3) and (9) and section 61 TKG.

In the Chamber's view, the issues are particularly complex and the decision to be taken of great importance for the market. It is also in the public interest to ensure, through efficient and effective spectrum management, that such radio frequencies – particularly in light of their great economic importance for electronic communications and their social importance for the promotion of powerful telecommunications infrastructures – are used with maximum efficiency. In order to place this decision on a secure and stable basis, the Chamber now opens proceedings in timely manner. The current assessment is that proceedings should if possible be completed three years before the current time limit expires, so as to give the undertakings concerned and all other parties the planning and investment certainty they need. The Chamber has therefore started by opening official demand identification proceedings in the fourth quarter of 2011 in a first step, in order to establish ex officio the demand for spectrum in the bands at 880 to 915 MHz, 925 to 960 MHz, 1725 to 1785 MHz and 1820 to 1880 MHz for wireless access for the provision of telecommunications services as from 1 January 2017.

For this purpose the Chamber drafted initial key elements, which represent the framework conditions for official demand identification proceedings, and invited comments on them (Bundesnetzagentur Official Gazette no 13/2011, Com no 365, page 3446 ff).

The Chamber will draw up a draft decision on provision of the above spectrum, based on the demand it has identified. However, it should be noted that, if scarcity is established, it will not be possible to conduct award proceedings directly. This is because the legislation requires further Chamber decisions (on the conditions and rules for award) to have been taken before award proceedings, for which consultation with the Advisory Council is also needed, can be conducted. As stated above, consideration will have to be given to holding the award proceedings in timely manner, ie in 2013.

The Chamber now calls on interested undertakings to submit notification of their forecast requirements in the 900 MHz and 1800 MHz bands as from 1 January 2017.

Notifications of demand should be submitted in German, in writing, by **16 January 2012** to the postal address below

**Bundesnetzagentur
Referat 212
Tulpenfeld 4
D-53113 Bonn**

and

electronically in Word (or compatible) or PDF format (copying and printing must be possible), to the email address below

referat212@bnetza.de

A. Demand identification proceedings

IDENTIFICATION OF DEMAND FOR SPECTRUM in the bands from 880 – 915 MHz, from 925 – 960 MHz, from 1725 – 1785 MHz and from 1820 – 1880 MHz for wireless access for the provision of telecommunications services as from 1 January 2017

- BK1-11/003 -

1. Opening of proceedings

The President's Chamber herewith opens official proceedings (demand identification proceedings) in order to establish whether there is a sufficient volume of available frequencies in the 900 MHz and 1800 MHz bands for awards of spectrum as from 1 January 2017; section 55 (9) sentence 1, 1st alternative TKG.

As of the opening of these proceedings, interested undertakings are invited to state, in substantiated form, their forecast demand for frequency usage rights in the 900 MHz and 1800 MHz bands as from 1 January 2017 (cf section 5, below).

Notifications of demand should be submitted in German, in writing, by 16 January 2012 to the postal address below

**Bundesnetzagentur
Referat 212
Tulpenfeld 4
D-53113 Bonn**

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electronically in Word (or compatible) or PDF format (copying and printing must be possible), to the email address below

referat212@bnetza.de

2. Available frequencies

The frequencies available in future in the 880 to 915 MHz, 925 to 960 MHz, 1725 to 1785 MHz and 1820 to 1880 MHz bands are to be provided for wireless access for the provision of telecommunications services for use as from 1 January 2017 (**Annex**).

In particular:

In the bands from 880.1 to 915 MHz (lower band), from 925.1 to 960 MHz (upper band), from 1725 to 1780.5 MHz (lower band) and from 1820 to 1875.5 MHz (upper band), frequencies have been assigned for the protected GSM licences until 31 December 2016.

The following spectrum is to be made available in the 900 MHz and 1800 MHz bands as from 1 January 2017:

Band	Spectrum	Amount
900 MHz	880 – 915 MHz and 925 – 960 MHz	2 x 35 MHz
1800 MHz	1725 – 1730.1 MHz and 1820 – 1825.1 MHz	2 x 5.1 MHz
	1735.1 – 1758.1 MHz and 1830.1 – 1853.1 MHz	2 x 23 MHz
	1763.1 – 1785 MHz and 1858.1 – 1880 MHz	2 x 21.9 MHz

Table 1

The President's Chamber plans to make this spectrum, totalling 170 MHz, available at one and the same time.

3. Frequency usage throughout the Federal Republic of Germany

The frequencies in the 900 MHz and 1800 MHz bands are available for use across the Federal Republic of Germany.

4. Purpose of use

In the frequency bands at 900 MHz and 1800 MHz, the frequencies 880 – 915 MHz and 925 – 960 MHz, 1725 – 1785 MHz and 1820 – 1880 MHz are dedicated in the frequency usage subplans (entry nos 227 011, 228 001, 228 005, 267 001 and 267 006) to "wireless access for the provision of telecommunications services". As required by the frequency usage plan, this dedication, which is technologically neutral, makes it possible for a variety of technologies and systems to be used without restriction to specific standards.

5. Presentation of spectrum requirements

5.1 Interested undertakings are invited to give notice of and set out their spectrum requirements in the bands at 900 MHz and 1800 MHz for frequency assignment as from 1 January 2017.

5.2. Participation in proceedings to identify demand is not restricted.

5.3. Each interested undertaking is called on to state its requirements just once. This also applies in respect of consortia. Undertakings that have merged under section 37 of the Restraints of Competition Act (GWB) are deemed to be one undertaking.

5.4. Each interested undertaking is asked to show, in its notification of requirements, that it meets the legal requirements associated with a possible future assignment of frequencies.

The statutory requirements for frequency assignment are that compatibility with other frequency usages is given, and that the efficient and interference-free use of the frequencies by the applicant is secured (see section 55(5) sentence 1 subparas 3 and 4 TKG).

Of particular importance here will be an account of the applicant's reliability, specialist knowledge and, most notably, financial capability, plus a statement of their frequency usage concept. This applies also to undertakings which already hold suitable spectrum.

5.5 The notification of demand should include the following information:

A. Details of the undertaking

- name and address
- legal form
- seat, and
- financial interests

B. Information on reliability

A declaration whether

- a frequency assignment has been revoked in the past,
- conditions have been imposed on account of failing to honour obligations from a frequency assignment,
- legal action has been taken on grounds of having breached telecommunications or data protection regulations, or
- proceedings in the above cases are pending and, if so, with which public authority.

C. Information on efficiency

Declarations that there will always be sufficient financial means

- for assignment of the frequencies, and
- for the build and rollout investments set out in the frequency usage concept and for operation of the wireless network,
- and how financing is to be ensured.

D. Information on specialist knowledge

Declarations that the persons engaged in building and operating the wireless network have the necessary knowledge, experience and skills.

E. Frequency usage concept

Presentation of a frequency usage concept showing, in particular, how efficient use of the frequencies will be ensured. Undertakings should state what degree of coverage of the population they are looking to provide. Details should be given of the following, in particular:

- spectrum requirements with reference to their business model and the minimum period of use,

(explanation of a frequency usage concept for the period after 1 January 2017; information on the planned business model and its implementation)
- planned service concept,

(information on the type of services to be provided, based on the technology selected)

- and business planning and its implementation from 2017.

(Explanation of the business planning and its technical implementation; details on network expansion planning and the time frame for network build, for example on the intended dimensions of the radio access network, the degree of coverage of population or area, the network structure, the technical systems employed; where applicable, information on the use of GSM technology or a switch from GSM to a successor system).

