

To: **Radio Spectrum Policy Group**

Spectrum – Unit B4

Electronic Communications Networks and Services Directorate

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**Subject: Fastweb's contribution to the Draft RSPG Second Opinion on 5G Networks**

### **Introduction and background**

Fastweb is the leading alternative network infrastructure operator in Italy, full MVNO and cloud service provider. Having deployed and owning more than 45.000 km of fibre links, combined with a network of more than 20.000 street cabinets particularly in densely populated areas, Fastweb has earned a competitive advantage at infrastructure level for the emerging requirements of 5G communications. Fastweb is involved in several ongoing 5G trials in Italy, with a vision of becoming a key player in the deployment of 5G networks.

With this view, Fastweb acquired the use of 40Mhz in the 3.4 to 3.6 GHz 5G band and it is currently deploying small cells locally. Fastweb has also built and it is expanding the largest and most powerful WiFi network in Italy allowing downlink speeds of up to 1Gbps in densely populated areas that supports the mix of technologies underpinning 5G services.

Fastweb strongly believes in the need to accelerate in Italy and in Europe the transition to fully convergent connectivity services and it is committed to rollout investing more than 30% of its revenues in network infrastructure to possibly become the first fully convergent operator in Italy, triggering the race to invest in new 5G networks.

As recognised by the document under consultation in the section on coverage challenges, given that 5G is likely to be a gradual evolution of LTE in the beginning, established MNOs would lack the incentive to accelerate and extend 5G coverage. It is clear that only by stimulating competition and new entrants, policy makers will be able to speed up the rollout of innovative 5G network solutions.

In this respect, everyone agrees that due to the mix of technologies supporting 5G, including SDNs and network slicing, in the future it will be easier and even required to think of a whole new level of network



access and sharing solutions that should be foreseen and included in future authorisation and network licensing practices in Europe.

### **General observations**

Fastweb welcomes the intention of the RSPG to provide a common strategic roadmap towards 5G for Europe.

However, we must observe that the approach of the roadmap is somewhat contradictory in so far as, on the one hand, it recognises that *“5G technology and networks are likely to have a different set of spectrum requirements for Member States, because of the different network characteristics and services”,* that *“Development at the core network level will allow a common mobile network to be sliced into virtual private networks, for use by different sectors (network slices)”*[...] and that *“The diverse set of services, enabled by both existing and potential new players, may require different authorisation approaches to deliver innovation and meet the socioeconomic policy objectives of each European country”* (Section A1 of the Annex) .

On the other hand, the whole opinion and its annex seems to be entirely based on the same approach that was adopted for 3G and 4G, i.e. on exclusive long-term licenses to a handful of operators that could just upgrade their existing mobile networks leaving some space at wholesale level for “niche players” satisfying the need for specific applications (e.g. second bullet of section A2.3 of the Annex).

This vision shows an evolutionary rather than revolutionary approach to 5G. Such an approach carries the real danger of slowing down the innovative potential of 5G. It is unimaginable that just a few well established mobile operators will be able to respond to the demand of business specific applications in the fourth industrial revolution and in a world of trillions of seamlessly connected objects.

5G is the next generation platform for future innovation and a service enablement platform for vertical services and enhancing mobile broadband evolution for consumers and businesses. Network slicing, in particular, is an innovative network architecture that will allow service providers to create multiple logical networks that can be assigned to different services/service types running over a common physical infrastructure.

This revolution demands a different approach to spectrum licensing. Policy makers and relevant authorities will need to create a framework adapted to endless new business models also differentiated according to geographic and demographic characteristics.

In this context, access and sharing of active infrastructure will be key for the rapid development of innovative 5G services. Demanding 3 or 4 MNOs in each EU country to be responsible for the development of all this potential would mean condemning the whole EU economy to be depending on the innovative capacity of a few companies instead of creating the condition for a dynamic grass-root ecosystem that could reward the best and most innovative ideas.

Fastweb is also worried by the lack of consideration of ongoing investments when it comes to the treatment suggested for the 3.6GHz band. Despite the opinion recognises the importance of a dense fibre network to supply capacity to 5G networks and services, the RSPG seems to ignore that, at least in Italy, fixed services providers like Fastweb are already using the 3.6GHz band to test and possibly deploy early 5G networks. The



idea that administrations should clear entirely this band to licence it to established mobile operators neglects the fact that 5G networks will be fully convergent and that fixed service providers could take advantage of their existing investments to deploy 5G on non-LTE bands.

## Detailed comments

### 1. Sharing with existing spectrum users

The annex to the draft RSPG opinion under consultation takes for granted that all 5G bands, in particular the 3.6GHz currently not licenced to mobile operators should be cleared and licensed to mobile operators.

