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Parts of an impact assessment concerning the National Post and Telecom Agency Regulations on licences to use radio transmitters in the 1900–1905 MHz band

The National Post and Telecom Agency (PTS) has chosen to only translate the essential parts of the chapter dealing with the consultation carried out. The entire document has been published in Swedish on the PTS website, www.pts.se, under Documents and statutes, and Consultations. This corresponds to Section 4.2 of the Swedish document.

1 Consultation carried out

In April 2007, PTS carried out a consultation regarding licences in the 1900–1905 MHz frequency band. All in all, 15 responses were received on the basis of the consultation, comprising the following areas:

- Point in time for the auction (for assignment)
- The geographical area of the licence
- Technology and service neutrality
- The scope of the licence
- Requirements for rollout and/or coverage
- Technical conditions

These areas are discussed in more detail below together with justification for cases where amendments have or have not been made despite the views presented in relation to the proposals contained in the consultation.

Documents regarding the consultation and the responses to the consultation published by PTS can be found on the authority's website, www.pts.se.

1.1 Point in time for assignment

PTS's proposal for the relevant regulations

PTS proposes that the assignment take place during the first half of 2008.

It has not been possible to establish an optimal point in time for assignment that fully meets the interests of all parties. For this reason, an assessment of reasonability must be made.

In the assessment of PTS, it is appropriate for the auction to be held during the first half of 2008, as some stakeholders are interested in the assignment of frequencies taking place as soon as possible. If assignment does not take place as soon as possible, there is a risk that the stakeholders currently needing spectrum will be unable to enter the market or risk being put out of business. All interested parties will be able to apply for frequencies in the 1900–1905 MHz band. Thus, the auction enables both the expansion of 3G as well as other use.

1.2 National licence

PTS's proposal for the relevant regulations

PTS proposes that the licence be national.

The relevant frequency band is internationally harmonised for mobile communications systems, and there is good potential for international roaming. The fact that the frequencies can be used for mobile communications systems indicates that the licences should not cover very small geographical areas. Another reason in favour of a national licence is that the upper parts of the frequency band (1905–1920 MHz) have already been assigned as national licences; for example, due to the simpler coordination of radio use.

The possibility of transferring part of a licence¹ following approval by PTS means that a national licence can be divided into several regional licences after the auction.

1.3 Technology- and service-neutral licences

International regulations

According to ITU's Radio Regulations, the 1900–1905 MHz frequency band has been allocated for mobile and fixed services. As stipulated by footnote 5.388 in the Radio Regulations, this band is 'intended' for IMT-2000², but this is not binding.

¹ Chapter 3, Section 23 of the Electronic Communications Act

² International Mobile Telecommunications 2000

In the European Common Allocations table (ECA), the 1900–1920 MHz band has been allocated for, for example, mobile services under the Radio Regulations. For instance, ECA refers to ECC³ decision ECC/DEC/(06)01.⁴

According to ECC/DEC/(06)01, these frequencies are 'designated'⁵ for UMTS/IMT-2000, and may be used unpaired for TDD or for an FDD uplink paired with other frequencies. In its Decision, the ECC identified the possibility of pairing this band with parts of 2570–2620 MHz. According to ECC/DEC/(06)01, the 1900–1920 MHz frequency band should be available for UMTS/IMT-2000 subject to the precondition that there is market interest.

Sweden is not committed to this Decision.

PTS's proposal for the relevant regulations

PTS proposes that the frequency band be assigned in such a manner that is as technology- and service-neutral as possible.

PTS's Spectrum Policy states that licences for use of radio transmitters are required to be as technology- and service-neutral as possible. Technology- and service-neutral licences give the licence holder the flexibility to choose which service is to be produced and with which technology.

In this case, there are no international decisions preventing an assignment that is technology neutral. Also, such use does not give rise to interference vis-à-vis neighbouring countries.

The entire upper part of the 1900–1920 MHz frequency band has been assigned for UMTS TDD in Sweden. A technology-neutral licence in the present frequency band will mean that coexistence between licence holders will become more complicated compared to a situation where a licence was assigned exclusively for UMTS TDD, as proposed earlier in the consultation. The consultation shows that there is interest in using other technologies in the band. As a result, and as a consequence of this involving the assignment of a rather limited frequency band, 1900–1905 MHz should be assigned in such a way so that a guard band is not required in relation to adjacent UMTS TDD licence holders. This renders

³ ECC, Electronic Communications Committee

⁴ The ECC decision can be found at www.ero.dk

⁵ 'Designate' means the following in accordance with the current wording of the ECC's Rules of Procedures: Decisions that 'designate' a frequency band for a harmonised application are intended to foster the deployment of an application to meet a market demand in a harmonised manner throughout CEPT. Members signing the Decision commit themselves to make spectrum available for this harmonised application which includes assessing when and where there is a demand for the harmonised service/application and deciding whether that demand is great enough to exclude other services and applications from the harmonised band. Such Decisions shall not inhibit radiocommunication equipment meeting different standards from operating in an identified frequency band provided it offers the same spectrum use and application as specified in a Decision for the band and is placed on the market in conformity with the essential requirements, i.e. it makes effective use of the spectrum allocated to terrestrial/space radio communications so as to avoid harmful interference.

assignment for FDD use impossible. However, in line with PTS's Spectrum Policy, it is appropriate to facilitate an assignment that is as technology- and service-neutral as possible.