6. Further steps in the proceedings

The Chamber wishes to point out that:

The purpose of the survey of demand is to identify whether demand exceeds supply and thus have a basis for a forecast within the meaning of section 55(9) sentence 1, 1st alternative TKG.

6.1 The Chamber will publish the demand it has identified.

6.2 Following publication, the next steps laid down by the law for the assignment of frequencies will be determined. The frequencies will be assigned as individual assignments only upon written application or, as the case may be, only after participation in award proceedings. The Bundesnetzagentur will call for applications for usage rights in timely manner before it conducts spectrum award proceedings.

6.3 The Chamber intends to take a decision on subsequent use in timely manner, before expiry of the current assignments.

B. Explanatory notes

I. Background

The frequencies available in future in the bands at 880 to 915 MHz, 925 to 960 MHz, 1725 to 1785 MHz and 1820 to 1880 MHz are to be made available for wireless access for the provision of telecommunications services for use as from 1 January 2017.

The frequencies in the bands from 880.1 – 914.9 MHz (lower band), from 925.1 – 959.9 MHz (upper band), from 1725 – 1730 MHz, 1735.1 – 1752.5 MHz, 1752.7 – 1758.1 MHz, 1763.1 – 1780.5 MHz (lower band) and from 1820 – 1825 MHz, 1830.1 – 1847.5 MHz, 1847.7 – 1853.1 MHz, 1858.1 – 1875.5 MHz (upper band) have been assigned to the network operators E-Plus Mobilfunk GmbH & Co. KG (E-Plus), Telefónica Germany GmbH & Co. OHG (Telefónica), Telekom Deutschland GmbH (Telekom) and Vodafone D2 GmbH (Vodafone) for their GSM licences for a limited period expiring on 31 December 2016 (for a history of the separate assignments and protected licences, see the overview in the Bundesnetzagentur's discussion paper (*Impulspapier*), page 6ff, and the GSM concept (*GSM-Konzept*)). Consequently, these bands will be available again from 1 January 2017.

The Chamber in 2009 gave top priority to making spectrum available in the 900 MHz and 1800 MHz bands for wireless access for the provision of telecommunications services (for details see the Chamber's flexibilisation decision of 12 October 2009, BK 1a-09/001). The objective was to withdraw individual regulatory specifications that had outlived their usefulness and thus constituted removable barriers to achieving the desired aims. This frees up additional radio frequencies for wireless services, ones that could also be used for a nationwide offer of innovative broadband access services.

In its flexibilisation decision of 12 October 2009 the Chamber already announced, as a measure for the flexibilisation of frequency usage rights for wireless access in the bands at 900 MHz and 1800 MHz, its intention of deciding about the assignment of these frequencies in timely manner, ie approximately three years before expiry of the current time limit (31 December 2016) (loc cit p 3576):

"Measure 3: The Bundesnetzagentur will decide ex officio, in timely manner before the current frequency usage rights in the bands at 900 MHz and 1800 MHz expire, on the assignment of this spectrum from 1 January 2017.

The same applies in the case of an assignee applying for an extension of the time limit beyond 31 December 2016."

In its rationale the Chamber said the following (loc cit, page 3610f):

"The Bundesnetzagentur will decide ex officio, in timely manner before the current frequency usage rights in the bands at 900 MHz and 1800 MHz expire, on the assignment of this spectrum from 1 January 2017.

"(...) the Bundesnetzagentur will decide in timely manner, ie approximately three years before the current time limit expires (31 December 2016), on the further grant of frequency usage rights. The Chamber has taken particular note of the outcome of the most recent consultations.

"(...) In the Chamber's view, the issues involved are particularly complex and the decision to be taken of great importance for the market. To do justice to the complexity, the Bundesnetzagentur will open proceedings to reach a robust decision in timely manner."

On account of the protected GSM licences the use of frequencies for GSM systems currently achieves a degree of coverage of the population topping 98% for mobile voice communication offers. Use of the frequencies in the 2 GHz band for UMTS systems that can also provide mobile voice communication does not, by contrast, achieve such a high degree of coverage.

In the public consultations on the flexibilisation of frequency usage rights and the examination of frequencies distribution (downloadable from www.bundesnetzagentur.de) GSM operators said that their GSM networks were operating practically at full capacity and that demand for GSM services existed beyond the current usage rights period. Thus it was proposed, amongst other things, to extend the time limits for the GSM assignments to the end of 2030, for instance.

The expert opinion of 25 March 2011 on the examination of frequencies distribution commissioned by the Bundesnetzagentur and drawn up by Prof. Dr. Christoph Mecklenbräuer (Vienna University of Technology) focuses, inter alia, on the question of how long, and to what extent, GSM systems are expected to be domiciled at 900 MHz (downloadable from www.bundesnetzagentur.de/Frequenzverteilungsuntersuchung). The authors come to the following conclusion (page 103):

"GSM technology is optimised for voice and will be needed for voice and roaming in the next decade to the same extent as today, at least. A phase out is likely between 2020 and 2025. A scenario is also conceivable in which GSM is kept on at the end of its actual life in such a way that a certain level of basic service is guaranteed.

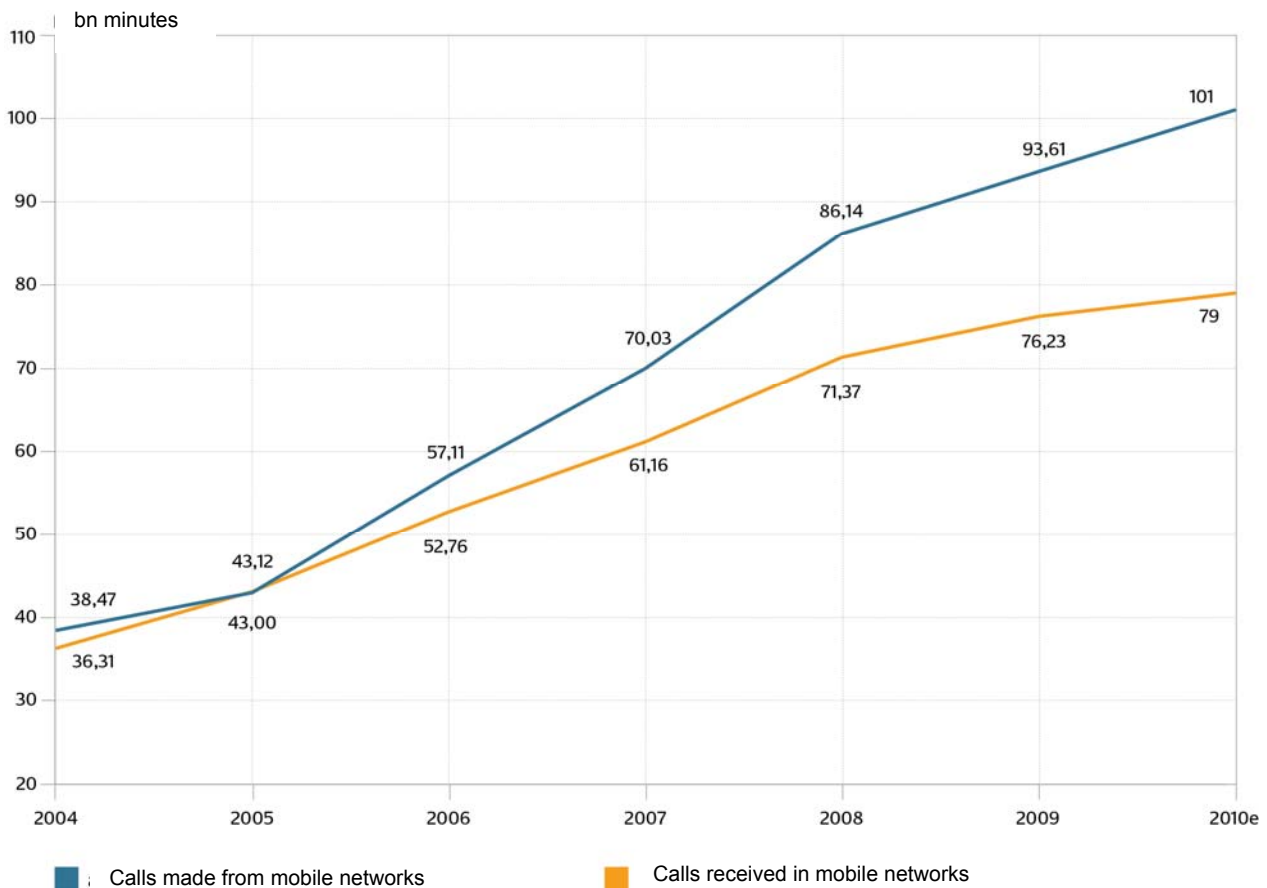
Vigorous demand for mobile data services and the success of the new smartphones means that the new UMTS/HSPA+ and LTE mobile generation needs to be rolled out swiftly. The preferred successor technology to GSM will be LTE, particularly where UMTS/HSPA+ has not yet been rolled out. The new technologies will then be used in the 800 and 900 MHz bands, too.

