

March 2004

ETNO Reflection Document in response to RSPG's public consultation on secondary trading of rights to use radio spectrum

Executive Summary:

ETNO believes that the current spectrum management regime already allows the orderly introduction of necessary adaptations with regard to radio spectrum user needs. However, the introduction of spectrum trading could offer additional incentives, in particular concerning the flexible use of radio spectrum.

From ETNO's point of view, spectrum trading entails serious challenges from both technical and market structure point of view and should be introduced step by step. Special care has to be taken when treating possible harmful interference in particular in the case of change of use. Another important aspect in this regard is the introduction of possible difficulties concerning harmonisation of frequency bands.

Any frequency trading initiative should be thoroughly considered from a competition point of view, and should avoid introducing market distortions. In this regard, the transfer of rights to use radio spectrum has to be linked to the associated obligations.

ETNO is of the opinion that benefits and drawbacks have to be considered carefully and sufficient experience need to be gained before spectrum trading is mature for a broad harmonised introduction.

Introduction and general comments

ETNO represents the voice of 40 of Europe's largest, well established telecoms groups in 35 countries. ETNO is pleased to submit its initial comments to the consultation opened by the RSPG on secondary trading of rights to use radio spectrum. Aware of the importance of this matter, ETNO is eager to contribute to the general debate and ready to further discuss this issue with the RSPG should this be considered appropriate.

The present European regulatory framework for spectrum management is the result of a laborious and difficult process involving European and worldwide administrations within ITU, at the international level, and

CEPT in Europe. Up to now it has been highly satisfactory as it allowed to develop a range of high quality wireless applications thanks to the designation of harmonised frequency bands for specific services and dedicated to the use of specified systems or technologies. There is no doubt that the tremendous evolution of terrestrial and satellite radio communication services (fixed, mobile and broadcasting) have been made possible by this somewhat constraining but very efficient assignment procedure.

Furthermore, the worldwide success of the GSM system is widely due to the harmonised spectrum allocation and technology introduction in Europe. The GSM market has benefited from the advantages of the economies of scale, and finally became a global system, being used not only in Europe but around the world.

The regulatory framework related to secondary trading of rights to use radio spectrum should prevent an “over-fractioning” of frequency bands since this could increase the complexity of spectrum management and hamper future harmonisation, putting Europe's leadership at risk.

It will be important to take great care in the introduction of spectrum trading, to attain an appropriate balance which avoids jeopardising the current successful structure of worldwide harmonised allocations while opening new possibilities in terms of flexibility in the use of radio spectrum. Virtually no experience at all has been gained on secondary trading so far, and possible national introductions could only be considered as experiments, taking into account the diversity and specific situations within the different European countries.

As a consequence, it will be interesting to follow the results of national trials. Although being in favour of an harmonised EU-wide approach, ETNO believes it is too early to try to establish harmonised rules or guidelines at European level. An EU intervention at this stage should rather be to favour exchange of views and discussion between the different parties involved in the process. Further consultations such the one conducted by RSPG would give clearer indications on future trends and possible harmonisation.

ETNO is of the opinion that if secondary trading of rights to use radio spectrum is introduced in some frequency bands this should happen in an open and transparent manner with the aim to improve the efficiency of the use of radio spectrum. The introduction of secondary trading should take place by a stepwise approach. A change of use of the spectrum would need detailed investigations and should be considered at a later stage after some experience with the trading of rights to use radio spectrum has been gained.¹

ETNO responses to the RSPG questions

¹ BT believes that “change of use” should be an integral part of the spectrum trading environment from the outset.

General questions

- 1) *Do you consider secondary trading of rights to use radio spectrum to be beneficial to consumers, businesses and radio users? why/why not?*

ETNO considers that secondary trading of rights to use radio spectrum might be beneficial to telecommunication operators because it could facilitate the availability of spectrum resources in line with their individual needs on a time (short to long term) as well as on a geographical basis. Although trading could also allow users to get value from spectrum currently not used by selling, leasing or hiring out, care must be taken to guarantee the efficient use of spectrum and to avoid speculative spectrum hoarding.

Consequently, possible benefits of secondary trading of rights to use radio spectrum have to be considered in conjunction with the danger of deterioration of the overall conditions of use of the whole radio spectrum resulting from its incorrect implementation and regulation. Special attention should be granted to both, technical and speculative hoarding issues.

On one hand, ETNO has special concerns on secondary trading implying a change of use of the traded spectrum. ETNO believes that this raises the risk of a division of frequency bands into small sub-bands that would be used for different technologies and in different time scales and thus complicate international frequency co-ordination as well as the identification of bands large enough to allow the harmonised introduction of new systems in the future.

