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NOKIA RESPONSE TO THE EC CONSULTATION ON SPECTRUM TRADING

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Dear Sir,

Please find our response below

Yours sincerely

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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?

Sometimes. It will be the task of the regulator to only allow those transactions where benefits are anticipated.

Any quantitative discussion of the benefits of trading requires a common understanding of efficiency. Economists define it to mean allocation that is best for all parties i.e. no other allocation would be better for one without being worse for someone else. Economic supply and demand theory predicts that trading (in a competitive environment) is then efficient, but this is only with respect to the buyers and sellers. Externalities i.e. costs, benefits, and network effects applicable to third parties (suppliers, consumers, parties receiving phone calls, viewers and listeners of broadcast programmes etc) need separate consideration or 'market failure' will result.

However we support the move to allow trading where appropriate, with the caveats above. In particular trading would ease sharing of infrastructure.

More generally the main benefit of trading would be the potential increase in spectrum supply. Whether consumer prices then decrease will depend largely on whether competition is strengthened. In the short term competition may be helped if new spectrum becomes available to new entrants but if consolidation takes place later, price rises may occur. Since any new entrant is likely to reduce profits for all operators (in the relevant market) the new spectrum will have a value to existing operators who may well choose to purchase. The net effect would be extra cost for operators but positive for the treasury/taxpayer, if the new spectrum was previously owned by government or public services. The effect on consumers would be negative to the extent that the additional spectrum costs are passed on, but this could be offset by lower prices in cases where spectrum for the service is no longer scarce.

Services which lose spectrum in the trading process are also likely to see price rises if shortages occur.

Similarly greater choice cannot be taken for granted; a likely outcome of deregulation is that choice is reduced to the most profitable services.

Nor does competition follow as a natural consequence of the market. On the contrary, competition is a *pre-requisite* for an efficient market.

Radio manufacturers, who make a significant contribution to the GDP, will have no direct influence on trading. Whether they benefit will depend on their area of business. Overall, manufacturing is likely to benefit only if there is an increase in competition in services, and consequent increase in spectrum use. We contend that this is more dependent on the regulator than the introduction of trading.

The development and commercial realisation of a new radio technology may take 10 years or more. This R&D has in part been conducted in national and Europe wide research fora (often with strong university, operator and manufacturer co-operation). Industry needs confidence that harmonised spectrum will be available to support this.

The regulator has a duty to secure ‘optimal use of the spectrum’ and a ‘wide range of communications services’. It needs to consider *what* is optimum and in particular when it would consider that ‘market failure’ exists. We believe that at a minimum it should consider the *costs and benefits* of proposed trades, in a proportionate manner, and that they should only go ahead if those benefits outweigh the costs. Externalities should be counted fully in this cost/benefit assessment. Consideration should include third party operators, consumer surplus, users of existing services, and the effect on the contribution to GDP from manufacturing. It should consider the effect that change of use may have on economies of scale and roaming. Decisions should be consistent with Article 9.2 of the Framework Directive which *requires* member states to work towards harmonised use across Europe. The development, or jeopardy, of competition in the equipment market should also be considered. Manufacturers take a long term view on the investment in research and will be less willing if confidence in future band usage is harmed.

A Europe wide mechanism should be established to identify spectrum for change of use so that economies of scale, roaming and harmonisation is maintained. Europe wide agreement on the emission levels and equipment requirements for any change of use should also be established.

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?

No specific comment

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

In general the obligations should remain in place, including annual fees which will still be required as an incentive to use the spectrum. Otherwise there is a danger that spectrum could be purchased purely with a view to sale later, on technology development. As trading picks up in the future, with spectrum becoming more of a 'commodity' annual fees will become even more important to avoid too much volatility and ensure efficient use. In setting annual fees the degree of competition, the social benefits and consumer surplus of the use to which the spectrum is being used needs to be taken in to account.

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?

