

Public consultation on secondary trading of rights to use radio spectrum

Response provided by Qualcomm Inc.

Strictly confidential

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

Spectrum trading, whether through a transfer of ownership of the spectrum or to a change of use / change of technology/, is a mean to optimize frequency use and therefore to reduce spectrum scarcity, if appropriately implemented.

Yes, Qualcomm believes that secondary trading of rights of use spectrum will be beneficial to consumers, businesses & radio users as well as it provide a more competitive environment that would enable a rapid introduction of advanced wireless services in the EU and support meeting the goals set by the Lisbon Council.

In particular, QC believes that an appropriate and timely introduction of secondary trading of rights to use spectrum in the Union will boost the advent of broadband access services, at cheaper prices for consumers, since it will allow new broadband access solutions to be made available to users/citizens for commercial and non commercial purposes. In addition to commercial applications, “e-learning, e-health and e-government” services, under current deployment across Member States, as set by Europe2000 and Europe++ agenda, will also benefit from an improved spectrum allocation use, making these public services easier to be disseminated and cheaper to be accessed.

The take up of wireless broadband market (in such way as to include all wireless options) will also add a significant competitive pressure on incumbent fixed and alternative DSL /vDSL internet access providers, their service provision, ultimately , becoming challenged by the wider choice of access platforms available in the market.

Qualcomm's view is that any and all benefits resulting from the introduction of secondary trading of rights to use radio spectrum should directly or indirectly benefit to the consumers, any benefit to the businesses would only result from a potential benefit for the consumers and for the citizens.

Spectrum trading not only should allow the lease or transfer of any or part of an allocated spectrum to third parties but also allow spectrum usage flexibility (liberalization) that may be defined as the right of any spectrum user (i) to change the use of any existing portion of the spectrum subject to any harmonization at EU level but also (ii) to change the technology used within such spectrum for the provision of new services or existing services and whether through a change of use of the spectrum or for the same usage.

Spectrum trading, coupled with liberalization of spectrum usage, should be implemented simultaneously for all spectrum bands,, under non- discriminatory conditions, measured through ex-post control by the responsible national authority, subject to the diligent respect of the "protection from undue interference."

Another key element of the new regime shall be that any spectrum user should be allowed to trade on "voluntarily" basis its "*tradable right*" and that such right should be equally defined and recognized in every Member States. Secondary trading of rights to use spectrum shall be recognized as stakeholder exclusive "right" and not framed as an "obligation". Some form of incentives could also be identified, in such way as to guarantee a competitive level playing field. License-exempt spectrum shall be excluded from trading based on the principle that it doesn't require to be protected.

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?

The new framework should allow the market to decide the better economic mode chosen for a secondary trade to use radio spectrum, bearing in mind that some flexibility will be required in the early stages .

Transparency and detailed information in spectrum assignment blocks is a pre-requisite to allow secondary trading to take up.

This information shall be made available, in an electronic way, free of charge, to any interested party and kept updated, as to facilitate the identification of tradable rights and which technical and non technical obligations are attached and may/may not be transferred to the buyer/leaser.

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

Depending on the duration and type of the transfer (temporary or indefinite, partially or entire) all technical (spectrum & network related) obligations may/may not go to the new owner – Should roll out obligations be transferred entirely to the new owner, that should be coupled with permission to review the technology choice and opt for any new/other technology that will allow to meet coverage obligations, based on spectral efficiency/business model adequacy and non interference criteria to other existing services.

It is vital that “interference protection criteria/parameters” are strictly pre-defined and internationally approved (known) so to let any party to refer to, when entering into possible agreement.

All non-technical (services provision related) obligations can stay with primary owner, if the transfer is temporary, or be the subject of private agreement between parties, or could be transferred to the buyer if trading is for indefinite duration and there are public interest requirements to be fulfilled..

There could also be cases where some of the existing obligations may simply disappear, based upon ex post appraisal by the NRAs, which shall always be based upon fair, proportionate, transparent and objective criteria.

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?

a) If yes – why, to what extent? When ? Frequency bands /services?

Yes, QC recommends that secondary trading of rights to use spectrum is timely introduced into the EU, and that the liberalization of spectrum use shall be allowed independently from the trading to occur.

QC views secondary trading of rights to use radio spectrum as an additional and complementary regulatory tool (in addition to what today is under the competence of spectrum management authorities) which could, if timely introduced, (i) revitalize sector investments take up (ii) re-fresh competition in broadband wireless market and (iii) contribute to the take up of the Knowledge - Base Economy. More important, it could attract new sources of investment in R&D and favour improved market access conditions for smaller and -medium size players .