Parallel operation of UMTS 900/LTE 900/GSM 900 is possible and can deliver cost benefits for operators. Cooperation agreements among the operators – commonly known as "resource sharing" – can further advance the technology change for the benefit of the end customers and bring about appreciable CAPEX and OPEX reductions for the operators."

The Bundesnetzagentur, too, is assuming continued high demand for mobile voice services. Its Annual Report 2010 had the following to say on this:

"The volume of calls made in mobile networks again grew substantially in 2009. (...) The majority of calls were made in the subscriber's own network and to the German fixed network."

Volume of voice calls in mobile networks 2004 – 2010 ¹⁵



¹⁵ excl. International Roaming calls

[Source: Bundesnetzagentur Annual Report 2010, page 87]

Back in 2006 the two mobile operators E-Plus and Telefónica applied for the assignment of further frequencies in the bands 880 to 915 MHz and 925 to 960 MHz. The aim in doing so was to "adjust to the greatest possible degree" the legacy of asymmetric distribution of spectrum between the four existing operators in the 900 MHz and 1800 MHz bands in order to avoid regulatory framework conditions that, it was feared, might distort competition between them. Specifically, the two applicants wanted spectrum currently used by the D network operators to be redistributed in favour of the E network operators who, in turn, would give up usage rights in the 1800 MHz band.

Auction of spectrum in the bands 800 MHz, 1.8 GHz, 2 GHz and 2.6 GHz (BK1a-09/002) also showed the great demand for spectrum for wireless access services. This is particularly true of spectrum below 1 GHz. In these proceedings the applicants, in their application to qualify for the auction, stated and demonstrated requirements that, altogether, far exceeded the amount of spectrum available.

In the public hearing on the examination of frequencies distribution on 4 April 2011 the Chamber declared that it would follow a "parallel approach", aligning the time of demand identification with

the examination of frequencies distribution. The purpose of doing so is to give participants in the examination of frequencies distribution (BK1-11/001) a complete picture of future decisions on assignment in the bands at 900 MHz and 1800 MHz too.

On 6 July 2011 the Bundesnetzagentur, in a first step, published key elements for demand identification proceedings for the bands at 900 MHz and 1800 MHz as from 1 January 2017 in its Official Gazette (Bundesnetzagentur Official Gazette No 13/2011, Com no 365 page 3446 ff). The key elements were also published on the Bundesnetzagentur's website and comments were requested. By publishing the key elements for identifying demand before official proceedings begin the Bundesnetzagentur provided an overview of the separate steps and of the frame within which the further decisions stipulated in the legislation may take shape. At the same time, interested parties were given ample opportunity to prepare for participation.

A total of nine respondents took advantage of the opportunity to present their views. In essence their comments on the key elements were as follows:

Re key element 1 (Spectrum availability)

Basically what was said was that the 900 and 1800 MHz spectrum would be needed for GSM services until 2020/2025. It could therefore not be assumed that there would be enough spectrum available for new operators in the foreseeable future. The bulk of the spectrum would thus not be available for new assignment as from 2017 to any operators other than the present ones. It was consequently unnecessary to extend the range of participation in the proceedings beyond the group of GSM operators.

Re key element 2 (Demand identification proceedings)

The comments on key element 2 focused mainly on two points: one was the timing of the opening of proceedings and the other the requirements that have to be met by demand identification proceedings.

Most of the respondents welcomed the plan to identify future requirements at an early stage by means of open, transparent proceedings involving the parties affected. This, they said, would help to provide a secure basis for planning and investment. Support was expressed for the proposal to conduct the demand survey in the fourth quarter of 2011. The Bundesnetzagentur was however requested to extend the period for giving notification of demand to at least eight weeks so that all undertakings would have enough time for the necessary analyses.

On the subject of what undertakings wanted from demand identification proceedings, it was stated that, for an undertaking to be included in the proceedings, its notification of demand must be properly substantiated, as it was necessary to prevent undertakings from pretending to have frequency requirements when in fact they were pursuing other interests than spectrum management. It was also said that more exacting requirements needed to be applied to the frequency usage concept in cases in which an interested party asked for additional spectrum in excess of the current assignment volume.

Another respondent argued that there was no need for demand identification proceedings. Instead of conducting such proceedings the Bundesnetzagentur should, ex officio, carry out a small-scale redistribution by means of individual assignments, at short notice and (at the latest) with effect from 1 January 2017.

If the proceedings were nevertheless held, it should be made clear before their commencement that the spectrum cap of 2 x 20 MHz in the 800/900 MHz band, which was used for providers at the 2010 auction proceedings, must apply to all market players in respect of frequency assignment effective as from 1 January 2017. The consideration given to notifications of demand should also include the question of whether the undertaking had already demonstrably fulfilled the regulatory requirements in the past.

If it was not clearly stated before the proceedings started that the spectrum cap of 2 x 20 MHz stipulated by decision of the Chamber on 12 October 2009 (BK 1a-09/002) also applied to the 900 MHz band under consideration, the result could be, it was argued, that a scarcity declared at an early stage would be reversed through the subsequent stipulation of spectrum caps during award proceedings.

If no statement was made on a spectrum cap, it should at any rate be made clear that separate scarcity assessments would be issued for the 900 MHz and the 1800 MHz bands.

Re key element 3 (Publication of identified demand)

The majority of respondents were in favour of publishing identified demand, on the grounds of the high degree of transparency this would produce.

It was felt there was a need for clarification of the legal nature and/or the legal quality of the identification of demand.

Some respondents called for the publication not only to show identified demand but also to detail the individual notifications and identify the notifying undertakings.

Re key element 4 (Purpose of use)

Support was expressed for the spectrum to be provided on a service and technology-neutral basis. This principle ought to make it possible to introduce a channel structure for the bands concerned which would both encourage the use of the latest mobile technologies, such as (Multi-Carrier) HSPA and LTE, as well as larger channel bandwidths with 5 MHz spacing, and ensure the necessary continuity for mobile phones with only GSM support and for international roaming through parallel operation with GSM.