Subject to competition considerations and where public services are involved public consultation we do not see a problem with trading provided the use class remains the same.

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?

Previous sale price should be available to assist prospective buyers

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)

No comment

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 constrains, other)

A free market will tend to place the spectrum in the hands of those who will create the highest producer surplus from the spectrum whereas the objective should be to maximise the value of the services. This would also include consumer surplus (which for many services is several times greater than the producer surplus.) For example there could be two bidders. A offers services in an uncompetitive market whereas B offers services in a competitive (low margin) market. A 'flexible' spectrum market will place the spectrum with A, whereas B may have the higher value in services offered (albeit at lower profit) and therefore higher economic value to the economy.

Furthermore equipment manufacturers timescales and investments need consideration. Investment in design will not occur if there is little certainty that the described use of a band will remain for a reasonable period.

Further issues that the regulator should consider before allowing flexibility include:

- Benefits to end-users of roaming between networks in the same or in different regions. Roaming to different regions increases consumer surplus and operator surplus. The ability to change between competing networks in the same region increases competition and therefore, through lower prices, consumer surplus.

- Because of the greater variety of standards and frequency bands, liberalisation leads to less competition between terminal manufacturers. Higher terminal costs will reduce total usage, further reducing economic value. The regulator will need to assess when this is outweighed by service choice, and when it is providing no end-user benefit.

- Other policy issues. For example a policy to encourage 'broadband' might require a particular band to be used for fixed wireless access even though the spectrum may be worth more to a corporate user for 'point to point' links.

- Equity considerations

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

Indefinite licences encourage the most volatility in prices and also do not recover the full value of the spectrum in the distant future. A licensee will pay the discounted value. The receipt will depreciate and therefore will be less valuable to consumers of those future years.

Licences with a fixed expiry date should be traded with that date unchanged.

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?

As we have answered above rules will differ for some services. For example bands used for public services will required greater consultation. Bands used for services with 'externality' benefits such as emergency services or broadcasting may not be appropriate for trading.

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

See above

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?

The UK has proposed ex-ante scrutiny for lessening of competition. We support this approach.

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 take account of third party costs and benefits the SMA will need to carry out a cost/benefit analysis of the proposed trade, especially if there is a change of use. This would need to be proportionate to the type and scale of the trade.

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?

As spectrum is a finite public resource ex-ante approval is needed in order for the public interest to be upheld. Examples of trades which might in some cases require refusal include those which may result in the loss of service to one sector of the public (even if replaced by a more profitable service to another sector.)

Another example might be change of technology without enough notice, if terminal manufacturers have made significant investments to provide handsets direct to consumers.

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)

See above

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

Where there are good reasons for use restrictions, they should continue. Otherwise procedures should not be more complex than necessary.

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?

Yes. If trading was too liberal in certain states there is a clear risk of fragmenting the bands and losing the benefits of harmonised spectrum and use (notwithstanding there are limits to the flexibility that can be applied to spectrum that has been harmonised in a formal way.)

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?

See 14

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

See15

Related experiences and examples of secondary trading

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

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Clearly consumers and industry have benefitted from harmonised cellular spectrum. Equally we feel there is a case for some bands to be much more losely regulated, subject to strict power limits (e.g. 2.4 GHz) to enable rapid innovation of radio technologies.

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

None

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

In particular trading would ease sharing of infrastructure.

21) Any other comments

Trading will not remove the need for all service obligations. Economics concerns the efficient use of resources and if part of public policy is the use of the radio spectrum, use it or lose it, or a rebate system of some kind, could be useful tools. Often annual fees will be a sufficient incentive but the interrelationships of the facets to trading will be complex, for example in some instances fees may be deliberately set low (eg to encourage a certain service for public policy reasons.)

For reasons given to earlier questions, in the absence of perfect competition in a homogenous market the market is insufficient to ensure efficient use of spectrum. It is also necessary to do what can be done to avoid a repeat of the volatility of prices shown in the 3G auction in some member states.