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RSPG OPINION ON A RADIO SPECTRUM POLICY PROGRAMME (RSPP)

GENERAL COMMENTS

In summer 2019, 1&1 Drillisch, a subsidiary of United Internet, purchased by auction spectrum in order to build its own 5G mobile network as a new entrant in Germany. As a remedy taker in conjunction with the merger of E-Plus with Telefónica Deutschland[1], 1&1 Drillisch has started to close the gap of the acquisition, also by obtaining additional spectrum at the end of 2019.

The acquisition of 5G spectrum by 1&1 Drillisch has created in Germany the conditions for a fourth mobile network – as it is also the case in the other G7 states and major EU countries. The market entry of 1&1 Drillisch will provide new impulses to stimulate competition and the expansion of 5G future technology. As the roll-out of the network will take several years, similar to the established operators in the market, a pro-competitive spectrum policy is essential.

United Internet welcomes the opportunity to comment on the draft RSPG opinion on a radio spectrum policy programme (RSPG 21-014[2]), the draft RSGP opinion on spectrum sharing (RSPG 21-006[3])

1 https://ec.europa.eu/commission/presscorner/detail/en/IP_14_771

2 https://rspg-spectrum.eu/wp-content/uploads/2021/02/RSPG21-014final_Draft_RSPG_Opinion_on_RSPP.pdf

3 https://rspg-spectrum.eu/wp-content/uploads/2021/02/RSPG21-006final_Draft_RSPG_Opinion_on_Spectrum_Sharing.pdf

and the draft RSPG opinion on additional spectrum needs and guidance regarding the fast roll-out of future wireless broadband networks (RSPG 21-008[4]).

The future RSPP should be an ambitious programme of essential points to ensure a successful competitive European 5G ecosystem, providing strong guidance for regulators and EU-legislators. Therefore, the RSPP must be given a much more binding form, clearly intending to serve EU Member States and national regulatory authorities as a standard that contributes significantly to the promotion of effective competition in the area of spectrum policy. To achieve this, the RSPP must be shifted away from its previous programmatic character. The RSPP must make clear that Member States not only have the possibility to take pro-competitive measures but are explicitly obliged to do so. Uncertainty favors the dominant network operators; a regulatory vacuum (e.g., when competent authorities do not act when they should) is not acceptable.

This is particularly relevant for future award conditions, as the framework for spectrum-use applies during a long period, so that it seems also useful to support the EECC requirements in a supplementary manner. Therefore, much more emphasis in terms of a stronger advisory role of the RSPG is necessary, which steer the work of national regulatory authorities, of the Commission and of the EU Member States. The RSPG should act as a lever in enabling alternative operators to enter the market. Support should also be given by the RSPG to closely monitor the developments within the EU Member States.

As mobile markets have witnessed an increased occurrence of oligopolistic market structures and the course of 5G deployment is now being set, we consider a fast implementation of the future RSPP to be of utmost importance. Such increased occurrence is not only based on limited spectrum, but also on a strong consolidation of the market through mergers and acquisitions and the lack of effective wholesale access. The development of oligopolistic market structures contributes to a non-competitive market and results in harm and welfare loss for users.

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[4] https://rspg-spectrum.eu/wp-content/uploads/2021/02/RSPG21-008final_Draft_RSPG_Opinion_on_Additional_Spectrum_Needs.pdf

Privileged access rights for new market entrants and reliable procedures are essential. Against this background the European Commission prohibited mergers[1] or imposed conditions[2]. The importance and need of political action is clearly demonstrated regarding the takeover of E-Plus by Telefónica Germany in 2014, where the merger was linked to the fulfilment of commitments in order to remedy the competitive deficit by reducing the number of network operators in Germany from 4 to 3. However, although the remedies were already imposed in 2014, the implementation of the MNO remedy was heavily delayed. Telefónica and Drillisch started negotiations on the implementation of the MNO remedy at the end of 2018. Already very early in the negotiations Telefónica made clear that it was not willing to agree even on basic terms of a national roaming agreement without further involvement of the European Commission. This lead to further substantial delays. It was not before February 2021, until Telefónica presented an offer that complies with the requirements of the MNO remedy and which 1&1 Drillisch could accept, having in mind that the final negotiation of the roaming agreement requires more time.

