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GRETEL Introduction

COIT/AEIT, the Spanish Telecommunications Engineers Association, has the main role of defending, both the interests and the points of view, of its associates in different issues related to their profession, including regulation and public policies.

Within the COIT/AEIT, the Telecommunications Regulatory Group (GRETEL) was founded in June 1997, as an initiative of its governing boards. It was planned as a forum for analysing the telecommunications regulatory issues with the aim of assisting these boards in formulating positions on regulation of the sector and presenting the importance of these questions to the industry. Since its inception, GRETEL has participated in different issues, such as the definition phase of the 1998 Regulatory Framework describing the evolution of the sector structure in the mid term, and actually, it is contributing to the analysis of the transposition process of the new electronic communications regulatory framework across the European Union, with special attention to the Spanish case. This has allowed COIT/AEIT to maintain an active role in formulating positions within different national and international forums.

The main tasks in which GRETEL has been involved since its creation include different studies and commentaries on the General Telecommunications Law, commentaries on different regulatory projects, commentaries on successive European Commission Green papers, the publication of articles in the information and technology BIT journal¹ and a set of long term work publications studying the advances in public policies and regulations covering the convergent sectors of Telecommunications, Audiovisual and the Internet.

¹ Specialised IT journal edited by the Spanish Telecommunications Engineers Association.

In 1998, as a result of the effort of this group, a first book was published entitled 'Competencia y Regulación en los Mercados de las Telecomunicaciones, el Audiovisual e Internet' (Competition and Regulation in the Telecommunications, Audiovisual and Internet Markets). This was a first attempt to present an overall vision of the regulation needed, incorporating economic, business, technological, legislative and even political aspects. The paper was one of the first to analyse, from this convergent perspective, the new regulatory environment that had just taken shape under the Law 11/1998 of 24th of April on General Telecommunications.

In the spring of 1999, GRETEL decided to update the paper, seeking to incorporate the phenomenon of the convergence of the Internet with the telecommunications and audiovisual sectors. This work culminated in the publication of 'Convergencia, Competencia y Regulación en los Mercados de las Telecomunicaciones, el Audiovisual e Internet' (Convergence, Competition and Regulation in the Telecommunications, Audiovisual and Internet Markets) in 2000.

Unlike the previous works which were mainly centered on Spain, one of the last works carried out by the GRETEL shifted its attention towards the European Union and its Member States. The decision to dedicate the group's efforts to an analysis of the situation in Europe was taken in autumn 2000 after taking a view at the first results of the '99 Review², and the consequent EU decision to design a 'New regulatory Framework for Electronic Communications in the EU'. A process of this magnitude, which was still in its preliminar phase, represented an excellent opportunity to extend GRETEL's horizons. Since that date, GRETEL has carefully monitored and debated, internally, successive advances in this process. Therefore, this paper presented the systematised result of these analyses and reflections, although, keeping the 'convergent focus' of previous works. This book was launched in April 2002, in Seville, coinciding with the summit of Heads of State and Government of the European Union, Latin America and the Caribbean on Information Society, which was held during the Spanish Presidency of the European Union.

Finally, during the first quarter of 2004, GRETEL has been working in different projects, especially within the aim of analysing the transposition process of the new regulatory framework to the Member States. This work has culminated with the publications of two papers reviewing the whole process and describing its impact across the whole telecommunications industry. These papers are titled:

- 'El Nuevo Marco Europeo de las Comunicaciones Electrónicas y su Implantación en España. Análisis de la Nueva Regulación Europea de las Comunicaciones Electrónicas - Cuaderno 1' (The New European Electronic Communications Regulatory Framework and its Implementation in Spain. Analysis of the New European Regulation on Electronic Communications - Volume 1), and
- 'El Nuevo Marco Europeo de las Comunicaciones Electrónicas y su Implantación en España. La Transposición del Nuevo Marco Regulator Europeo de las Comunicaciones Electrónicas en España - Cuaderno 2' (The New European Electronic Communications Regulatory Framework and its Implementation in

² Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions. Towards a new framework for electronic communications infrastructure and associated services. The 1999 Communications Review. COM (1999) 539 final.

