

March 6, 2017

ARCEP
7, square Max Hymans
75730 Paris Cedex 15

Dear Mr. Benoit Loutrel:

The Dynamic Spectrum Alliance (“DSA”) hereby submits its comments in response to the public consultation launched by ARCEP on January 6, 2017.¹

DSA’s Interest

DSA is a global organization advocating for laws and regulations that will lead to more efficient and effective spectrum utilization.² Our membership spans multinationals, small-and medium-sized enterprises, and academic, research, and other organizations from around the world, all working to create innovative solutions that will increase the amount of available spectrum to the benefit of consumers and businesses alike.

DSA’s primary goals are to close the digital divide globally. We believe this can be achieved by reducing the cost of deploying last-mile wireless networks, freeing up an ample supply of spectrum for innovative uses, and enabling the Internet of Things (“IoT”) and other forward-looking applications.

DSA supports a broad mix of spectrum allocation methodologies, including exclusive licences, licence-exemption, and shared spectrum. Furthermore, we believe there needs to be an appropriate mix of these methodologies to support the widest range of innovation opportunities.³

¹ ARCEP, Press release, “Arcep launches a public consultation on ‘New frequencies for the regions, businesses, 5G and innovation,’” January 6, 2017.

² A full list of DSA members is available on the DSA’s website, at www.dynamicspectrumalliance.org/members/.

³ On December 1, 2016, DSA submitted comments in a similar consultation launched by Ofcom. “Ofcom consultation – Improving consumer access to mobile services at 3.6 to 3.8 GHz,” published 06 October 2016. Our overarching view there, as here, is that spectrum allocation should optimise the efficient use of spectrum, and spectrum sharing arrangements are well-suited to provide material benefits. We asked Ofcom to ensure that its expertise and resources are directed towards looking for ways to optimise the efficient use of spectrum by balancing the spectrum needs of all users, both incumbents and new entrants.

ARCEP's Consultation

On January 6, 2017, ARCEP launched a public consultation “whose purpose is to query stakeholders on future uses of several frequency bands, including the 2.6 GHz and 3.5 GHz bands, and on the methods used to allocate these bands.” The agency notes that these bands are “particularly attractive” because they are being used to develop LTE (Long Term Evolution) technologies used for 4G mobile service offerings, and 5G technologies expected to be developed and deployed in the future.

The consultation document notes that use cases for the 2.6 and 3.5 GHz bands include (1) 4G/5G mobile services, (2) wireless ultrafast Internet access in hard-to-reach locations, (3) professional mobile networks (PMN) used by transportation, energy, and other operations; and (4) enabling the Internet of Things (IoT). In particular, the agency proposes to allocate 40 MHz in the 2.6 band for PMN networks, and 40 MHz in the 3.5 GHz band for fixed wireless ultrafast networks in rural areas. The remainder of the 3.5 GHz band would be made accessible at a later date for 5G technologies. The consultation document also notes that this proposed scheme could be confirmed through this public consultation, or that “an alternative scheme” can be established.

DSA Comments

DSA welcomes ARCEP's consultation regarding the appropriate allocation of spectrum to serve current and future needs of the citizens of France. The consultation document rightly highlights a number of the important use cases that would be well-served by allocating additional spectrum. In particular, we agree that the 2.6 and 3.5 GHz bands are of increasing relevance to current 4G and future 5G mobile services. Enhanced access to these bands will provide industry, as well as French citizens and consumers, with more and better options for broadband services.

Three Shared Tiers Provide Optimal Benefits

In general, we agree that these bands should be made available to a wider range of services, including but not limited to mobile technology, whether 4G or 5G, mobile or fixed. We support ARCEP's identification of these bands as high-priority for mobile services. We expect that existing users will recognize this trend, and accept that mobile use will enter the bands in some form.

We are concerned however that the proposal put forward by ARCEP presents an unnecessarily stark view of the policy choices available. These options appear to be based on conservative coexistence analysis, which adopts worst-case scenario assumptions and overestimates the burden of coexistence significantly. This is not representative of the likely uses of the band.

Any policy choice should:

- Provide existing users clarity as to how the interference environment they face will change over time. As long as satellite and fixed services continue to be allowed, we do not believe it is sufficient simply for them to be asked to accept reduced spectrum quality,

without the explicit ability to understand and track the level of interference they must work with.

- Maximise the opportunity for new users to innovate in mobile technology-based broadband wireless infrastructure and enable incremental investment in this band, taking full account of international trends in this band.
- Maximise spectrum efficiency, avoiding excessively conservative exclusion zones but ensuring that coexistence arrangements are adequate to protect the interests of existing users for as long as they retain authorisation.

DSA believes that a multi-tier, database-driven framework would meet these requirements and bring significant benefit to citizen-consumers.

First, a multi-tier, database-driven approach facilitates both licensed and licence-exempt access to the spectrum, facilitating the widest possible range of innovative business models with low barriers to entry, protection of investment, and opportunities for co-existence in networks. This will enable a wide range of providers to meet both well-established use cases for mobile broadband and new use cases for 5G systems deployed by and for vertical industries and innovative service providers.

Such a database-driven sharing scheme also would drive opportunities for innovation in technology and business models. French companies could tap into the growing international ecosystem for mobile shared spectrum opportunities in this band and serving unmet consumer demand.

Second, the approach would provide greater certainty of spectrum quality for existing users, providing clarity regarding the levels of incoming interference that their systems will face, and new users with the greatest opportunity to make use of spectrum where and when it is available. Although the incumbent uses are largely static, the basic nature of mobile operations is dynamic, and therefore aggregate interference considerations change with time. In a three-tiered approach, a database might also enable companies to assess their opportunities and define business tasks that include not only the cost to access the spectrum, but also the risk associated with accessing the spectrum under a certain tier.

Database-driven approaches can track such dynamic uses and provide incumbents with protection at all times. This means, for example, allowing three-dimensional, high-resolution coordination that takes full account of the substantial impact of clutter (buildings and trees) and terrain at these frequencies. This also includes the actual, rather than hypothetical worst-case, characteristics of new and existing systems.

Third, such an approach will provide mobile and fixed operators with a faster, simpler, and more certain method for deploying new base stations than is available under the current coordination procedure. Such an approach also would allow for tighter reuse of the spectrum. As a result, French operators overall would benefit from faster, simpler, and more certain access to licensed spectrum, compared with the current coordination procedure.

Fourth, through a database approach, the regulator could code the rules to access the spectrum and fine tune them where needed, thus further optimizing the efficiency of spectrum use.

In short, spectrum policy would help speed up innovative, user-friendly business models. Specific innovation opportunities include:

- Enabling mobile operators to extend the coverage and capacity of their systems more rapidly and cost-effectively via sharing and lower-cost deployment models.
- Allowing businesses and public buildings to improve mobile service for all operators in a single technology deployment, without wasteful deployment of multiple systems or a reduction in choice amongst providers.
- Enabling specialist systems, such as those for critical applications and special applications, to take advantage of international economies of scale for mobile equipment.

DSA asks that ARCEP give due consideration to these important points, and incorporate a multi-tiered, database-driven framework as part of its future allocation rules for the 2.6 and 3.5 GHz bands.

Sincerely,



Kalpak Gude
President
Dynamic Spectrum Alliance