The negotiations between 1&1 Drillisch and Telefónica clearly have shown that without pressure, incumbent operators have no interest in offering national roaming at competitive conditions and have the strategic possibility to hinder competition. This conflict can only be solved by regulation.

Recommendations for the future RSPP:

- **Recommendation 1: Definition of a much more binding character of the RSPP:** Maximising the full positive impact of the RSPP is necessary to serve EU Member States and national regulatory authorities as a binding standard that contributes significantly to the promotion of effective competition in spectrum policy.
- **Recommendation 2: Specify principles of spectrum sharing to address scarcity and growing demand for connectivity**: Clear spectrum sharing criteria should be defined. An increased coordination and sharing of best practices between the NRAs could also prevent market fragmentation.

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[1] https://ec.europa.eu/commission/presscorner/detail/en/IP_16_1704
[2] https://ec.europa.eu/commission/presscorner/detail/en/IP_18_5383

- **Recommendation 3: Promote and facilitate national roaming**: A legal obligation to offer mandatory national roaming to new market entrants will contribute to the principle of equal opportunities. The requirement to impose national roaming must also be explicitly re-included in the new RSPP in addition to Article 52 of the EECC.
- **Recommendation 4**: **Provide wider coverage through facilitated access to low frequency bands**: The allocation and access to low bands is an important prerequisite for a cost-efficient network roll-out in rural areas and for competitive coverage inside buildings (deep indoor). In addition to a preferential allocation of lower frequency bands to new market players, the allocation of lower frequency bands to the established network operators must at least be subject to binding national roaming obligations.
- **Recommendation 5: Create competitive auction criteria taking into account the needs of a new entrant**: The award design must ensure competition by defining criteria (at least binding national roaming) taking particular account to new entrants. It is necessary to prevent an excessive market concentration of established mobile network operators and that infrastructure expansion is paralysed by high bidding prices. The RSPP should define clear criteria on assigning licenced spectrum on a transparent, pro-competitive and non-discriminatory basis, also regarding a more harmonized approach within the EU and specifically taking into account the needs of a new MNO entrant.

Table of contents

DRAFT RSPG OPINION ON A RADIO SPECTRUM POLICY PROGRAMME (RSPG21-014)

COMMENTS ON STRATEGIC SPECTRUM ISSUES

SPECTRUM SHARING

It is welcomed that the RSPG encourages the European Commission and Member States to actively promote innovative spectrum sharing solutions to ensure its efficient use and to boost spectrum access opportunities. However, the RSPP could take this much further, i.e., the RSPP should seriously encourage new market entrants in 5G services leading to a more competitive EU market and EU leadership. The shared use of spectrum should therefore be considered more seriously to spur essential competition and innovation. A specific and strong approach of spectrum sharing for 5G networks is vital.

Already today, NRAs have experience with spectrum sharing[5]. In this context, BEREC notes that all types of sharing (infrastructure and spectrum sharing) allow operators to significantly reduce costs. While the cost savings depend on the type of sharing, some NRAs expect significant cost savings through active sharing (incl. spectrum) of between 33%-45% (CAPEX) respectively 30%-33% (OPEX)[6]. As costs to cover underserved areas (often rural areas) for a single operator are high, cost savings are a real advantage. The same is true to deal with problems such as overpriced spectrum auctions; here spectrum sharing could help to reduce the costs as well.

LOWER FREQUENCY BANDS TO PROVIDE WIDER COVERAGE

Access to lower frequency bands is a basic prerequisite for an efficient 5G network roll-out and competitive mobile coverage for customers inside buildings (so-called deep indoor coverage). Without lower frequency bands, for a new MNO entrant it is not possible to build a mobile network that can compete with the mobile networks of the established MNOs. In Germany, all lower frequency bands (700,800,900, in total 2x 95 MHz) are allocated to the three incumbents (Telekom, Vodafone and Telefónica). Compared to other European countries, those three companies have an above-average level

5 BEREC Report on infrastructure sharing, BoR (18) 116, p. 10f.

of access to lower frequencies bands. Already today, some European countries (e.g., the United Kingdom, France and Italy) have imposed regulated measures in order to ensure that a market entrant has access to an adequate amount of spectrum after entering the market.