As far as usable technologies were concerned, a clear statement was recommended to the effect that in future too these bands would be provided exclusively for FDD based technologies in paired spectrum. This, it was said, did not prejudice the principle of technological neutrality because all modern mobile technologies supported both the FDD and the TDD mode.

It was also argued that unqualified approval of technologies in the 900 MHz band should be given only if there was also a redistribution of 2 x 2.4 MHz 900 MHz spectrum as against 1800 MHz spectrum by 1 January 2017 (at the latest). This would enable all mobile operators to offer parallel services at 900 MHz.

Re key element 5 (Use across Germany)

The basic point made was that the frequencies in the two bands, at 900 MHz and 1800 MHz, were a vital basis for securing GSM radio coverage throughout Germany and a valuable resource for the further expansion of radio-based broadband coverage. It therefore continued to be necessary to make both bands available for broadband use across Germany.

It should therefore be borne in mind that it was in the interest of users too to have fully comprehensive coverage with mobile radio services, which at the present time was possible exclusively with GSM and would be achieved with the GSM terminal equipment which would be in common use for some time to come.

Re key element 6 (Frequency usage conditions)

The comments received on key element 6 basically focused on three issues: firstly the technical usage conditions, secondly a basic frequency package, and thirdly the matter of coverage obligation.

With regard to the technical usage conditions a call was made for the stipulation of highly specific conditions of use which would guarantee the protection of radio applications in adjacent bands. The coordination of frequencies under private law by the operators involved was held to be inadequate. It was also proposed that channel spacing, or frequency blocks, of 5 MHz should be provided. This would not only facilitate but also promote the technologically neutral use of new broadband technologies.

On the subject of frequency packages it was requested that no basic frequency package be stipulated in abstract (ie generalised) terms, but that it should be left to each undertaking to decide its frequency requirement on its own.

In connection with a basic package another respondent called for a "hard" spectrum cap of 2 x 20 MHz of total spectrum in the 800/900 MHz band.

It was suggested that the coverage obligation should apply to the total amount of spectrum held by an operator and not to each individual frequency band, so that operators would not be asked for unnecessary multiple coverages. The proposal was made that the degree of coverage should be uniform for all operators and not set at a lower level than that already attained.

The point was also made that the coverage obligation in the various bands should be fixed before any demand identification proceedings. There should also be a clear statement of the extent to which credit is given for coverage obligations already met. Awareness at an early stage of the requirements applicable in the future had, it was said, a decisive influence on the evaluation of frequency requirements and thus on the real and effective demand for spectrum.

Re key element 7 (Further steps in the proceedings)

Most of the respondents feel that final decisions should be taken only after consultations with the parties likely to be affected.

One of the suggestions for the further steps was that existing frequency assignments should be renewed even when scarcity has been established. In view of the heavy demand for GSM mobile phone services, a renewal of existing frequency usage rights in the 900 MHz and 1800 MHz bands was both in the interest of consumers and served the German government's infrastructure mandate and the requirement of efficient frequency usage.

On the other hand it was argued that any auction whose object was to designate future assignees and determine assignment volume should only be held if there had been a significant decline in the demand for GSM services. By implication the existing assignment rights should be renewed as long as, and to the extent that, there was demand for GSM.

Opinions varied on the length of a renewal of usage rights. Some respondents wanted 5 years, others 10, 15 or 20. There was also support for an expiry date of 2020 or 2025.

A different respondent argued that the proceedings selected for assignments taking effect on 1 January 2017 should ensure that the cost advantages of D network operators resulting from ex officio individual assignments could also be reversed (at least to a large extent) by other ex officio individual assignments. A possibility that could be considered here would be a small-scale redistribution of 900/1800 MHz spectrum. If, contrary to the views of this respondent, demand identification proceedings were nevertheless conducted and there was neither a clear decision on a hard spectrum cap nor a small-scale redistribution, the renewal of the assigned 2 x 5 MHz in the 900 MHz band should at least be taken into consideration. The request for redistribution was paramount, however, and a ruling chamber should hold hearings and put it into effect as from 1 January 2017 at the latest. It was pointed out that the application for redistribution affected only the period from 1 January 2010 till 31 December 2016, which meant it could not be held to be relevant to any scarcity of 900 MHz spectrum.

Yet another respondent, dealing with the question of scarcity, made the point that the frequency auctions of 2000 and 2010 suggested that there would not be any qualified new undertakings giving notification of their requirements in relation to the frequency usage rights expiring at the end of 2016. When it came to the assignment of the usage rights expiring at the end of 2016, therefore, only the four existing mobile network operators needed to be considered. There was thus no point in opening the proceedings to other undertakings in addition to the four current operators, nor was there any need to stipulate a basic frequency package.

Re key element 8 (Timely decision on assignments)

On the one hand it was argued that brisk progress through the proceedings helped to ensure continuity of service and encouraged innovation and investment in the frequency bands. This was especially relevant to the possible necessity of inter-band migrations and the continuity of usage of the bands. The market participants needed enough time to be able to implement strategic decisions and make any necessary adjustments. If the time available for implementation were shortened, backlogs could develop and there could even be interruptions of service. In light of the time that experience showed was needed for lengthy consultation and preparation processes, it was felt to be appropriate and practical to take the decisions three years before expiry of the frequency usage period. It was also pointed out that the early opening of proceedings - if possible before 2013 - was indispensable in relation to Europe, as Germany - in contrast to France, the UK, Spain, Italy and Austria - did not yet have any long-term time frame for the usage of the 900 MHz frequencies.

On the other hand it was felt that 2013 was too early for a final decision to be taken, at least with reference to the conducting of award proceedings. This view held that taking a decision on the future of the GSM spectrum two years before the expiry of the usage rights - that is, in 2014 - would be expedient and allow enough time.

II. Detailed explanatory notes

Re 1: Opening of demand identification proceedings

The Chamber is opening these demand identification proceedings in order to establish whether sufficient spectrum will be available in the bands at 900 MHz and 1800 MHz as from 1 January 2017; section 55(9) sentence 1, 1st alternative TKG.

For technical reasons, there is a finite supply of usable radio frequencies. This is why they are regarded as a scarce public resource, a resource of considerable value to society and the market. Coordination and management of this scarce resource by government bodies is therefore necessary (cf official analysis of section 53(1) of the draft TKG, Bundesrat printed paper 755 from 03, page 105). It is in the public interest to make sure, through efficient and effective regulation, that such spectrum is used with maximum efficiency from the economic and social points of view – especially considering the great importance of the radio spectrum for electronic communications.

Radio spectrum is made available in accordance with the principles of efficient frequency management, spectrum efficiency and flexibility, technology and service neutrality, and competition. The aim is to maintain and promote effective competition between market participants and to prevent hoarding, in particular. Demand identification provides not just an analysis of existing usages, including technologies and service offers, in the interests of transparency and detecting any inefficiencies, but is also an important step in terms of future fitness, that is to say being prepared for the market's requirements and being able to promote efficient usages.

In the Chamber's view, the issues are particularly complex and the decision to be taken on frequency usage as from 1 January 2017 of great importance for the market (see above, background). In order to do justice to the complexity and arrive at a robust decision, the Chamber has opened the proceedings leading up to the decision in timely manner. The current assessment is that the proceedings should be completed three years before the present time limit expires so as to give the undertakings concerned and all other interested parties the planning and investment certainty they need.

