

**FRANCE TELECOM'S ANSWER TO THE PUBLIC
CONSULTATION ON SECONDARY TRADING OF RIGHTS TO
USE RADIO SPECTRUM**

France Telecom welcomes the opportunity to respond to the public consultation on secondary trading of rights to use radio spectrum.

The current European regulatory framework for frequency management results from a long and complex working process within the ITU and the CEPT involving most national administrations. The existing framework can be considered as satisfactory since it has allowed the development of a wide range of high quality wireless applications thanks to the designation of harmonised frequency bands for specific services, these bands being dedicated to the use of specified systems or technologies.

There is no doubt that the tremendous progress of satellite, broadcasting, fixed and mobile services has been made possible by this constraining but very efficient framework.

The introduction of spectrum trading, while opening some opportunities to increase the flexibility of use of the radio frequency spectrum, could jeopardize the existing fragile structure if sufficient care is not taken in its implementation. This could have significant economical consequences for telecommunication operators. Thus, in a first stage, secondary trading of rights to use radio spectrum should be limited to transactions which do not result in a change of use of the concerned frequency bands. Once the appropriate monitoring and control mechanisms have been set up, secondary trading of rights to use radio spectrum could be progressively extended to transactions implying a change of use of selected frequency bands. As a general rule, in accordance with the European regulatory framework, change of use should not be allowed in harmonised bands.

There is little or no experience so far with spectrum trading, and its introduction in Member States could only be considered as experimental, given the diversity and particular situation of each Member State.

Thus, we believe that while it will be interesting to follow the results of the first national experiences, it seems too early to establish rules or rigid guidelines at the European level. The intervention of European organisations should be limited to facilitate exchanges of views and discussions between the different parties involved in such a process.

General questions

In the following, secondary trading of rights to use radio spectrum is understood as a bilateral commercial transaction between two spectrum users and does not cover spectrum reallocation or refarming on request and under the control of the spectrum management authority.

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

The secondary trading of rights and obligations related to the use of radio spectrum should be beneficial to telecommunication operators in so far as it facilitates the availability of spectrum resources in line with the evolution of their needs in the course of time as well as regards geographical coverage.

However, it must be kept in mind that international harmonisation of frequency bands limits the scope of secondary trading, and that unlicensed bands should not be concerned by such trading. In addition, special care should be taken to maintain interference at acceptable levels for existing users.

France Telecom believes that limited regulatory intervention and bilateral negotiations between the interested parties would reduce the transaction costs of acquiring spectrum and make easier the development of new services. Reduced transaction costs and increased flexibility in business planning and in developing new services should result in benefits to consumers and national economies as well.

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?

We believe that several types of transfer of rights and obligations related to the use of radio spectrum should be available and that operators should be authorised to select the most appropriate one on a case by case basis. Thus, the transfer of part or all of a frequency band should be allowed for various durations, in part or all of the geographical area covered by the initial right to use radio spectrum. As a matter of fact, the appropriateness of a given type of transfer (full or partial, leasing or resale) depends on the specific needs of the operator in each situation. Each case has to be handled individually and the choice of a particular type of transfer will take into account the relevant objectives and circumstances.

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 should be established according, in particular, to the various types of transfers that will be implemented. The determination of these rights and obligations should

take into account the necessity to avoid unacceptable interference and speculative spectrum hoarding, the responsibilities of users, the capacity of spectrum management authorities to monitor and control the use of spectrum and to enforce the rules related to the usage of the spectrum.

In all cases, and in order to facilitate the development of services, we believe that the “buyer” of a right to use radio spectrum should have, when relevant, the same rights and obligations as those applying to the “seller”. In case of partial transfer, and obligations such as those related to coverage, the seller may have to ensure that the purchaser will respect the relevant obligations.

It has to be kept in mind that rights and obligations may vary according to frequency bands and the type of service to which they are allocated. Furthermore, the way in which rights and obligations are transferred depends upon the type of transfer of rights to use radio spectrum.

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, France Telecom believes that the introduction of secondary trading should be favoured in Member States provided that adequate measures are taken in order to maintain an efficient use of the spectrum and an acceptable level of interference for all its users.

Adequate arrangements in the present regulatory framework should allow increased flexibility in spectrum use while guaranteeing confidence in the way the spectrum is used for all frequency users.

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

In some cases, the introduction of secondary trading could allow more flexibility in the way the spectrum is used. The scope of trading, the bands concerned and the schedules of the process should be defined at the national level, whilst complying with international obligations such as those relating to the harmonisation of frequency bands.

However, we believe that all required spectrum-reallocations cannot be achieved through secondary trading of rights to use radio spectrum only. Thus, secondary trading should be coupled with spectrum refarming. The latter mechanism should involve all parties concerned (spectrum users, manufacturers, regulatory authorities) at the national level and the setting-up of a spectrum refarming fund, such as implemented in France, seems to be an efficient means for facilitating large scale operations.