The RSPP must set common regulatory principles and policy objectives to enhance access to those lower frequency bands in all Member States. An additional key aspect is the definition of specific requirements under which national regulators must provide the possibility for a reservation of certain spectrum blocks for new market entrants, as foreseen in the EECC. The new RSPP should call on the European Commission to adopt measures to ensure that pro-competitive measures will be taken by Member States to correct existing competitive imbalances.

ALLOCATION OF SPECTRUM

Spectrum should be assigned on a transparent, pro-competitive and non-discriminatory basis. Rules for allocation and auctions must guarantee equal opportunities for spectrum use and must neither consolidate existing oligopolies nor create new oligopolies. When spectrum is not used or access obligations are not available, the NRA may withdraw existing spectrum and allocate it to new entrants. A contribution to this could also be made by successive aligning the runtime of spectrum. This would enable an overall approach and would avoid fragmentation of the market.

As spectrum is a scarce commodity and demand exceeds the availability of spectrum, the RSPP should prepare a catalogue of pro-competitive solutions and to provide harmonised guidance to Member States. Here, an important contribution can be made by combining mandatory spectrum sharing to the spectrum allocation – especially regarding lower frequency bands to cover rural areas. Furthermore, the individual initial situation and the business model of each MNO must be considered with regard to spectrum requirements (e.g., differentiation about most extensive coverage).

The RSPP should provide certainty by making clear recommendations on how the allocation of spectrum to new market entrants could be structured. As new market entrants have no spectrum or significantly less spectrum than the established MNOs due to their recent market entry, this should be combined by pro-competitive measures such as national roaming requirements, lower coverage requirements (compared to those imposed on early market entrants) and infrastructure sharing. Parts of the low frequency spectrum should be reserved for new entrants. An increased coordination and sharing of best practices between the NRAs could prevent market fragmentation.

NATIONAL ROAMING

Many countries are facing the challenge of ensuring sufficient competition in their mobile communications markets. This is why several European countries (e.g., Belgium, Czech Republic, France and Romania) imposed obligations on license holders to provide national roaming services for new entrants or to share spectrum with operators that have relatively less spectrum holdings.[7] As it takes many years to roll-out a mobile network, new entrants must take one step at a time. National roaming is key to ensure a competitive market environment. While current network operators can fulfil nationwide coverage during the roll-out of a 5G network by relying on their existing networks, new network operators cannot.

In this respect there is a great need for a binding implementation of common rules. Here, the RSPP should create a pro-competitive approach as a standard. Especially for new market entrants, national roaming access to the mobile networks of existing operators is a crucial basis for the network roll-out. To provide nationwide coverage, end customers must be able to use the network of another provider as long as their own provider does not yet offer network coverage. But also new services will require a high level of coverage. In order to meet QoS requirements or coverage obligations, national roaming would allow an efficient use of spectrum.

The RSPP should further explore the provisions of Article 52 of the EECC with regard to the use of national roaming. As the ongoing implementation of the EECC seems to be insufficient, the future RSPP should re-include the obligations of Article 5 of the current RSPP also in the future RSPP. Also here, clear rules are necessary for NRAs to include clear provisions in their toolbox. The RSPP must make clear that Member States not only have the possibility to take pro-competitive measures but are explicitly obliged to do so.

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7 BEREC Report on infrastructure sharing (BoR (18) 116), p. 8: https://berec.europa.eu/eng/document_register/subject_matter/berec/download/0/8164-berec-report-on-infrastructure-sharing_0.pdf

BROADCASTING AND PMSE

There should be a critical review of the RSPG position that the future of broadcasting in regard of the UHF Band 470-694 MHz shall not be subject to a new RSPP. As also TV is moving to mobile services and traffic is increasing, spectrum reallocation is necessary to support operators. Also the European Commission recently underlined the pressure on the infrastructure in the context of increased connectivity demands by streaming services[8].In particular, we believe that the RSPP should reflect a longer-term and forward-looking approach. Therefore, a generalized exclusion of the UHF Band 470-694 MHz should be avoided. For example, in ITU Region 2[9], the 600 MHz band is used for mobile communication. With additional spectrum at 600 MHz, the scarcity of the currently available low band spectrum would be improved. The RSPP must therefore address the need at an early stage to ensure that additional spectrum becomes available as soon as possible in order to improve planning certainty.