Spain. The Transposition Process of the New European Regulatory Framework for Electronic Communications in Spain - Volume 2).

This study is planned to be completed with a third publication related to the process of definition and analysis of the relevant markets under the new legal framework, once more, with special focus on Spanish market.

GRETEL Response to the public consultation on secondary trading of rights to use radio spectrum

As spectrum trading is now allowed under the *new european regulatory framework for electronic communications* and GRETEL is monitoring its process of transposition to national legislations, GRETEL would like to express its opinion from an integrated knowledge perspective, taking into account different issues that should be considered when such a complex theme is discussed. In this sense, GRETEL would like to thank the Radio Spectrum Policy Group and the European Commission for formulating a public consultation and, therefore, for giving the opportunity to consider the different points of view of interested sector agents in relation with this issue.

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?

GRETEL considers that secondary trading opens an opportunity for an optimum use of the radio spectrum allowing trade transactions between undertakings towards an efficiency of this scarce resource. This is an overall background understanding, but in order to reach this goal, it is necessary to set up clear conditions and procedures to be applied. In this sense, there is a potential risk to convert the genuine goal of spectrum efficiency into spectrum speculation, which surely has to be avoided.

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?

On one hand, spectrum trading is suitable taking into account that the original owner of rights maintains all of its responsibilities in front of the Administration. This means that the transfer of rights may be permitted only for the use of the spectrum under certain conditions. There are well established procedures or experiences to understand under which conditions this mechanism will effectively work, as the original owner has to set up procedures to ensure that the responsibility retained for the use of the buyer of the rights is controlled. However, it is to be seen whether this responsibility of the original owner of spectrum rights might constitute a relative barrier for efficient trading of the ownership.

On the other hand, the change of use means the possibility to modify the technical parameters, which would generally carry out a change in the original service or application provided over the use of such frequencies (from a broadcasting to a mobile service, for example). From the point of view of the telecommunications engineers association, surely worried about the establishment of quality control mechanism of such an important resource, GRETEL considers that changing the original use of radio spectrum would require further research in this issue (possible effects on coordination and harmonisation, due to the fact that in such case, we would be talking not only about secondary spectrum trading but about the next step towards the total liberalisation of radio frequencies). In the case that change of use is allowed while maintaining technical parameters (interferences, bandwidth usage, etc.), further discussion about the process of harmonisation would also be required.

The first situation reduces the scope of the transfer of spectrum rights to just a business transaction as the original use and the new user, making a rights trading, will bound their trade within strictly the same technical parameters and same use. GRETEL considers that this mechanism may not offer all possibilities for fully exploiting the spectrum usage, but it is a reasonable cautious approach for the initial steps of a completely new mechanism for the spectrum use: trading of rights. In a second stage, once the benefits and experience of the spectrum trading at ownership level, have been proved and assessed, further de-regulation might permit the introduction of trading under a change of use context. Although the Engineers Association understands that the introduction of change of use will bring anyhow significant practical difficulties (technical, operational and regulatory natures), there are obvious experiences which have demonstrated daily that change of use is certainly feasible and it should not represent an insurmountable problem for further spectrum trading practices under the change of use mechanism (example of this is the use of the Fixed

Satellite Service bands for Broadcasting Satellite Service applications, including different set of technical parameters).

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

It is obvious that the rights, constraints and obligations derived from the original assignment of spectrum rights to the original owner should not be changed when making a trading with a new owner. GRETEL also considers that the secondary trading should have always a temporary scope. In this sense, when a portion of radio spectrum is not needed by an original owner, this spectrum should be returned back to the public administration to manage it bearing in mind the general interest associated to a scarce resource. This should be the baseline practice.

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?

Secondary spectrum trading should bring a better and more efficient use of the spectrum. However, as it has been pointed out before, spectrum management authorities should take care about avoiding speculation of radio frequencies that might lead to an increase of price of such spectrum, being not beneficial to the final users and customers. Therefore, GRETEL considers that spectrum trading may be implemented although being aware of all the possible effects on the value chain of spectrum service providers, being watchful for an effective and positive impact in wireless telecommunications sector.