For this reason, PTS has amended the UMTS TDD requirement to assign the 1900–1905 MHz frequency band in a technology-neutral manner with technical specifications that correspond to the requirements in the UMTS TDD standard and with the requirement that the licence holder must avoid causing harmful interference by coordinating any radio use with possible existing radio use in the adjacent 1905–1920 MHz frequency band.

The adjacent frequencies below 1900–1905 MHz (1880–1900 MHz) is used for DECT cordless telephones, which are exempt from the licence obligation. This may entail a slightly increased risk of interference in the 1900–1905 MHz frequency band.

1.4 Scope of the licence

PTS's proposal for the relevant regulations

PTS proposes that only one 5 MHz licence should be assigned in the 1900–1905 MHz frequency band.

As this involves the assignment of a relatively limited frequency band, in the assessment of PTS, a 5 MHz block is the most effective assignment of frequency in this frequency band.

1.5 Requirements for rollout and/or coverage

PTS's proposal for the relevant regulations

PTS proposes that the licence should not be associated with rollout requirements.

There are two main and closely related reasons as to why rollout requirements were to be introduced to the licence conditions. The first reason is to counteract hoarding and the second is to promote use of the licence. However, one problem related to rollout requirements is that if they are set too low, it is likely to result in a rollout that only fulfils the requirements and nothing more. If the requirements are set too high, demand for the licences will be reduced and there may then be no interest in them, even at a price approaching zero.

Assignment effected through an auction is considered to make frequency hoarding less attractive, as the party intending to hoard licences must then surpass the willingness to pay of the competitors who actually want to use the licences from the auction. This means that the value of excluding competitors from the market must exceed the cost of the licence.

Following the auction, the auction price has no effect on whether or not hoarding takes place. On the other hand, the authorisation of secondary trading after the auction gives rise to reduced incentives for hoarding if the alternative of selling

the frequencies is more attractive than returning the licence to the licence authority.

Another reason is the fact that this licence will be service neutral and, as far as possible, technology neutral. This makes the imposition of rollout requirements inappropriate, as PTS does not know whether or not the licence holder will use the licence for fixed or mobile communications services. It is not possible to impose rollout requirements without making assumptions about the licence holder's future use of the frequency band.

Thus, PTS considers that rollout requirements will not directly counteract the risk of hoarding or that the licence will not be used. Instead, PTS considers that an auction is in itself sufficient to avoid the risk of hoarding. There may also be reason to wait with rollout until technological progress has advanced further and licence holders are prepared to invest in such rollout. For this reason, rollout requirements shall not be introduced for the licence in question.

PTS wishes to state the following in terms of the comments made concerning the possibility of competition being distorted in relation to other mobile technologies unless the licence is associated with rollout requirements:

There are no grounds for assuming that any future licences should be associated with the same rollout requirements as licences assigned previously. When the Electronic Communications Act entered into force in July 2003, PTS was given the opportunity to also apply auction procedures as an alternative to a beauty contest. An auction procedure means that the operator that values a frequency block the most may purchase it, as opposed to a beauty contest, where the operator submitting the best application receives the frequency block. In the case of a beauty contest, PTS can convert the promises of the applicant into binding licence conditions. However, the final result may be perceived as equivalent regardless of the assignment method. The operator receiving the frequency block is the party that values it the most and is willing to pay either with money or, for example, by means of commitments for investments (rollout), which can be converting into binding conditions.

1.6 Technical conditions

PTS's proposal for the relevant regulations

In order to limit the risk of interference between licence holders with adjacent frequencies, PTS will stipulate technical conditions to limit the maximum transmitter power within and outside the frequency band assigned by the licence. The technical conditions to be stipulated will be based on the UMTS TDD standard. However, PTS will not impose any required use of the UMTS TDD technology in the band as proposed in the consultation; see the section on technology- and service-neutral licences above. However, the licence holder must be able to coordinate its use with the existing operators in the adjacent 1905–1920 MHz frequency band in accordance with UMTS TDD technology. This is essential for coexistence between these licence holders.

When drawing up the licence conditions regarding use of the terminals connected to the networks of the licence holder, PTS has taken into consideration that

harmful interference should not arise. Licence conditions for transmissions by terminals (which are controlled by the licence holder) are based on the same levels prescribed in the UMTS TDD standard.