Furthermore, we consider that increased flexibility in spectrum use would be better achieved if secondary trading of rights to use radio spectrum would apply to the public users of the spectrum as well, since the latter may have “spare capacity” in certain geographic areas or during certain periods of the day.

Finally, in the case of unlicensed bands, the implementation of secondary trading of rights to use radio spectrum, does not seem relevant.

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?

Information concerning the use of the whole range of frequencies utilised should be made available to all spectrum users provided that the confidentiality of “business sensitive” information is respected.

CEPT should continue to study and publish, as it currently done, feasibility and compatibility issues that are useful for our community.

The results of these studies should be duly taken into account during secondary trading of rights to use radio spectrum related operations.

When some equipment is associated with the frequencies being traded, the information concerning the use of the spectrum should be completed with :

- Information concerning any possible IPRs relating to such equipment, and
- Possible constraints due to the licences associated with the software relating either to the equipment itself, or to its deployment.

Scope of trading – change of use, reconfiguration

6) Is the possibility to reconfigure rights through the trading process important?

If yes, what kinds of reconfiguration do you consider would benefit consumers, businesses and users of spectrum? (geography, frequency, time, change of use, change of technology, other)?

France Telecom believes that future spectrum trading regimes should allow the reconfiguration of rights to use radio spectrum in their geographical, frequency and time dimensions. However, in the first phase following the introduction of secondary trading of rights to use radio spectrum change of use should be restricted. Change of use could be introduced in the longer run and under the control of the spectrum management authority, once we have some experience with secondary trading and operational conclusions can be drawn from national experiences.

Technical aspects, such as the interference problems at the borders of the concerned area, must be taken into account in all cases.

A change of technology may generate harmful interference. Thus, it is essential to conduct compatibility studies at the European level before introducing new systems in a given frequency band.

These studies have to take into account the technical specifications (e.g. radio parameters) of both the existing and the candidate system. Change of technology and change of the parameters of either system should not be allowed if unacceptable interference is generated. Moreover, in case a change of technology or parameters imposes any additional costs on existing users, these costs should be entirely borne by the spectrum user who implements such a change of technology or parameters.

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, a more flexible availability of the resource allowing to better fulfilment of the needs of operators is important for France Telecom.

In the context of technologies and service offerings rapid evolution, e.g. development of “convergent” services, a more flexible management of the resource would permit to exploit partially used bands for new services and thus to increase spectrum efficiency.

A change of use or service could also foster the development of new technologies and services but, as mentioned above, should be considered carefully. In particular, in order to guarantee a good quality of service and an efficient network management and operation it is important to define technical constraints allowing the avoidance of unacceptable interference. We believe that the development of new techniques such as SDR, could, in a longer term, increase the possibility to use the spectrum in a flexible way.

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

As already mentioned, the tenure is an important issue in secondary trading since the spectrum needs of a telecommunication operator are closely linked to the evolution of traffic and thus of consumer demand for services. The tenure should therefore be determined on a case by case basis in order to facilitate the availability of the resource in line with the evolution of the operators’ needs during the time. However, in order to secure infrastructure investments and facilitate the development of new services and technologies, we believe that in most cases a fixed, long term and renewable right would be the most appropriate.

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?

The general regulatory framework implemented at the national level should cover all types of users, and the whole spectrum. Thus, the same principles should govern secondary trading of rights to use radio spectrum independently of the usage, the user or the range of spectrum, provided that in harmonised bands, change of use is not allowed, and that unlicensed bands are not concerned by secondary trading of rights to use radio spectrum.

- b) If you see a need for different rules and regulations in question 8a above, please give examples

Since the technical conditions of spectrum use may vary according to frequency bands and the usage of these bands, rules and regulations have to take into account these differences. The functions of the spectrum management authority need to be clearly defined and the rules and regulations should take into consideration the responsibilities

of each category of frequency user, in particular when secondary trading of rights to use radio spectrum leads to a change of use of the concerned frequency band.

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?

Since general competition rules are well defined at the European, as well as at the national level, and the regulatory framework for electronic communications networks and services includes competition aspects too, there is no need to implement specific competition rules in relation to implementing secondary trading of rights to use radio spectrum. As a matter of fact, the existing rules seem sufficient for dealing with competition issues that could arise further to the implementation of secondary trading (provided that the required technical rules are enforced and speculative spectrum hoarding is avoided).

Moreover, in the context of increasing convergence of electronic communication technologies, spectrum 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?

France Telecom believes that spectrum management authorities have a fundamental role to play in a context where secondary trading of rights to use radio spectrum is implemented.