SPECTRUM INVENTORY

Spectrum inventory in the form of a database is a useful instrument that should be kept. In this context we would like to suggest that the RSPG should identify potential bands for wireless broadband services to add into a spectrum inventory database. This would allow vendors an easy overview of European spectrum and usage and could be beneficial to shorten lead time of new products due better ability of planning.

GREEN NEW DEAL / CLIMATE CHANGE

The Green New Deal offers a chance for sustainable and forward-looking developments. There is general agreement that the telecoms sector will play a crucial role in this context and has a strong potential to leverage sustainability. Here Europe can play a leading role by setting standards.

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8 https://ec.europa.eu/commission/presscorner/detail/de/MEX_20_498

9 https://www.itu.int/en/ITU-R/information/Pages/emergency-bands.aspx

PANDEMIC RESPONSE

It is unquestionable that the role of mobile operators during pandemic times is of utmost importance. Nevertheless, a situation must be avoided that even only temporary rights of spectrum are granted to the large spectrum holders to raise their speed and capacity under the guise of pandemic help. This would also endanger business plan considerations of competitors, delay investments and lead to inefficient spectrum allocations at the end.

DRAFT RSPG OPINION ON SPECTRUM SHARING (RSPG 21-006) AND DRAFT RSPG OPINION ON ADDITIONAL SPECTRUM NEEDS AND GUIDANCE ON THE FAST ROLLOUT OF FUTURE WIRELESS BROADBAND NETWORKS (RSPG 21-008)

United Internet would like to take the opportunity to also comment on the draft RSPG opinion on spectrum sharing (RSPG 21-006[10]) and on additional spectrum needs (RSPG 21-008[11]). As there are overlapping comments to the RSPP and to avoid repetitions, we will primarily outline additional key aspects within the following sections.

COMMENTS TO THE DRAFT RSPG OPINION ON SPECTRUM SHARING (RSPG 21-006)

OPTIONS FOR PROMOTING SHARING CONDITIONS:

In principle, the allocation of new rights must enable spectrum sharing between incumbents and new users (para. 5). However, in this context conditions listed below shall apply. New rights of use for new spectrum must ensure to safeguard and promote competition and should therefore be linked to the following preconditions:

- Enabling new market entrants to access to all types of band types to ensure competition. Even incumbent operators have acknowledged that new entrants need sufficient low band frequencies.[12]
- Enabling new market entrants access to passive infrastructure sharing, where not possible due to proofed static reasons at least access to active infrastructure sharing.
- Incentive/privileged regime for operators willing to use cutting edge technologies.
- Restrictive assignment of bands for legacy mode operation.

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10 https://rspg-spectrum.eu/wp-content/uploads/2021/02/RSPG21-006final_Draft_RSPG_Opinion_on_Spectrum_Sharing.pdf

11 https://rspg-spectrum.eu/wp-content/uploads/2021/02/RSPG21-008final_Draft_RSPG_Opinion_on_Additional_Spectrum_Needs.pdf

12 https://www.bundesnetzagentur.de/SharedDocs/Downloads/DE/Sachgebiete/Telekommunikation/Unternehmen_Institutionen/Frequenzen/OffentlicheNetze/Mobilfunk/Frequenzkompass2020.pdf?__blob=publicationFile&v=1

Criticism is necessary regarding the proposed sharing solutions of vertical industries and other spectrum users to access spectrum on mutually beneficial basis (para.8). To avoid inefficient allocation of valuable bandwidth, this approach requires spectrum holders that offer nationwide services. This also creates cost equality and avoids cherry-picking.

Overall, support must be given, that sharing should be adopted for achieving the goal of a more efficient use of spectrum to fulfill coverage objectives (para.10). In this regard, nationwide operators shall be enabled to request unused spectrum on regional basis (i.e., municipalities) for a regulated discounted fee, while in return an operator of relinquished spectrum allows active / antenna sharing in these regions.

IDENTIFICATION OF KEY PIONEER INITIATIVES AND BANDS

Support should be given for the RSPG considering that all spectrum bands are potential candidates for introducing and enhancing spectrum sharing solutions (para. 17 and 18).

ROADMAP FOR INCREASED SPECTRUM SHARING

Regarding the definition of sharing conditions (para.22) it should be mentioned that there is a high risk of further market concentration and bottlenecks within 5G. We therefore strongly consider that the RSPG should react in a pro-active way to prevent and remove bottlenecks, to promote competition and to develop a fast and competitive deployment of 5G.

