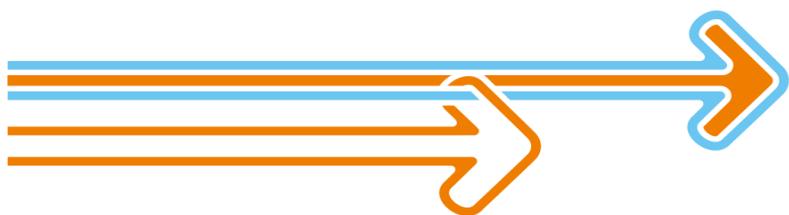


Committed to Europe



The European Electronic Communications Code

Telecom Spectrum Management

Executive summary

Spectrum is the life-blood of mobile telecommunications. In order to deliver its vision of the Gigabit Society and 5G, the European Commission (EC) strives to ensure greater consistency in the national approaches to the regulation of spectrum. To this effect, the EC proposes binding and enforceable rules for spectrum management and a peer review mechanism allowing BEREC, the EC and National Regulatory Authorities (NRAs) to review elements of Member States' planned national assignment procedures.

Orange, with mobile operations in 7 EU Member States, fully supports the European Commission overall approach:

- **competition and investment first:** clear and harmonized principles, applying to spectrum allocation and the extension of the duration of the rights of use, will contribute to a competitive and investment friendly environment for mobile operators; objective criteria should result in reasonable fees for radio spectrum and allow operators to dedicate more funds being spent on investments;
- **regulatory certainty and stability:** the EC's coordinated and harmonized timing, as well as increased transparency in the NRAs' procedures of allocation and re-allocation of spectrum bands, will be crucial to ensure predictability for investors, and will bring us closer to the completion of the Digital Single Market;
- **technology delivery:** the facilitation of small cell deployment will play an important role in 5G rollout.

In order to ensure full alignment with the EU's overall investment objective, Orange believes that the draft Code could be further improved. This includes:

- **ensure quality:** departing from the "no interference/no protection" principle may have negative consequences on the quality of service provided by operators through their individual authorizations;
- **ensure clarity:** the general authorisations have a role to play in the context of the Internet of Things (IoT), however, it cannot replace the individual licenses, which are necessary to safeguard the 5G investments;
- **avoid spectrum-sharing obligations:** the sharing of spectrum and/or infrastructure is an already established market practice that can help reducing costs – this should remain an option, but not an obligation.

Orange is confident that those concerns can be addressed during the legislative procedure, thereby further strengthening the predictability of regulatory environment and encouraging investments. We look forward to working closely with the co-legislators to that end.

General assessment of the spectrum management proposal

Radio spectrum is a key and scarce resource for connectivity. The need for spectrum is driven by an exponential increase in the volume of mobile data traffic. According to Cisco's VNI 2016 Mobile Report, the global mobile data traffic grew by 74% in 2015. The traffic has grown 4,000-fold over the past 10 years and almost 400-million-fold over the past 15 years. Thus, a sound regulatory regime enabling the availability of sufficient and appropriate spectrum to network operators is the foundation of modern communications.

Orange finds that the existing EU regulation has played a generally positive role. EC Harmonization Decisions identified spectrum bands for wireless broadband (WBB) and enabled provision of mobile services for consumers and economies of scale for the operators. There were, however, several shortcomings: fragmented spectrum allocation procedures and selection criteria, different views on the rationale to be considered when fixing the

spectrum fees, various timetables and license durations and not transparent allocation process. All contributed to slow deployment of modern wireless technologies (800 MHz band for LTE services serves as the best example).

Orange is convinced that the EC's overall goals and provisions will help deliver the spectrum needed to address today's and tomorrow's challenges. We believe that the following proposals will enable timely availability of spectrum and faster rollout of telecommunications networks:

- **Greater harmonisation of rules for spectrum management** in the European Union (*art. 48-54*) taking into account the contrasted experience of various practices across Europe.
- **Extension of the Radio Spectrum Policy Group's (RSPG) role** providing advice to the EC based on its own expertise and public consultations of stakeholders (*art. 28*, with a positive focus on cross-border issues).
- **Limiting unreasonable fees for spectrum** (*art. 42*) as they reduce resources available for network rollout. **Fees for the rights of use spectrum can no longer be required prematurely**, and specifically, not for a substantial period of time, before operators can start using it (*art. 42.3*).
- **A binding European framework** laying down general rules for Member States in the way of granting national individual authorisations of spectrum use, including burden on auction schemes, taxation, time scales, license duration and information on license renewal conditions (*art. 35 and 48-54*). This includes **transparency requirements** in NRAs' process of allocation and re-allocation of spectrum (*art. 47*); the **duration of the rights of use** of at least 25 years (*art. 49*). **EC coordinated and harmonised timing** (*art. 53*) will maximise the economies of scale and reduce cross border issues related to different national clearance dates of the given spectrum band, while preserving the national sovereignty of spectrum.
- **General authorisation regime** for the deployment, connection and operation of small-area wireless access points i.e. **small cells** (*art. 56*), which will be key in view of the deployment of 5G in high frequency bands.
- New requirement for NRAs to carefully assess the risks and means to **mitigate interferences** with existing in and out of band-users, prior to any spectrum band allocation (*art. 46, 47, recitals 107 and 114*).

Changes to be further streamlined and completed

Despite the general positive assessment, there are, however, some proposals that need further elaboration:

- The priority given by the EC to **general authorisations vs. individual licenses** (*art. 46*) would have a major impact on the stability and predictability of investments. Orange believes that radio services requiring high Quality of Service and spectral efficiency, which require heavy investments, need individual licenses. This is especially important in view of the 5G networks rollout. Some other services with fewer requirements would be more adequately served by general authorisations.
- Within the proposed framework of general authorisation, Orange has a serious concern in relation to the **"no interference/no protection" principle**. This rule, as specified in International Telecommunications Union Radio Regulations, applies to equipment subject to general authorisations (i.e. using unlicensed spectrum bands). Limiting it could lead to undue constraints on other systems subject to individual authorisations, such as mobile equipment, when using same or adjacent spectrum bands. E.g. a user of WiFi in unlicensed 2.4 GHz band could claim protection from harmful interferences received from nearby 4G transmitters in licensed 2.6 GHz band. We support the existing arrangements, where the issue must be addressed by manufacturers in the design phase of the WiFi equipment, by implementing adequate immunity measures.
- The decisions concerning the **sharing of mobile network infrastructure**, especially in less populated areas (*art. 47*) should result from business initiatives, and not be mandated and arbitrarily enforced by regulation. Mandatory sharing could question the "legitimate confidence" of operators in the stability of the conditions related to the licenses they paid for, and therefore hamper investment incentives.
- The concept of **spectrum sharing** (*art. 45.2 and 45.4, 46-47, recital 115*) is technically and economically complex (as demonstrated in the RSPG studies). As a consequence, Orange prefers a more neutral approach and a careful analysis on a case by case basis, rather than a directional call proposed by the EC.

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