Under section 55(9) sentence 1 TKG it may be ordered, without prejudice to section 55(5) TKG, that the assignment of frequencies be preceded by award proceedings based on conditions according to section 61 TKG as determined by the Chamber, when spectrum is scarce. The scarcity assumed in the two alternatives in section 55(9) sentence 1 TKG can result from either the established fact of a surplus of applications (section 55(9) sentence 1 2nd alternative) or the forecast of an insufficient number of frequencies being available (section 55(9) sentence 1 1st alternative.). An order as per section 55(9) TKG is at the discretion of the Chamber.

In consideration of the wording of the law and of the connection between the two possible cases referred to in section 55(9) sentence 1 TKG, the forecast mentioned in the 1st alternative refers to demand exceeding supply at the time of assignment, that is, to a greater number of applications being made than frequencies are available. This forecast is based on identified excess demand.

At present, scarcity does not appear improbable. This is indicated not least by the excess in demand that became evident in the 2010 auction. The provision of frequencies in the bands at 900 MHz and 1800 MHz means that an intensively used spectrum dedicated to the mobile services will be made available. Furthermore, the request for assignment of further 900 MHz spectrum made by E-Plus is, by any reasonable interpretation, an argument for conducting proceedings to identify demand. In addition, the Chamber is unable to share the view expressed by respondents that there will be no qualified new undertakings submitting notifications of demand for the frequencies in question. At all events the proceedings must be given properly open form, and the possibility of new participants cannot be ruled out from the start.

The procedure that is used for the purpose of establishing whether demand for frequencies exceeds supply is multi-stage, informative and tried and tested. It takes the form of demand identification proceedings in which the Chamber, paving the way for a decision on issuing an order for award, makes a public call for requirements for particular frequencies to be notified within a suitable period. The procedure takes proper account of the criteria of objectivity, transparency and non-discrimination and grants applicants equal opportunity for access to spectrum. If demand is shown potentially to exceed available spectrum, the Chamber will open a time window in the further proceedings (see also section 6.2) in which anyone may file an application for frequency assignment or admission to the award proceedings.

Official demand identification proceedings are not explicitly prescribed in section 55(9) TKG. However, if they are not carried out prior to an order for award being issued, the Chamber will have to draw on information that offers a comparable guarantee for the accurate recording of current demand and is hence not less suitable as a basis for a forecast of – possibly – insufficient spectrum. Against this background the Chamber considers it appropriate and efficient to take a proactive stance and open official demand identification proceedings as a step in the overall process, to make sure the frequencies are assigned in the framework of objective, transparent and non-discriminatory proceedings.

The purpose of identifying demand is to establish whether demand is likely to exceed supply as the basis for forecasting whether the number of applications is expected to exceed the frequencies available (section 55(9) sentence 1, 1st alternative, TKG). The explanatory notes to the Act show this to be possible if the Chamber concludes that frequencies are not available for assignment in sufficient numbers (cf analysis of the draft TKG, section 53(9), Bundesrat printed paper 755/03, page 109). Here the Chamber must work on assumptions that reflect not only current knowledge and experience, but which are also comprehensible and take account of the regulatory aims.

Even if the frequencies in the bands at 900 MHz and 1800 MHz will only be available again for the assignment of spectrum as from 1 January 2017, the Chamber considers it appropriate and efficient to open assignment proceedings at the present time. In its flexibilisation decision the Chamber already announced, as a measure for the flexibilisation of usage rights for wireless access in the bands at 900 MHz and 1800 MHz, its intention of deciding about the assignment of these frequencies in timely manner, ie approximately three years before expiry of the current time limit (31 December 2016) (loc cit page 3576):

"Measure 3: The Bundesnetzagentur will decide ex officio, in timely manner before the current frequency usage rights in the bands at 900 MHz and 1800 MHz expire, on the assignment of this spectrum from 1 January 2017.

"The same applies in the case of an assignee applying for an extension of the time limit beyond 31 December 2016."

In its rationale the Chamber said the following (loc cit, page 3610f):

"The Bundesnetzagentur will decide ex officio, in timely manner before the current frequency usage rights in the bands at 900 MHz and 1800 MHz expire, on the assignment of this spectrum from 1 January 2017.

"(...) the Bundesnetzagentur will decide in timely manner, ie approximately three years before the current time limit expires (31 December 2016), on the further grant of frequency usage rights. The Chamber has taken particular note of the outcome of the most recent consultations."

Opening proceedings in the fourth quarter of 2011 is considered timely by the Chamber so that it will be able to take a final decision on use of the spectrum after 1 January 2017 three years before the current time limit ends on 31 December 2016. With regard to the opening of frequency assignment proceedings, the Chamber said the following by way of rationale for its flexibilisation decision (loc cit, page 3610f):

"(...) In the Chamber's view, the issues involved are particularly complex and the decision to be taken of great importance for the market. To be able to take the decision on a secure and robust basis, the Bundesnetzagentur will open proceedings to prepare this decision in timely manner."

An early opening of proceedings to identify demand accords with the interests of all current frequency assignees as well as other interested undertakings - which is what the majority of respondents also called for. The early publication of the two drafts for consultation (examination of frequencies distribution and the key points for the demand identification proceedings), in particular, gave the former an overview of the preparations for a decision on assigning frequencies in the 900 MHz and 1800 MHz bands. It provides the network operators with a comprehensive view of the upcoming provision of spectrum above and below 1 GHz, enabling them to assess their own requirements and access to spectrum. Equally, all interested undertakings were given, at the earliest possible moment, the necessary information on the framework conditions for frequency assignment proceedings, and they could therefore plan their business operations accordingly. All interested parties have thus been given the opportunity to safeguard their right to equal access to spectrum in the 900 MHz and 1800 MHz bands.

With reference to the claim by one respondent that the proceedings were to be held at too early a stage, the Chamber must point out that experience has shown sufficient time needs to be set aside for conducting the complex award proceedings in order to ensure continuity of service to consumers as required by section 2(2) subpara 1 TKG. Another regulatory aim served by an early date is the encouragement of efficient investment in infrastructure referred to in section 2(2) subpara 3 TKG, since it gives the undertakings enough time to plan their investment decisions on both existing infrastructures and network build and expansion.

To guarantee objective, non-discriminatory and transparent proceedings the Chamber now opens the demand identification process. The first step in the proceedings is to invite interested undertakings to submit a substantiated statement of their expected requirements of frequency usage rights in the 900 MHz and 1800 MHz bands as from 1 January 2017. This notification must be received by 16 January 2012 (cf section 5). With regard to the request by one respondent that the deadline for submitting the notification be extended to at least eight weeks, the Chamber would point out that the period granted to interested undertakings for their planning and analysis actually started as long ago as 6 July 2011, with the publication in Official Gazette No 13/2011 of the key elements for the upcoming proceedings.

Re 2: Spectrum availability

The frequencies available in future in the bands from 880 to 915 MHz, from 925 to 960 MHz, from 1725 to 1785 MHz and from 1820 to 1880 MHz are to be made available for wireless access for the provision of telecommunications services after 1 January 2017.

The harmonisation of the technical conditions for the availability and efficient use of the 900 MHz and 1800 MHz bands for terrestrial systems capable of providing electronic communications services was effected through the Commission Decision of 16 October 2009 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 (2009/766/EC). With regard to the technical conditions for the availability of the above-mentioned frequency bands, the Member States are required under Article 5(2) of the Decision to ensure that the other systems referred to in Article 3, Article 4(2) and paragraph 1 of this Article give appropriate protection to systems in adjacent bands (GSM-R below 880 MHz and DECT above 1880 MHz). It will only be possible at a later date to stipulate guardbands or coordination measures that may be necessary because these will depend on what technologies are ultimately employed.