QC invites the RSPG to consider to adopt as a proposal under its Opinion, a work assignment to the European Commission, to prepare / draft “legal framework principles and practical guidance” to Member States as to what to consider when introducing secondary trading of rights to use radio spectrum at national level. That would serve the purpose to provide an homogeneous platform to work on for Member States and also provide legal certainty and predictability to market players. It is clear, however, that the issuance of such Guidelines shall not prevent any Member State, willing to speed up the introduction of secondary trading of rights to use radio spectrum, to move ahead based on its national sovereignty.

Should such Guidelines be drafted, QC envisages that they should at least provide appropriate, precise, legal definitions, of all terms having practical relevance to the introduction of secondary trading of right to use radio spectrum, its scope of applicability (licensed as opposed to un-licensed spectrum) and which are the community laws and regulations that’s serve as reference (competition and sector specific) .

Some of the words that in our views require a precise definition are the following:

- Right to transfer;
- Tradable right
- Type of transfers;
- Liberalization of spectrum use;
- Re-configuration;
- Technology neutrality
- Change of technology ;
- Change of standards
- Change of use;
- Categories of uses/ services;
- Harmonization of uses
- Harmonization of frequencies;
- Categories of technical and non technical obligations and if they are transferable or not;
- Interference parameters
- Undue interference

QC also invites the RSPG and the Commission to continue to work in collaborative manner and possibly to increase the level of transparency of their preliminary findings and, in particular, to allow to industry to participate in RSPG ST sub-working group well in advance to the Opinion adoption.

QC invites the RSPG to state in its Opinion that is vital that Member States consider, when introducing secondary trading and spectrum liberalization rules to do it upon fair, proportionate, justified and objective criteria and to urge Member States to avoid a “case by case”, “license by license” or “band by band” approach – as possible source of discrimination.

Whereas it is foreseeable to have a different and gradual timeline in some Member States, due to the particular market development status before allowing “change of use” over certain frequency bands – always preserving the international agreements integrity and scope (ITU allocation and WRC decisions) it is critical, at this stage, that a common understanding on the scope and of meaning of secondary trading of right to use radio spectrum is understood and agreed across European Union States, subject to the exclusive right of each National Administration to determine when allowing trading and when to allow liberalization with change of use

We also invite the RSPG and the Commission to make reference, in such Guidelines, to the applicability of existing competition rules and sector specific rules, like SMP, to help vigil secondary trading market implementation, while also to state that there is no anticipated need for further ex-ante specific regulation.

QC views are that the introduction of secondary trading of rights to use radio spectrum, if timely introduced, could also benefit other digital economy transitions, like DTV and GSM networks migration toward 3G technologies.

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

Where transfers are allowed or are possible under some circumstances, the ownerships, the rights and constraints in all bands should be fully known so that a potential recipient could apply.

As a non exhaustive list of examples : (i) primary frequencies assignment (ii) ownership and contacts details; (iii) technical network data (geographic coverage; technologies deployed; standards used, point of interconnections,) (iv) Licensed services / all categories ; (v) Interference criteria (in band and out of band) ; (vi) Approved international/global standards; (vii) set of technical obligations for tradable spectrum; (viii) list of non-technical obligations for tradable spectrum; (ix) Spectrum fees and payments due dates; (x) Duration of licenses ; (xi) contacts of the spectrum management authority as reference for any notification/request of intervention in case of interference dispute; (xii) authorised intermediaries contacts details, if any.

Such information should be available to all parties with an interest in spectrum engineering, trading or liberalization and should be accurately maintained with updates on electronically format, free of charge.

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)

Liberalization defined as “re-configuration” with change of technology / standards shall be permitted independently from the trading “event to occur and be ruled on the basis of protection from undue interference criteria as adopted at international level.

Liberalization defined as re-configuration with change of use shall be permitted, independently from the trading to occur, but subject to the respect of the combination of two principles (i) avoiding any undue interference to any third party, according to RR and (ii) evidence, after appropriate assessment, of the wide economic and societal interests..

QC believes that *the market* should drive/determine how spectrum should be used with some guard-line, which shall be derived from the dynamic combination between broad services allocation [deriving from ITU recommendations and WRC decisions] and proven market demand .