With reference to test&trial | innovation&trial licenses (para.25) to multi country operators, a coordination of national regulators to incentivize working on new future techniques should be established. In addition, increasing the commercial development of technologies and developing future network architecture is reasonable. Common EU-funded research projects between operators and NRAs could be helpful to evaluate and achieve more efficient spectrum sharing solutions (para.35).

COMMENTS TO THE DRAFT RSPG OPINION ON ADDITIONAL SPECTRUM NEEDS (RSPG 21-008)

The following comments refer to Annex I of the draft opinion.

IDENTIFICATION OF ADDITIONAL SPECTRUM AND HARMONISATION NEEDS (SECTION A):

The identification of spectrum and harmonization needs – especially in low and mid bands – must be welcomed. Due to increasing traffic all over Europe, there is a high demand on (limited) spectrum capacity (para. 1).

Concerning next generation wireless broadband systems (para. 2), a strong commitment towards new players is a must-have to overcome historical telecommunication techniques, allocating valuable spectrum below 2100MHz. Therefore, a part of low and mid band spectrum should be reserved for new operators under the obligation to use these bands for state-of-the-art services only.

With reference to 6G research and its impact on spectrum regulation (para.7), it is positive that preparatory work on 6G has already started. A light licensing regime can help to deploy the newest technology such as 6G nationwide. Light licensing should focus therefore on the needs of nationwide new entrants because only these players are not hindered by legacy infrastructure and will, – adequate subsidies assumed – take the risk of a first mover.

Support is also given to additional spectrum and harmonisation needs, especially in the low band range, as well as additional spectrum in the mid bands for nationwide operators (para. 8). As the allocation of low band spectrum by providers using legacy technologies are hindering efficient usage (see 3GPP TS 38.214 Table 5.1.3.1-1: MCS index table 1 for spectral efficiency[13]) of these precious frequencies, measures strengthening new nationwide operators to develop new future proof solutions (e.g., virtual reality, online gaming, mobile internet) are appreciated. In this context it should also be emphasized that new market entrants are not equipped with legacy technologies and therefore using the latest technology which enables a better and more efficient use of spectrum.

[13] https://www.etsi.org/deliver/etsi_ts/138200_138299/138214/16.02.00_60/ts_138214v160200p.pdf

Roll-out of 5G networks (section B)

Coverage obligations of national road and rail corridors (para. 3) can only be achieved by active negotiations. These negotiations should be supported or performed between national regulators to enable effective coverage of border regions. Especially new players are not able to reach agreements with all neighboring country providers – ending up in inefficient spectrum usage in border areas. However, mm-wave bands above 24 GHz should not be part of the solution, as 24GHz and above is not solving this general problem because it is not a substitute for mid and low bands.

AUTHORISATION REGIMES (SECTION C)

With reference to preferences for licensing the higher mm-wave bands (para.1) there is a need of different type of authorization for different bands to meet the demand of users and service providers most efficient. For low band spectrum, nationwide operators, especially those under fair share holdings, shall be awarded with new/re-issued licenses. Mid bands should also be licensed and awarded to nationwide operators preferable for those willing to introduce new technologies. These bands should be assigned nationwide.

Regarding the 42 GHz band, high bands below 42 GHz on county level should be assigned. For the range of high bands a regional approach is suitable as long as nationwide providers are not discriminated.

Above 42 GHz licensed should be granted to all operators on single location basis to enable all kind of use cases for public and private networks as well as for vertical use cases. Secondary usage should be considered wherever possible to maximize spectrum efficiency.

With reference to paragraph 6, a right for active sharing is essential for efficient usage of assigned bands, but measures shall be taken to avoid market concentration. Therefore nationwide operators shall always start spectrum sharing with smaller players.

ABOUT UNITED INTERNET

With more than 25 million fee-based customer contracts and about 39 million ad-financed free accounts, United Internet AG is a leading European Internet specialist. At the heart of United Internet is a high-performance "Internet Factory" with more than 9,600 employees, of which 3,000 are engaged in product management, development and data centers. In addition to the high sales strength of established brands such as 1&1, GMX, WEB.DE, IONOS, STRATO, 1&1 Versatel and the Drillisch Online brands, United Internet stands for outstanding operational excellence with around 65 million customer accounts worldwide.

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