The frequencies assigned in the 900 MHz and 1800 MHz bands on the basis of the GSM licences for the period up to 31 December 2016 are as follows:

Band	Assignee	Assignments	Volume
900 MHz	E-Plus	880.1 – 885.1 MHz and 925.1 – 930.1 MHz	2 x 5 MHz
	Telefónica	885.1 – 890.1 MHz and 930.1 – 935.1 MHz	2 x 5 MHz
	Vodafone	890.1 – 892.5 MHz and 935.1 – 937.5 MHz	2 x 2.4 MHz
		899.9 – 906.1 MHz and 944.9 – 951.1 MHz	2 x 6.2 MHz
		910.5 – 914.3 MHz and 955.5 – 959.3 MHz	2 x 3.8 MHz
	Telekom	892.5 – 899.9 MHz and 937.5 – 944.9 MHz	2 x 7.4 MHz
906.1 – 910.5 MHz and 951.1 – 955.5 MHz		2 x 4.4 MHz	
914.3 – 914.9 MHz and 959.3 – 959.9 MHz		2 x 0.6 MHz	
1800 MHz	Telekom	1725 – 1730 MHz and 1820 – 1825 MHz	2 x 5 MHz
	Telefónica	1735.1 – 1752.5 MHz and 1830.1 – 1847.5 MHz	2 x 17.4 MHz
	Vodafone	1752.7 – 1758.1 MHz and 1847.7 – 1853.1 MHz	2 x 5.4 MHz
	E-Plus	1763.1 – 1780.5 MHz and 1858.1 – 1875.5 MHz	2 x 17.4 MHz

Table 2

The frequency bands will be available for the assignment of frequencies for wireless access as from 1 January 2017.

The frequencies in the bands from 1710 to 1725 MHz (lower band), from 1805 to 1820 MHz (upper band), from 1730.1 to 1735.1 MHz (lower band), from 1825.1 to 1830.1 MHz (upper band), 1758.1 to 1763.1 MHz (lower band) and from 1853.1 to 1858.1 MHz (upper band) have been assigned for wireless access until 31 December 2025.

With reference to the comment by respondents that the bulk of the spectrum will not be available as from 2017 for award to a new entrant, it must be pointed out that the proceedings used to identify demand, which are objective, transparent and non-discriminatory, do in fact cover all interested undertakings, ie not only the current assignees but also new entrants.

The Bundesnetzagentur plans to make the spectrum in the two bands, totalling 170 MHz, available at one and the same time:

Band	Amount of available spectrum
900 MHz	2 x 35 MHz
1800 MHz	2 x 50 MHz

Table 3

Thus the assignment procedure will give potential assignees a sufficient degree of planning certainty, making available to them spectrum both for service in rural areas and capacity spectrum. Joint award of all the spectrum available reflects the Bundesnetzagentur's practice of providing all the available frequencies, as far as possible, in one set of proceedings so as to avoid artificial scarcity.

Re 3: Use across Germany

The frequencies in the bands 900 MHz and 1800 MHz are available for use across the Federal Republic of Germany.

The basic point made by the respondents was that the frequencies in the two bands, at 900 MHz and 1800 MHz, were a vital basis for securing GSM radio coverage throughout Germany and a valuable resource for the further expansion of radio-based broadband coverage. This meant that both bands should continue to be available for use across Germany. It should therefore be borne in mind that it was in the interest of users too to have fully comprehensive coverage with mobile radio services. Against this background it would be appropriate to ensure that the frequencies will again be assigned for use across Germany in the period after 1 January 2017. Such nationwide assignment allows potential new entrants to enter the wireless access market and existing network operators to continue to use the frequencies for their national mobile networks.

The Chamber last awarded spectrum from the 1800 MHz band nationwide for wireless access in 2010. Spectrum from the 800 MHz band, which has comparable propagation properties to spectrum in the 900 MHz band, was also awarded in 2010 for use across the country (for details see the Chamber's decision BK 1a-09/002).

No arguments were advanced for diverging from the determination that the spectrum in the 900 MHz and 1800 MHz bands will be assigned for use throughout the Federal Republic of Germany. Just like the spectrum in the bands at 800 MHz, 1.8 GHz, 2 GHz and 2.6 GHz that was awarded in 2010, so too the spectrum from the above bands at 900 MHz and 1800 MHz will be available for wireless access throughout the country and hence should be available for assignment on a nationwide basis.

Nationwide assignment of this wireless access spectrum would enable networks for innovative mobile broadband services to be set up in rural areas, too. Moreover, the regulatory aim of efficient and interference-free frequency use within the meaning of section 2(2) subpara 7 TKG can best be achieved by means of nationwide assignment of the 900 and 1800 MHz frequencies, as less coordination than with regional or local assignment will be required.

Re 4: Purpose of use

In the frequency bands at 900 MHz and 1800 MHz, the frequencies 880 – 915 MHz and 925 – 960 MHz, 1725 – 1785 MHz and 1820 – 1880 MHz are dedicated in the frequency usage subplans (entry nos 227 011, 228 001, 228 005, 267 001 and 267 006) to "wireless access for the provision of telecommunications services". As required by the frequency usage plan, this dedication, which is technologically neutral, makes it possible for a variety of technologies and systems to be used without restriction to specific standards.

According to the frequency usage plan (description of frequency usages) the purpose of the usage (wireless access) is to connect terminal equipment to radio networks via fixed stations, usually with a view to offering telecommunications services.

The technical conditions of use are taken from Commission Decision (2009/766/EC) of 16 October 2009 on the harmonisation of the 900 MHz band and 1800 MHz band for terrestrial systems capable of providing pan-European electronic communications services in the Community; last amended by Commission Implementing Decision (2011/251/EU) of 18 April 2011 amending Commission Decision 2009/766/EC. The conditions of use will be reviewed and updated as part of European harmonisation.

One of the respondents, during the demand identification proceedings, called for FDD to be stipulated as the exclusive duplex method. Here it must be pointed out that the stipulation of specific conditions of use – which may possibly include laying down the permissible duplex methods – will only be done at a later date. The purpose of the present proceedings is to first of all identify the requirements of the interested undertakings.

With regard to the proposal by respondents that channel spacing or frequency blocks of 5 MHz should be provided so as to promote the technologically neutral use of new broadband technologies, the Chamber states that the deployment of such innovative systems is possible. The Bundesnetzagentur will therefore support future spectrum users in introducing or converting to technologies with 5 MHz channel spacing, particularly in the coordination of these new frequency usages in Germany's border regions with frequency usages in neighbouring countries. The Bundesnetzagentur will also take due account of justified claims for protection from domestic frequency usages in adjacent bands. However, to stipulate specific technical conditions and take steps to ensure compatibility of radio applications will only be possible at a later date through the frequency assignment process or the setting of location-based parameters.

Re 5: Putting forward spectrum requirements

Participation in proceedings to identify demand is not restricted. All interested undertakings are invited to put forward their spectrum requirements in the 900 MHz and 1800 MHz bands as from 1 January 2017. Some respondents called for participation in the proceedings to be restricted to the undertakings which currently operate mobile services. This will not be done, as there is no apparent legal or objective reason for such restriction.