Taking into account the above QC would like to emphasize that in order to fully benefit from its potential, spectrum trading should therefore imply liberalization, where *liberalization should distinguish between* (i) change of technology within same use (not requiring additional permission) and (ii) “change of use” (requiring explicit permission)

Therefore the concept of “*liberalization*” of spectrum use is critical to be defined at this stage, since it requires to be used by and across European Member States in order to avoid any dispute arising on its interpretation and legal effects produced

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)

Liberalisation of spectrum use as defined above is from our perspective vital.

Waiving the single standard approach for specific bands in order to include permission to change technology should be implemented as a pre-requisite to secondary trading and independently from the trading regulation implementation itself.

Change in use, ultimately, is also important to allow successful take up of secondary trading of rights to use spectrum in a growing digital economy with convergence taking up. We are of the opinion, as said before, that wide public consultation assessing (i) the level of interest of the market and (ii) the availability of industry to commit to make

terminal and network within a certain time scale could prove to be a metric in addition to the wide economic and societal benefits to be taken into account . It is a fact that market forces can anticipate effectively the need for radio spectrum change in use.

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

As a general legal principle, secondary trading of right to use spectrum shall be recognized for the entire license duration (and its renewal) and to all spectrum users being granted an authorization.

Licenses acquired at market cost, e.g. at auction, should preferably have indefinite terms, or a license renewal presumption.

With respect to termination notice period we would like to emphasise that we understand that any such termination would only be in *a very exceptional situation*.

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

License-exempt spectrum shall be excluded from becoming a “tradable” right.

However, for licensed spectrum (including defence/military and therefore with a broader scope than what identified by the Spectrum Decision which only refers to “commercial spectrum”), independently from its current effective/efficient use, there should be a process to create/establish/set such right and make it exercisable on “voluntarily” basis.

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

The basic principles that underlie the rules and regulations should be the same for the whole of the spectrum. This means that it is beneficial to introduce spectrum trading simultaneously for the whole of spectrum.

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

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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?

National and community competition laws, merger regulation and sector specific like SMP rules should be sufficient, in early stage.

Regular vigilance and monitoring shall be applied by competition authorities in conjunction with NRAs/Spectrum management authority.

A set of guard-lines may be needed to secure intermediaries / brokers behaviors, in cases where they may have acquired / taken control of junks of spectrum and seek to retain it, unused, until it has reached a high value (*futures* type of market) and they can further speculate over its tradability

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?

To promote competition; encourage efficient investment, avoid discrimination; protect users/consumers interests; ensure efficient use of spectrum; vigil over the market; mediate in dispute resolution;

More specifically and taking into account of the “start up” phase of secondary trading of rights to use radio spectrum, the Spectrum Management Authority should also ensure, in the initial phase, the appropriate conversion from a “spectrum asset” into a “tradability right” for each spectrum owner on fair, transparent and objective criteria and to make known, to the public, the criteria on which basis, upon consultation, it has achieved it.

When the new secondary trading regime shall be in place, the Spectrum Management Authority shall (i) act as point of information (web based) on all data (technical and non technical) that are not business sensitive and that may be of interest to third party to look for tradable rights and transferable/non transferable obligations and (ii) be responsible to put in place an appropriate control mechanism to ensure that protection from interference is respected across spectrum users and (iii) an appropriate dispute resolution mechanism is available to interested parties;

On a case by case basis, the Spectrum Management Authority shall co-ordinate with the national and community antitrust authorities on market vigilance and fair behaviour.

Additionally, it could also register and monitor, pending prior approval, the list of intermediaries / brokers allowed to trade and, if any, determine the specific rules applicable to this special category .

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

Adopt the appropriate legal framework that will allow successful take up of secondary trading of right to use spectrum, based on fair, transparent and objective criteria .

Ensure that in such framework disputes are resolved rapidly, effectively and in an expert and consistent manner. And that some flexibility allows for adjustment over time (envisage a sort of “learning curve” period)

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?

No, individual regimes adopted by Member states will not cause problems in substance. As a matter of fact there are already various Member States which have adopted some form of secondary trading of rights to use spectrum, but since they limited the scope to very specific cases (i.e. 3G licenses), it proved not to be attractive/effective . (i.e. Italy introduced in 2003 the possibility for 3G spectrum license owners to re-sell their license, but only to 3G spectrum-licensees; Austria did the same in 2003. As a result of this provision in the Telecom Code, no trading transactions did take place since then).

What is vital, is that the agreement on some form of common understanding about the terms and conditions for secondary trading implementation across Member States is achieved at the political level and, in this sense, it could significantly help interested parties to make sound investment planning and to look at the Internal Market as a whole.

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?