As spectrum trading leads to more efficient spectrum management, it is expected that inefficiently used spectrum becomes available for better and more intensive exploitation.

Another very crucial issue is the need for harmonisation in Europe of the bands subject to spectrum trading. Lack of harmonisation seems to be a tremendous obstacle for effective implementation of spectrum trading, except for some very specific applications, services and coverages, where national or specific region driven spectrum trading might prove feasible.

However, the key element for a successful implementation of spectrum trading is the “transparency” of the process including the transparency associated to the current use of the spectrum.

The trading would only be justified when the current owner of the spectrum rights considers that will continue having a need for the use of the spectrum in the future, but there is a temporary gap where the spectrum may be better used by other entities/other owners of the rights. In this sense, GRETEL’s opinion is that if the spectrum resource is not needed by a current owner and there is not expectation that such user will not need it in the short or medium term, the spectrum rights should be returned back to the Administration for further allocation to other legitimate users. This will contribute basically to avoiding the speculation of spectrum. If this provision is not taken into account, there is a potential risk that the spectrum applications would include capacity, not only for real use, but for additional capacity with the aim to trade with third parties, which might help to foster a saturation of the spectrum usage.

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

In theory, all frequency bands could be subject to spectrum trading. There should not be any *a-priori* constraint. Obviously, the current owner and the new owner have to reach agreements to trade the spectrum and the procedure should be open and transparent. During the procedures to allow the legal trading, there should be implemented public consultation periods, within which any affected user may raise concerns and claims against the proposed trading. A simple rule might be that when potential collision of rights between traders and third parties is noticed, the trading should not be allowed and a conventional licensing process should be then put in place to ensure fair and non discriminatory trading processes. In this sense, GRETEL also considers that radio spectrum management authorities should be able to solve possible conflicts between different parties involved in the trading. It is assumed that the regular competition controls should be applied and spectrum trading practices should not constitute any back door to behave against competition freedom.

Needless to say that special spectrum users like Defense Departments might not be generally interested to trade spectrum, although the process should not prohibit that during temporary basis, spectrum vacancies, originally allocated to Defense purposes, would be traded and efficiently used by other private or public entities. This would even contribute to relax the current spectrum demands from Defense Departments for longer terms needs, as the spectrum would be available for such purpose in the longer term, but being used efficiently for other applications by other users in a shorter time basis.

Although it has been pointed out that in general, any frequency band could be subject to secondary trading, GRETEL understands that due to its initial complexity in a first stage, it would be desirable to start the process with “pilot experiences” in order to be aware of possible problems related to spectrum trading. Each Member State should identify suitable *a-priori* bands where spectrum trading is expected to enhance the spectrum efficiency usage. Those bands where majority of EU Member States show interest in spectrum trading should be the first target for the preliminary experiences.

In general, the conditions imposed during the process of licensing of original spectrum rights must always be respected, moreover when the mechanism of “beauty contest” was used for giving those rights. Afterwards and when success has been proved, the experience could be extrapolated to other frequencies bands.

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

Spectrum trading should not be allowed for those frequency bands where spectrum scarcity is clearly noted, demand from several users is present and there would be a need to ensure public transparency of the process to allow equal opportunities to any interested user to access to the spectrum rights. Among these bands, it could be mentioned national coverage TV broadcasting networks.

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

Obviously, this is a very crucial component for the success of spectrum trading. In fact, it is the major challenge to ensure that the spectrum trading process can effectively solve a problem associated to the inefficiency of the spectrum usage. There is an actual need to encourage Member States to make available all information related to spectrum usage. The current practices by which Member States only publish National Table of Allocations is, by

far, completely insufficient to allow fair, non discriminatory and efficient spectrum assignment processes.

Information about the use of spectrum, including area and population coverage, technologies, services and applications provided, spectral efficiency associated to the technologies and resources used, as well as businesses served by the spectrum usage, etc., should be provided in order to promote the efficient use of the spectrum and encourage the introduction of new more efficient technologies, which should always be pursued.