In order to ensure that the notification of demand is plausible and seriously meant, the notifications have been made subject to specific requirements. In requiring this, the Chamber has aligned itself with the majority of respondents, who called for the proceedings to require notifications to be properly substantiated. In line with the purpose of identifying demand – to establish whether demand is likely to exceed supply as the basis for forecasting whether the number of applications is expected to exceed the frequencies available (section 55(9) sentence 1 1st alternative TKG) – demand notifications that also take account of the objective and subjective criteria for future frequency assignment (section 55 subsections (3), (4) and (5) TKG) when interest in a particular usage is set out, are particularly convincing.

Preconditions for assigning frequencies are that "their efficient and interference-free use by the applicant is secured" and "their compatibility with other frequency usages is given" (see section 55(5) sentence 1 subparas 3 and 4 TKG). Interested undertakings are thus called on to set out clearly and conclusively that efficient and interference-free use by them within the meaning of section 55(5) sentence 1 subpara 4 TKG will be securely established at the time of assignment. This clear and conclusive account must cover not only the subjective requirements of reliability, efficiency and specialist knowledge but also present a convincing concept for intended use of the frequencies for assignment.

For efficient use of this spectrum, an aim to which the TKG is committed, it is recommended that applicants provide such accounts with reference to their particular business model. This is especially relevant if they already hold suitable spectrum with which to implement their business model, as was also requested by respondents. In this context the Chamber has thus decided not to adopt the proposal of a respondent who called for the proceedings to take due account of the fulfilment of assignment conditions at a past time.

In particular:

a) Competitive independence

Each interested undertaking is called on to state its requirements just once. This also applies in respect of consortia. Undertakings that have merged under section 37 of the GWB (Restrains of Competition Act) are deemed to be one undertaking. The prescription of competitive independence is in line with current regulatory practice (cf RegTP Official Gazette no 4/2000; Order no 13/2000, Order no 42/2006, Bundesnetzagentur Official Gazette no 20/2006, Order no 59/2009, Bundesnetzagentur Official Gazette no 20/2009). The regulatory aim of ensuring fair and workable competition (section 2(2) subpara 2 TKG) requires the network operators to have competitive independence.

The notification of demand should include the following information in order to demonstrate the undertaking's competitive independence: name and address, its legal form, seat and financial interests.

b) Reliability, efficiency and specialist knowledge

With reference to the demonstration of **reliability** the notifying company should declare whether a frequency assignment has been revoked in the past, conditions have been imposed on account of failing to honour obligations from a frequency assignment, legal action has been taken on grounds of having breached telecommunications or data protection regulations, or proceedings in the above cases are pending and if so, with which public authority.

With reference to **specialist knowledge** there should be a declaration that the persons engaged in building and operating the wireless network have the necessary knowledge, experience and skills.

In addition to reliability and specialist knowledge, the information on the undertaking's **efficiency** will also be of great importance. Interested undertakings should therefore have - and provide evidence of - sufficient financial capability. The notifying company should thus demonstrate that the financial means and, where applicable, also the physical resources will be available (over the long term) for assignment of the frequencies, for the build and rollout investments set out in the **frequency usage concept** and for operation of the wireless network, and how financing is to be ensured.

In this context it will have to be borne in mind that the spectrum in the 900 MHz and 1800 MHz bands consists of frequencies of extremely high economic value. Great social importance is attached to wireless spectrum in the 900 MHz and 1800 MHz bands in connection with rolling out wide-area infrastructures for innovative mobile broadband services (cf the regulatory aims in section 2(2) subparas 1-3 TKG). It is therefore in the public interest for efficient and effective regulation to ensure that this spectrum is used as efficiently as possible.

The setting of fees for assignment (section 142(2) TKG) is one way in which the aim of ensuring optimum and efficient use of spectrum (cf regulatory aim defined in section 2(2) subpara 7 TKG) is pursued. Accordingly, the fees for assignment decisions in the Frequency Fees Ordinance should be set in such a way as to act as a steering mechanism for optimum use of spectrum, in line with the aims of the TKG. According to section 142(2) sentence 4 TKG, therefore, the steering function is crucial in the assessment of fees.

To date no fees have been ordered for frequency assignments for wireless access. The current Frequency Fees Ordinance does not provide an assessment basis, as in the past only chargeable acts for GSM use were laid down for the frequencies here under consideration. The Fees Ordinance is currently being revised, and the intention is for the new chargeable acts to come into force in timely manner before binding frequency assignment applications are made.

The Chamber nevertheless wishes to point out that:

Section 142(2) sentence 4 TKG stipulates that fees for decisions on the grant of rights of use must be determined in such a way that they serve, as a steering mechanism, to secure optimal use of these commodities in line with the aims of the TKG. This means that the Bundesnetzagentur is required to structure its fees schedule so as to provide assignees with effective incentives for using spectrum efficiently and to prevent hoarding.

The 900 MHz and 1800 MHz spectrum has great economic importance for electronic communications. This is particularly true in relation to rolling out wide-area infrastructures for innovative mobile broadband services (cf the regulatory aims in section 2(2) subparas 1-3 TKG). It is therefore in the public interest for this spectrum to be used as efficiently as possible on the basis of efficient and effective regulation.

For the assignment of spectrum with the same or comparable technical conditions of use and wireless access as the designated purpose of use, the 2010 auction delivered the following outcomes (downloadable from www.bundesnetzagentur.de/VergabeverfahrenDrahtloserNetzzugang):

The average highest bid at the 2010 auction for a 2 x 5 MHz block (paired) in the 800 MHz band and a term of 15 years was approximately €600 million. For a block of 2 x 5 MHz (paired) in the 1800 MHz band and a term of 15 years the average highest bid was about €20 million and, in the 2 GHz band with the same term, around €88 million. These auction results were many times higher than the minimum bids of €2.5 million for a block of 2 x 5 MHz (paired; for details see the award decision of 12 October 2009) and in the Chamber's opinion demonstrate the outstanding economic importance of the spectrum in these bands.

c) Frequency usage concept

With reference to the presentation of the frequency usage concept, the undertaking stating its spectrum requirements should provide details of the planned service concept with its business planning and technical implementation. The period to which the frequency usage concept must apply starts on 1 January 2017, since the present proceedings cover usage rights which will only be effective as from that date.

The applicant should state what spectrum he needs for the technical implementation of the planned service concept on the basis of traffic theory assumptions. This is particularly relevant if the undertaking already holds suitable spectrum. It should also demonstrate that the frequencies are in fact needed and will be used efficiently in the long term (section 63(1) TKG).

Applicants should make clear what type of services they are planning to offer in the period in question, using the radio technology they have selected, and by what date the services are to be made available. They should also specify the target group and outline the market potential anticipated for the competitive radio networks.

The frequency usage concept should also contain details of the technical implementation of the planned service concept. Information on technical implementation should make it clear that applicants have a command of the intended procedures and will be capable of deploying the planning instruments at their disposal. For this purpose they should give details of their planning instruments (details of network expansion planning, time frame for network build), the intended dimensions of the radio access network (eg the degree of population or area coverage, the number of cells or sectors) and details of the undertaking's approach (eg network structure, technical systems employed). Where applicable, details should be given of the continued use of GSM technology or the switch from GSM to the successor system (eg parallel operations, time frame, availability of terminal equipment), and of the operating and maintenance concept (eg network efficiency, failure safety (radio network and core network), network and error management). It is also necessary to demonstrate conformity with the technical requirements laid down in Commission Decision 2009/766/EC on the harmonisation of the 900 MHz band and 1800 MHz band for terrestrial systems capable of providing pan-European electronic communications services in the Community (EU OJ No L 274 of 10 October 2009, p 32), as amended by Commission Implementing Decision 2011/251/EU of 18 April 2011 amending Decision 2009/766/EC (EU OJ No L 106 of 27 April 2011, p 9).