On the other hand, ETNO considers spectrum trading as a possibility to improve market oriented flexibility in spectrum management. The current lack of flexibility in handling rights to use radio spectrum is deterring the development of pan-European services. Consequently, in line with the cautions expressed in this document, flexible approaches for spectrum trading could be adopted in order to allow the development of such services, by avoiding an excessive fragmentation of markets that would lead to a significant reduction of economies of scale, crucial to a cost effective service provision.

With regard to consumers, ETNO does not foresee any direct benefit of secondary trading. Their benefits are seen to be indirect and will result from macro level gains, i.e. as a result of the overall evolution in wireless electronic communications services.

- 2) *What types of transfer of rights to use radio spectrum (full, leasing, partial etc.) do you consider can be beneficial to consumers, businesses and radio users? why/why not?*

Various types of transfer of rights to use radio spectrum should be allowed when implementing secondary trading as benefits could be gained from an increased availability of spectrum on various time scales and locations, involving varying amounts of frequencies. Such flexibility should help to overcome periods of spectrum congestion in particular areas.

Nevertheless, it is important to highlight that there are rights but also obligations associated to the use of radio spectrum. The transfer of rights to use radio spectrum has to be linked to the associated obligations. This is of particular importance to avoid market distortions resulting from a situation where different players competing in the same market have the same rights but different obligations.

3) What rights and associated obligations do you consider should be within the scope of secondary trading of rights to use radio spectrum?

Rights and obligations might differ according to the various licensing and trading scenarios. As stated above, it is essential that all the rights as well as obligations are maintained when spectrum is transferred, especially when rights to use radio spectrum have been granted through a beauty contest process. That means that obligations regarding coverage, frequency co-ordination, services offered, technology used, quality of service etc. must be maintained.

4) Would you want to see secondary trading of rights to use radio spectrum introduced in your country or in the countries of interest to you?

As already mentioned, ETNO believes that the introduction of secondary trading might be favoured in European countries provided that adequate measures are taken in order to avoid any degradation of the radio spectrum usage conditions and that an appropriate balance between rights and obligations is kept.

The current spectrum management regime already covers changes of spectrum assignments. The efficiency of this regime should not be underestimated, but additional flexibility can be expected from the implementation of secondary trading.

a) If yes – why, to what extent? when? frequency bands/services?

Limitations to spectrum trading are already established by European regulation, i.e. " Where radio frequency use has been harmonised through the application of Decision No 676/2002/EC (Radio Spectrum Decision) or other Community measures, any such transfer shall not result in change of use of that radio frequency". Furthermore, we believe that unlicensed

bands should not be part of the spectrum considered for trading. In general, it seems more relevant to trade rights to use radio spectrum in bands which are assigned to an exclusive user, since trading in shared bands might come up against heavier constraints. However, considerable benefits should be gained by enabling civil radio applications in less used governmental bands. Such access to governmental bands could also be facilitated by administrative pricing.

b) If no – why not, are there other tools that better suit your needs?

5) What information and electronic communication facilities should be made available to facilitate implementation of secondary trading of rights to use radio spectrum?

In order to facilitate the implementation of secondary trading of rights to use radio spectrum and to ease the monitoring of interference by the spectrum management authority, it is necessary to gather and publish updated information regarding the actual use of spectrum and the relevant rights and obligations of spectrum users. This information should be made available in conformity with the necessary business confidentiality.

To ensure the protection of existing assignments, the information should also include the required interference protection criteria. Moreover, no change of use should occur without the prior approval of the relevant regulatory authority which must take into consideration technical and market conditions.

Scope of trading – change of use, reconfiguration

6) Is the possibility to reconfigure rights important? If yes, what kinds of reconfiguration do you consider would benefit consumers, businesses and users of spectrum? (geography, frequency, time, other)

The main objective of secondary spectrum trading should be to ease the adequate availability of radio spectrum according to users' needs. In that respect, it would be necessary to allow the reconfiguration of rights to use radio spectrum in geographical, frequency and time dimensions. In particular, it is well known that depending on the population density, the use of a frequency band can significantly differ in different geographical areas. Moreover, depending on the period of a day or of a week, the data rates and necessary bandwidths can vary substantially. The regulatory framework should allow operators to overcome these difficulties. Particular consideration should be given to ensure an adequate coverage of

areas with low population density as wireless communications adequately fit that purpose.