Member States should also put into place efficient mechanisms to audit the spectrum usage in order to permanently monitor the real usage being made, the spectrum efficiency implemented, as well as the overall socio-economic environment for every single frequency band.

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)

GRETEL considers that change of use is considered implicitly as non practical at Community level, because divergences between Member States would bring the pan-european market completely useless and cumbersome. This means, for example, that an original Fixed Satellite Service frequency band can not be used for a Broadcasting Service application, either on temporary basis or during the whole period associated to the original license or rights ownership. Therefore, due to the fact that the new regulatory framework package does not contemplate the harmonisation of these procedures at European Union level, there is no possibility, at least in an initial stage, to make a success case of spectrum trading based on change of use.

If the first experiences of spectrum trading demonstrate to be successful (based on change of ownership with some conditions), the European Commission might consider the possibility to mandate the ECC to develop harmonised conditions for the implementation of spectrum trading practices including change of use.

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)

In general, the driving component to assess the flexibility for the use of spectrum should rely on the conditions established for the initial license. This process, usually closely related to competition rules, has to be protected and decisions should bear in mind the initial context in which spectrum was allocated and assigned. Nevertheless, the business and technological scenarios frequently change and these original conditions may not be longer applicable. Therefore, flexibility on the technical parameters should always be offered in order to promote the innovation and enhancement of the services and applications using radio spectrum. However, before allowing a flexibility in the use, there should be conducted studies (with transparency and audience to all players and interested bodies) to assess the need for such flexibility depending on the specific case (service, frequency band, etc.).

Also, it has to be noted that this theoretical possibility is difficult to implement, particularly, for Member States in the borders of the Community territories. In this sense, international frequency coordination challenges may inhibit the real and practical implementation of the change of use, if no coordination exists at international level. As this flexibility is proved as important (from a business point of view, for example), an efficient mechanism to implement it should be pursued at the widest international level (CEPT, ITU).

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

In order to facilitate the introduction of secondary spectrum trading as well as promoting feasible technological innovation and the return of investment, tenure of maximum of 20 years would be acceptable. Nevertheless, the licensing mechanisms should always set

milestones for the assessment of the efficient use of the spectrum in order to ensure that the maximum tenure period is not used as a mechanism to foster inefficiencies.

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

It is clear that each frequency band has its own characteristics of use and different levels of scarcity as well as socio-economic importance. Therefore, in principle, some specific bands must be taken special care such as the ones allocated for radio and TV broadcasting services, where specific anti-concentration rules might be applied in order to guarantee information and media pluralism, necessary in a democratic society. Also, many other considerations have to be made: coverage, international coordination, constraints from third countries coordination, social and economic demands, etc.

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

Yes, no flat regulation for all frequency bands is seen as practical or feasible. Studies have to be undertaken to assess all specific constraints when aiming to the introduction of spectrum trading in a particular frequency band. Users, players, technologies, social demand, etc, are certainly different for each frequency band and, therefore, different rules and conditions applied seem to be reasonable. However, basic principles should always be taken into account and guide the process; among them: transparency, respect to the competition rules, etc.

b) If you see a need for different rules and regulations in question 8a 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?

Considering that radio spectrum is a scarce resource, having the huge potentiality to block competitors to access the market, competition rules should be intensively monitoring for spectrum uses and trading, not just because of compliance of these general rules but also to ensure that the spectrum rights are not used as an unfair tool to speculate and block new entrants to the market.

As it has been appointed before, a practice that must be avoided is the possibility by which spectrum user applicants may be motivated to demand more spectrum than the necessary in order to prevent in a generous way their own spectrum needs for the longer term, as well as on the understanding that they might be able to recover initial investments by the way of trading the spectrum rights they got. This supposes, therefore, the major risk against the efficiency in the usage of the spectrum as well as against the spectrum trading mechanism itself. The trading option should not be seen as a motivation for increasing the demand of spectrum. Also, public information about spectrum applications, spectrum usage, results of spectrum monitoring and audit should be made public, as this resource is a scarce public domain belonging to the society.

It is also necessary to be considered that probably during the first stage of spectrum trading, the complexity of the process will be greater than in a second stage.