Their role consists, in particular, in monitoring and controlling the use of the frequency spectrum, in order to ensure that secondary trading of rights to use spectrum does not generate harmful interference and does not lead to speculative spectrum hoarding. Regulatory authorities should also be able to enforce the rights and obligations of spectrum users and have the ability to take binding decisions in spectrum related disputes.

The change of use of the spectrum should be allowed only once the required preliminary technical studies have been completed and the formal authorisation of the regulator has been granted.

The spectrum management authority should make available a data base gathering all the relevant information on all users and usages of the spectrum.

- 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?**

In the case of a change of use, a preliminary technical study should be mandatory. In case it shows that compatibility between the new service and existing services is not achievable, the **spectrum management authority should refuse the transfer of the right to use radio spectrum.**

The commercial/competition aspects of the trade should be dealt with by general competition law.

- 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)**

As a general rule and 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 these transactions. Ex ante regulation is required only in the case of a change of use of the traded frequency band. .

Thus in most cases, an ex post notification of the transaction is sufficient.

The eventual fees related to secondary trading of rights to use radio spectrum should cover only the administrative costs incurred.

- 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 could actively facilitate the secondary trading of rights to use radio spectrum by providing spectrum users with adequate updated information on the users and usages of the spectrum.

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 secondary trading of rights to use radio spectrum should remain under the responsibility of national spectrum management authorities. The conditions under which secondary trading should initially be implemented does not require harmonisation and the detail of implementation should instead be left to Member States. This is because of the differing levels of market development and competition in national markets as well as the fact that spectrum has been assigned on differing basis in the Member States.

At a latter stage, once we have some empirical experience with secondary trading of rights to use radio spectrum, the conditions of such trading could be harmonised.

Nonetheless, a homogeneous European approach is necessary to a certain extent in order to ensure to global operators the flexibility required to operate efficiently.

A certain harmonisation is also needed in order to prevent cross-border interference.

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?

In order to facilitate the implementation of secondary trading of rights to use radio spectrum the EU and CEPT should in particular encourage and facilitate exchanges of views between administrations and spectrum users.. Since most of the involved parties have no experience with secondary trading and given the heterogeneity of spectrum management regulations in Member States, as well as differing levels of market development and competition a common mandatory regulatory framework might not be desirable.

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. France Telecom believes that it is essential to maintain and intensify the benefits brought by regional and global harmonisation to consumers and spectrum users.

As already mentioned, a change of use of certain frequency bands as a result of secondary trading of rights to use radio spectrum could make future harmonisation more difficult and spoil the results of past harmonisation efforts.

Related experiences and examples of secondary trading

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

Transfer of rights to use radio spectrum can be understood and implemented in different ways. France Telecom has already some experience with such transfers under the current French regulatory regime. For example,

- ✓ GSM was implemented in defence bands,
- ✓ GSM 900 operators obtained GSM 1800 frequencies by exchanging some of their GSM 900 spectrum for part of the GSM 1800 frequencies of the GSM 1800 operator

- ✓ UMTS is being deployed in bands previously used by the Fixed Service,
- ✓ CT2 utilised on a temporary basis and in some geographical areas frequency bands assigned to the Ministry of defence.

The French spectrum refarming regime, where the national spectrum management authority is in charge of estimating the costs associated to spectrum refarming, establishing the schedules for and supervising the refarming operations and managing the spectrum refarming fund (financed through public subsidies, revenues from frequency fees and direct contributions from the commercial users of the spectrum), has been an efficient means for facilitating spectrum re-allocations.

Such an approach improves the flexibility of spectrum use by encouraging the users to release the unused or under-used parts of their spectrum.

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

Orange Sweden, subsidiary of France Telecom group, has sold its 3G licence to TELIA-SONERA. This is a case of secondary trading of rights to use frequencies.

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

Secondary trading of rights to use spectrum could be beneficial in the following cases:

- ✓ Two or several operators providing the same service decide to trade their underused spectrum to optimise the utilisation of the radio resource.
- ✓ A telecommunication operator can take advantage of the unused part of spectrum in some geographical areas to implement Wireless Access in sparsely populated areas.
- ✓ Spectrum unused by Defence or emergency services could be reallocated temporarily to telecommunication operators provided that the frequencies would be returned upon request.
- ✓ In congested parts of the territory, to get additional frequency resources from users who under-utilise their frequencies during the peak traffic hours of the day/week.
- ✓ The concept of "liberalisation of spectrum" could allow operators to change the technology utilised in their own frequency bands without changing the service provided (for example, 2G/3G transition, Fixed Wireless Access using mobile Technology) and enhance their service offering.
- ✓

21) Any other comments

Secondary trading of rights to use radio spectrum is a new issue and further visibility and studies are needed in order to implement it efficiently. In particular, it seems essential to analyse the different cases that could appear and to take into account the problems they could raise.