The use of a particular technology is often attached to rights to use radio spectrum. Possibility to change this technology should be considered carefully, taking into account national and EU plans for the frequency bands concerned, and submitted to constraints in order to avoid interference. For example, the guard bands should be reviewed, and it should be determined whether they would be appropriate or sufficient, considering the characteristics of the new technology.

In the case of terrestrial mobile services in particular, the change of use/technology could lead to problems with regard to roaming and cross-border co-ordination, as well as interference between different networks and with services in adjacent bands.

Prior to any change of use, previous technical and market studies as well as industry consultation should be mandatory. Provided the outcome is positive, the possibility to reconfigure rights of use accordingly should be welcome.

In general, ETNO believes that a change of use of radio spectrum should be considered as a second step after experience has been gained with secondary trading of rights to use radio spectrum.²

We also believe that, under normal circumstances, any pre-existing licence conditions (such as “roll-out” obligations) should be maintained, and should continue to apply following the trade.

7) Is the possibility to use the spectrum in a flexible way important? If yes, what kinds of flexibility do you consider would benefit consumers, business and users of spectrum (service, technical constraints, other)

As already indicated, flexibility of radio spectrum availability in order to fulfil the specific service needs is an important issue in ETNO's point of view.

For example, the change of technology would allow operators to enhance their existing services (e.g. 2G/3G transition, Fixed Wireless Access using mobile technologies ...).

A later introduction of change of use or service would have to be considered very carefully as mentioned above. The development of new techniques like SDR (Software Defined Radio) could facilitate flexibility in the long term.

8) To what extent is the tenure an important issue in assessing secondary trading? (indefinite, rolling, fixed, annual, other)

² BT believes that “change of use” should be an integral part of the spectrum trading environment from the outset.

The tenure is an important issue in secondary trading as telecommunication is tightly related to the business and leisure activities of a particular country. The time dimension in the trading process should therefore be flexible to suit the time varying spectrum needs on a case by case basis by country and allocation taking the needs of harmonisation into account where appropriate.

Licences should have a fixed expiry date and be traded with that date unchanged. Renewal should be a separate process.

9) Should the same rules and regulations apply for the whole of the spectrum?

a) Is there a need for different rules and regulations for different frequency bands? geographical areas? services? users?

Provided that the limitations indicated in the answer to question 4a on the frequency bands and services available for secondary trading are taken into account, ETNO believes that the general regulation should be as homogeneous as possible. Rules should be clear in order to establish the confidence of potential traders.

b) If you see a need for different rules and regulations in question 9a above, please give examples

Competition aspects

10) Should there be specific competition rules in relation to implementing secondary trading of rights to use radio spectrum, or is general competition law enough?

ETNO believes that the implementation of secondary trading of rights to use radio spectrum should be ruled to the largest extent possible by general competition law. However, if the existing competition law cannot prevent speculative spectrum hoarding, additional regulation might be needed.

Moreover, secondary trading of rights to use radio spectrum should not lead to competition distortion. Currently most spectrum holders are subject to rights and obligations and some market entry and exit barriers are closely linked to spectrum assignments. These have to be taken into consideration on a case by case basis.

An additional concern for ETNO members in a multi-platform competitive environment is that different rights and obligations are attached to different frequency bands used to provide similar/supplementary services such as broadband access. For example, in a context of increasing convergence of electronic communication technologies, frequency fees should not introduce competition distortion between operators providing the same types of services. More generally, a prior harmonisation of frequency fees should facilitate the establishment of fair conditions of competition.

The role of the spectrum management authority

11) What do you see as the main responsibilities for a spectrum management authority in regards to secondary trading of rights to use radio spectrum?

ETNO believes that spectrum management authorities have a fundamental role to play in case secondary trading is implemented. This role concerns the monitoring and control of the use of the radio spectrum in order to ensure interference-free operation. Part of this monitoring should include the efficient use of traded spectrum in order to avoid hoarding. All transfers implying a change of use of the concerned frequency band should require a prior authorisation by spectrum management authorities.

We also believe that the spectrum management authority should publish in advance any applications for change of use, and give the opportunity for potentially affected parties to provide comments on technical, regulatory or competition grounds.

Thus, any change of use of the radio spectrum should require mandatory preliminary technical and, where appropriate, market studies, consultation with industry and formal authorisation by the spectrum management authorities. Spectrum management authorities should also be in charge of the maintenance of the data base gathering all the information on the various spectrum users.

12) To what extent is spectrum management authority approval of trades a benefit or an impediment to the development of a market for secondary trading of rights to use radio spectrum? Under what circumstances do you consider it would be necessary for a spectrum management authority to refuse a trade?