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?

The main duties of the authority should target the necessary transparency and the fair and non discriminatory elements of the trading process. It would be a good approach if spectrum trading brings the “authority” to decide on the spectrum needs to the users, who would then decide when and how much spectrum can be made available to other users. But this process has to ensure that no third parties are excluded and that private agreements are not made against the public or private legitimate interests.

The administration should be responsible for ensuring that information about spectrum trading process is public, a consultation process is put into place, etc. The authority should also ensure that there are no unconfessed interests in the trading, aiming to avoid a blockage of the available spectrum by the spectrum owners.

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?

The trading requires approval by the management authority as the process has to be controlled by the authority to ensure that rules of the process are respected. In this sense, GRETEL’s opinion is that a diligence by the management authority should not be considered as an impediment to the process. It has to be taken into account that the content of the trading (radio spectrum) is a public scarce resource, so therefore, there is no way for the trading to be made without public notice and public approval following a well known established process.

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)

GRETEL considers that the management authority should set up a well described process for spectrum traders to follow: basically public notification, specific study of each individual case, resolution of possible disputes between spectrum traders and between these and third parties, etc.

Previous answers have already indicated that GRETEL does not see a way out for spectrum trading based on change of use if it is not harmonised at widest international level.

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

GRETEL understands that the spectrum management authority should not be seen as the promoter of the trading process. In fact, the information made available to the public and the transparency of the current usage of the spectrum are expected to be the major natural promoters of the spectrum trading.

In this sense, the management authority should not pursue or promote specifically spectrum trading, but it should monitor the real use of the spectrum and the social and economical impacts from its use.

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?

For the possibility of changes of ownership, the individual regimes over EU Member States may be workable although cumbersome. However, for the case of change of use, it is understood that individual regimes will cause detrimental effects on the process, being it quite unfeasible or impractical.

In this sense, it is necessary to reach a practical balance between specific national circumstances under which spectrum rights have been given (for example, beauty contest vs. auctions in UMTS licensing) and an european harmonisation process pursuing compatible spectrum management frameworks across different countries.

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?

GRETEL considers that pioneer individual experiences will come to demonstrate the potential benefits of EU actions to promote harmonised spectrum trading process and conditions.

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

GRETEL considers it as certainly crucial. Moreover, for countries like Spain in the geographical frontiers of the Community, the harmonisation should also be pursued with third countries in order to allow the effective implementation of the spectrum trading practices.

In any case (change of use or change of owner), harmonised approaches adopted by the EU will surely contribute to generate regulatory certainty.

Related experiences and examples of secondary trading

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

The current regimes are very rigid in most of the EU countries. The radio telecommunications licenses are frequently associated to an individual set of technical parameters for the use of the spectrum, which are very difficult to modify or update accordingly to the technological feasible capabilities.

As far as GRETEL is concerned, the most important criticism to the current spectrum management regimes relies on the lack of reliable information. It can be generally stated that Administrations do not offered to the public sufficient information on spectrum usage in order to 1) promote the best practices of spectrum users, 2) allow further assessment on current spectrum efficiencies, 3) identify spectrum ranges where trading might bring value.

The relevant data about the current usage of spectrum is not available in most of the EU countries. It is certainly difficult to assess which would be the potential benefits that spectrum trading would bring as the real unused spectrum resources are not reliably notified to the public.

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

GRETEL is aware that pseudo-spectrum trading actions have been done by spectrum users, in many cases through complex processes of company ownerships and shareholders transactions. This would implicitly endorse spectrum trading as potential solution in some cases.

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

GRETEL has already stated that a pioneer experience in a specific frequency band could contribute to determine possible actual uncertainties. In a second stage, specific studies of each individual case would be desirable

21) Any other comment

From all the above comments, the basic conclusion is that the real impact of secondary spectrum trading will probably depend on the different conditions under which primary rights were given. In this sense, it is necessary to guarantee that no asymmetric conditions are generated between different agents in the same market.

The radio spectrum management authority must establish well known procedures to be followed in order to avoid distortion in the market, and quality of radio spectrum usage must always be accomplished.