Forecasts of subscriber development and traffic volumes can be presented in a form showing different times over the first five years of the period in question. Finally, the business planning should be set out in an investment schedule.

One of the respondents went further than the above requirements for the demand identification proceedings, requesting that it should be made clear in the proceedings to identify demand already that the spectrum cap of 2 x 20 MHz per provider, used at the 2010 frequency auction, applies for frequency assignments in the 800 MHz/900 MHz bands. The Chamber cannot adopt this proposal. The notifications of demand provide the basis for the Chamber's forecast decision under section 55(9) sentence 2 1st alternative TKG. It is essential for the Chamber to base this decision on demand notifications that are rooted in objective fact and reflect the actual requirements of interested undertakings. Stipulations with a specific impact on the notifications of such undertakings would amount to an extraneous influence and distort the true demand situation on the market. The stipulation of a spectrum cap, for example, would have such an impact. The only useful function of such stipulations is to ensure fair and equal access to spectrum once the fact of scarcity has been established during ongoing proceedings. They can therefore only be considered after all the circumstances and requirements of the interested undertakings have been established.

Re 6 Further steps in the proceedings

The purpose of identifying demand is to establish whether demand is likely to exceed supply as the basis for a forecast within the meaning of section 55(9) sentence 1 1st alternative TKG.

Re 6.1 Publication

The Chamber will publish the demand it identifies. This will accommodate the public's need for information and, in particular, create transparency for potential applicants. With regard to the question raised by one of the respondents concerning the statement of individual demand, the Chamber must point out that substantiated demand notifications in these proceedings will include confidential information of the interested undertakings. The publication of the results of the demand identification will take that fact into account.

Re 6.2 Further steps in the proceedings

The demand notifications will identify whether demand exceeds supply and thus how to proceed in accordance with the law.

For assignment of the 900 MHz and 1800 MHz spectrum the Chamber's initial assessment is that eligible procedures are essentially those of extension under section 55(8) TKG or (re-)assignment of frequencies under section 55 subsections (3) and (9) and section 61 TKG in the case of scarcity.

Under section 55(9) sentence 1 TKG in conjunction with section 132(3) sentence 1 TKG the Chamber, after hearing the parties concerned, decides in the first instance whether or not scarcity is present for spectrum in the 900 MHz and 1800 MHz bands.

Based on the demand for 900 MHz and 1800 MHz spectrum that it identifies, the Chamber will consider whether it would be more appropriate to extend the time limits for the existing rights of use (section 55(8) sentence 1 TKG) or to conduct award proceedings (sections 55(9) and 61 TKG). The consultations with the parties concerned provided for in the Telecommunications Act will be conducted before each of the Chamber's decisions, as also called for by respondents.

Under section 55(8) TKG it is possible to extend the time limits for rights of use. Under section 55(9) sentence 1 TKG this does not apply, however, if scarcity is present. If frequencies are not available for assignment in sufficient numbers, the Chamber can order that assignment be preceded by award proceedings. Persons likely to be affected are to be heard before the decision is taken (section 55(9) sentence 2 TKG). Respondents were correct to point out in this connection that the Telecommunications Act here allows the Chamber scope to use its discretion. There was also a request from respondents for a decision to be taken now, at the present time, on an extension in favour of the current assignees. The Chamber cannot accede to this, because the facts necessary for taking a discretionary decision have yet to be established in the present proceedings.

The frequencies are assigned by the Bundesnetzagentur as individual assignments on written application or, as the case may be, only after participation in award proceedings. For this purpose the Bundesnetzagentur will issue a call to apply for usage rights shortly before conducting proceedings for assigning the spectrum. Undertakings which have already declared their interest in specific frequency usage in the 900 MHz and 1800 MHz bands in the demand identification proceedings are also required, under section 55(3) and (4) TKG, to submit a written application for assignment of frequencies and accordingly to provide greater detail and also evidence of compliance with the statutory requirements for assignment. In the event of award proceedings being ordered, the interested undertakings will also, in addition to their demand notifications under section 61(4) sentence 2 subpara 1 TKG, have to enter applications for admission to award proceedings and supply the necessary details and evidence of having fulfilled the above minimum legal qualification requirements.

The comments of the respondents on the assignment conditions to be stipulated later in the proceedings - eg duration of spectrum usage rights, coverage obligation, specific frequency usage conditions - will be dealt with later during the proceedings.

Re 6.3 Timing of decision on subsequent use

The current assessment is that proceedings should be completed three years before the current frequency usage rights expire so as to give network operators and other interested undertakings the planning and investment certainty they need.

In its flexibilisation decision of 12 October 2009 the Chamber already announced, as a measure for the flexibilisation of frequency usage rights for wireless access in the bands at 900 MHz and 1800 MHz, its intention of deciding about the assignment of these frequencies in timely manner, ie approximately three years before expiry of the time limit (31 December 2016) (loc cit, p 3576):

"Measure 3: The Bundesnetzagentur will decide ex officio, in timely manner before the current frequency usage rights in the bands at 900 MHz and 1800 MHz expire, on the assignment of this spectrum after 1 January 2017.

"The same applies in the case of an assignee applying for an extension of the time limit beyond 31 December 2016."

In its rationale the Chamber said the following (loc cit, p 3610f):

"The Bundesnetzagentur will decide ex officio, in timely manner before the current frequency usage rights in the bands at 900 MHz and 1800 MHz expire, on the assignment of this spectrum as from 1 January 2017.

"(...) the Bundesnetzagentur will decide in timely manner, ie approximately three years before the current time limit expires (31 December 2016), on the further grant of frequency usage rights. The Chamber has taken particular note of the outcome of the most recent consultations.

"(...) In the Chamber's view, the issues are particularly complex and the decision to be taken of great importance for the market. To do justice to the complexity, the Chamber will open proceedings to reach a robust decision in timely manner."

With reference to the suggestion by a respondent that it would suffice to take a final decision on the subsequent use at a later date, the Chamber would point out that further procedural steps are needed to ensure that the decision on frequency usage as from 1 January 2017 is taken in timely manner. The scheduling must be lined up with the procedural steps prescribed by statute; these steps can also include ordering and conducting award proceedings. The consultations with parties likely to be affected, which the law requires to be conducted in this case, and the Chamber decisions which are also provided for and which have to be taken in consultation with the Bundesnetzagentur's Advisory Council, had to be included in the scheduling at an early stage.

In doing so the Chamber is also giving consideration to the respondents who called for brisk progress through the proceedings with a view to ensuring continuity of service and encouraging innovation and investment. Attention was particularly drawn to the possible necessity of traffic migrations and the continuity of the usage of the bands. The market participants needed enough time to be able to implement strategic decisions and make any necessary adjustments. If the time available for implementation were shortened, backlogs could develop and there could even be interruptions of service. In light of the time that experience showed was needed for lengthy consultation and preparation processes, it was felt to be appropriate and practical to take the decision three years before expiry of the frequency usage period.

Bundesnetzagentur for Electricity, Gas,
Telecommunications, Post and Railway

The President's Chamber

Bonn, 21 November 2011

Dr. Henseler-Unger
Vice Chair

Kurth
Chair

Kindler
Vice Chair