Provided that the change of use is treated as a separate issue independent of the trade, the trade as such should not be refused as risks of interference are not concerned.

The regulatory authority might only refuse a trade if either the approved national procedure (e.g. notification) has not been followed or the

agreement does not clearly state the transfer of both, rights and obligations.

Hoarding or anti-competitive behaviour should also be prevented by the national authority in charge of competition issues.

13) What specific measures could a spectrum management authority take to handle the issues if secondary trading is introduced? (ex ante approval procedures, ex post notification, competition aspects, limit change of use, interference aspects, other)

Any change of use should be approved ex-ante by the NRA taking into account ITU and CEPT recommendations as well as harmonisation introduced by European regulation. Harmonised allocation and introduction was the basis for the success of the GSM system in Europe and outside Europe, respectively.

In the other cases, in order to reduce transaction costs and the duration of the transaction process, the spectrum management authority should not intervene in the transactions and the negotiations related to the transactions.

14) To what extent should the national spectrum management authority actively facilitate secondary trading of rights to use radio spectrum?

The national spectrum management authority should actively facilitate the secondary trading of rights to use radio spectrum by fostering the implementation of an adequate regulatory framework and providing spectrum users with adequate information. Possible fees attached to spectrum trading should be limited to administrative costs.

Community aspects

15) Do you consider that adoption of individual regimes by EU member states will cause problems for consumers, businesses and radio users? If yes, in what ways and to what extent?

The implementation of spectrum trading is under the responsibility of Member States. A certain harmonisation of secondary trading conditions in the various EU countries might be beneficial for telecommunication operators who are involved in different countries in the longer term.

The current heterogeneous situation all over Europe makes it advisable to let the different countries make their own first experiences. It will be

interesting to follow the results of national trials, but although in favour of a harmonised approach in the EU, ETNO believes that it seems too early to try to establish harmonised rules or guidelines at a European level. The intervention at European level at this stage should rather be to favour exchange of views and discussion between the different parties involved in the process, as this consultation is doing, in order to give clear indications on the future trends to be followed at European level.

16) Do you consider that the EU should take measures to facilitate the implementation of secondary trading of rights to use radio spectrum? If so, in what areas and to what extent?

The EU should ensure a coordination of the way secondary trading of rights to use radio spectrum is envisaged and implemented in the different European countries in the longer term. In the short term, EU and CEPT should continue to discuss the issue and confront views and experiences in the various European countries.

17) To what extent is European harmonisation of frequencies an important issue in regards to secondary trading of rights to use radio spectrum?

Harmonisation of frequency bands is the result of a long and difficult process led successfully mainly by ITU and CEPT. This harmonisation is the basis on which most of the activities of telecommunication operators rely on, even though it would limit secondary trading of rights to use radio spectrum to transactions that do not lead to a change of use of the concerned frequency bands. Allowing the change of use of frequency bands could lead to a situation where further harmonisation will become more difficult as the use of a particular band is less homogeneous within Europe and mainly adapted to local needs. Further consideration of this issue is probably needed.

Related experiences and examples of secondary trading

18) What are your experiences with the current spectrum management regimes?

The current spectrum management regime allows limited flexibility in the use of radio spectrum. However, under this regulation, change of use of radio spectrum has been made possible to allow for example the implementation of GSM or UMTS in bands occupied by other services. Mechanisms have been implemented in some countries (e.g. refarming funds) in order to ease the release of frequency bands to be harmonised.

Limited access to governmental spectrum have been allowed for experimentations and some medium/long term spectrum leasing has been implemented (for example for CT2 implementation).

19) What are your experiences of secondary trading of rights to use radio spectrum?

ETNO has no comments to this question.

20) Please describe specific scenarios in which you consider that the introduction of secondary trading of rights to use radio spectrum would be beneficial

- Between two or more operators in the same service who decide to trade their underused radio spectrum to optimise the spectrum resources.
- Telecommunications operators can take advantage of unused parts of radio spectrum to implement Wireless Access Systems in sparsely populated areas.
- Unused spectrum assigned to defence or emergency services could be reallocated temporarily to telecommunication operators. Special care should be brought to the frequency restitution on request.
- In congested parts of the territory one user could get additional frequency resources from another user at peak traffic times of the day/week.
- Infrastructure or terminal suppliers may lease or rent frequency channels from telecommunications operators for trial or R&D purposes (for a time period agreed). This would be useful especially in those cases when all the spectrum in question has been allocated, e.g. UMTS in most countries.
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21) Any other comments