Yes, QC would welcome the EU to launch a process aiming at building the widest possible achievable consensus on the economic-societal benefits deriving from the introduction in Europe of secondary trading of rights to use radio spectrum.

Information dissemination and conceptualization of the challenges are critical at this early stage of consensus building. QC welcomes any initiative that aims to achieve this goal and is willing to participate at any of the forthcoming stages.

As we stated above, we consider an appropriate way forward that the Union decides to dispose of some form of Guidelines aiming to establish a set of common legal definitions ... The explicit reference to competition rules, merger regulation and sector specific rules – like SMP applicability, would also be advisable, in order to avoid “un co-ordinated trends” in Member States looking at new specific “spectrum specific rules to be adopted.

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

The permission to secondary trade rights to use radio spectrum will also strengthen the effects of European harmonization and the creation of the European internal market, since where harmonization has proven to create conditions for spectrum efficient use [like for digital land mobile services] it is expectable that trading requiring “change in use” will not happen soon. However “change of technology” (i.e. migration to new digital technologies) can be envisaged in harmonized bands too and should be allowed, taking into account the progress and advancement / innovation in wireless communication and market demands for more and better digital enhanced services. ,[i.e. 2G networks, at some point, will migrate toward 3G/IMT2000 technologies, compatible with their existing and future 3G networks].

As opposed to the “digital land mobile” service allocation example, there are cases for which harmonization has taken place across Europe, but proved to be meaningless, because the users were not accepting to pay the price requested in exchange of certain type of services nor there was regulatory flexibility to allow new technologies to be deployed in those bands in such as to offer new services to test market acceptance¹. It is in these cases, in particular, that QC sees secondary trading with liberalization / re-configurability, as a quick market led solution to re-adjust/allocate, to a better usage, that portion of spectrum, based on new technologies availability.

The frequency bands harmonization in place (and any on going further harmonization) will continue to benefit (industry and consumers/end users) any new technology solution, subject to the principle of non interfering with existing services which becomes a

¹ We have various harmonized bands across Europe assigned to certain use/services that are already out of the market. That spectrum could prove to become attractive for new services at the condition to be re-configured for new use and new technology with other/more advanced technologies (i.e. ERMES, DECT,TFTS.....).

candidate to be deployed in existing or future harmonized bands, as harmonization helps to create a predictable market size environment (large economies of scale).

Harmonisation is vital to achieve economies of scale and to allow consumers to benefit from wide choice of products and services at affordable prices, subject to effective technology neutrality principle and technology innovation freedom.

Therefore, on going-harmonization shall be seen as a positive development and the work done at ITU and regional ECC level should be continued with even more collaborative spirit.

Another level of harmonization that could positively complement and boost spectrum secondary trading of rights to use radio spectrum take up is to foresee a certain harmonization of categories of uses/services, independently from the access technology (fixed, wireless, satellite), and to take into account the real evolution of the Digital Economy and of the variety of access platforms and communication solutions that become available in the marketplace. As a broad example, a “simplification” of the type and category of services that are covered within certain frequencies bands (and to make this review flexible over time) could significantly help the current regulatory review on the introduction of secondary spectrum of rights to use radio spectrum.

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Related experiences and examples of secondary trading

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

Due to national administrations traditional “command and control” strict spectrum planning in combination with “single mandatory standard” approach for designated frequency bands, we have the views that some artificial scarcity of spectrum is preventing broadband wireless market to take up in Europe.

Though we believe in the ability of the market to identify the optimal spectrum allocation / use, we are also aware that is very difficult, at this stage, to predict the impact of secondary trading introduction and liberalization. Therefore we suggest that a combination of market driven and administrative spectrum management continue to be maintained, at least in the initial stages.

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

No current experience in Europe

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

Broadband wireless and nomad/mobility enhanced wireless services as well as in the multimedia wireless content delivery environment.

21) Any other comments

QC would welcome increased transparency of the work done within the RSPG, the RSC and the CoCOM, since the three organisations, for different reasons and with different perspective, are called to engage in this debate.

QC would welcome RSPG and the Commission to promote a number of dedicated workshops in Member States to continue to build consensus around the various scenario

QC would welcome, prior to the adoption of the RSPG Opinion, a high level event, to take place in Brussels, to help guiding the debate and measuring the advancement of the agenda

Consultation modalities

Contact: responses to the above mentioned questions should be sent exclusively to info-rspg@cec.eu.int for the attention of the RSPG Secretariat. Only electronic contributions will be taken into consideration.

Date of launch of the public consultation: 10 February 2004

Deadline for submission of comments: 2 April 2004