Thus, the opinion seems to ignore that 5G networks especially in densely populated areas will be fully convergent and that non-MNO fixed operators currently using spectrum in the 3.6GHz band could already have started deploying and testing 5G solutions relying on that spectrum band, on other eligible spectrum bands and on generally authorised spectrum thanks to a very dense fibre network.

In Italy, the 3.4-3.6GHz spectrum was licensed in a technologically neutral manner to several operators that used it for different purposes. However, with the emergence of 5G almost all these operators are now in the process converting their infrastructure and using the spectrum for 5G, anticipating market developments.

This is the case for Fastweb that is currently participating in official 5G trials and that is trying to anticipate the technological development by deploying a wireless network in densely populated areas in Italy. Fastweb is leasing the use of 40MHz in the 3.6GHz band from Tiscali SPA that holds a license due to expire in 2023. Should the relevant authorities blindly follow the recommendation of the RSPG, Fastweb would be at risk of stranding its investments and be squeezed out of the 5G market.

It is important that also the RSPG in its opinion reassures early investors that current 5G investments from non-MNO should be acknowledged and rewarded rather than undermined, especially for the competitive pressure that they are likely to exert on existing LTE licensees that are logically tempted to monetise as much as possible the current investment cycle.

Moreover, the process of defragmentation of the 3.6 GHz band should not be based on the sole purpose of making available to mobile operators very large spectrum blocks. Technological developments are demonstrating the possibility to reach the same performances of large spectrum blocks by combining a number of smaller spectrum blocks. This means that Member States, in an effort to spur competition, should tend to award licenses for small spectrum blocks (up to 20MHz maximum) in order to allow participation of more players able to combine spectrum resources rather than letting a few operators hoarding as much spectrum as possible in the 5G bands.

In the light of the above, Fastweb urges the RSPG to amend point 8 of its draft opinion to reflect that defragmentation of the 3.6GHz should take into account concrete steps of new market entrants that rightfully used the primary band to start deploying early 5G solutions. In this respect point 8 should be amended as follows:



The RSPG is of the opinion that Member States should consider appropriate measures to defragment the 3.6 GHz band, the primary 5G band, in time for authorising ~~sufficiently large~~ **efficiently sized** blocks of spectrum by 2020, **taking into account current uses and taking into account early 5G investment already made by 3.6GHz licensees and technological innovation.**

## 2. Licensing and authorisation models

Fastweb believes that authorisation models for 5G spectrum bands should reflect properly the characteristics of each spectrum band in the 5G context. This means, for instance, that higher frequency bands with limited geographical coverage should be licensed individually and possibly locally taking into account also existing investments in 5G networks.

Fastweb agrees as a general principle that 5G spectrum bands where necessary should be licensed individually allowing leasing and trading by default. However, given the potential of 5G, licenses should expressly provide the possibility for competent authorities to mandate access and sharing of passive and active resources under fair and reasonable conditions in specific circumstances. Such provision could be rewarded by longer license duration that could give more certainty to investors.

This reflects Fastweb's deep disagreement with the statement contained in section A2.3 that demand for business specific applications could largely be covered by existing mobile providers.

Moreover, Fastweb regrets that the RSPG seems to ignore the key role that a pro-competitive approach in spectrum licensing procedure could entail for the timely deployment of 5G. Spectrum assignment procedures should favour new entrants that do not have already spectrum resources < 1GHz. This could be done by reserving a predefined amount of spectrum for new entrants or by designing the auctions or context in a way that allows participation of new entrants (i.e. by assigning batches of 10-20 MHz maximum).

## 3. Coverage and roll-out obligations

Fastweb shares most of the reasoning of the RSPG on coverage and roll-out obligations. However, we believe that once again this section was drafted having in mind exclusively established MNOs as target of such obligations.

These obligations are particularly relevant in challenge areas in which 5G is expected to rely mostly on lower frequency bands and, as such, it is going to benefit from existing network investments in 4G and in its evolution. Competent authorities should take into account existing infrastructure and avoid redundant replication, thinking, when relevant, on a case by case basis whether network sharing could provide the most efficient solution in those areas.

Fastweb believes that for indoor coverage (especially in key buildings such as hospitals and schools) fixed technologies and WiFi have a potential to play an important role.

Finally, the RSPG does not seem to give consideration to use-it-or-lose-it clauses that might be embedded directly in the licenses. As Fastweb, we believe that such clauses, if implemented correctly, could provide a



strong incentive for a timely 5G deployment, while at the same time avoiding opportunistic approaches aimed at hoarding scarce resources, in order to elude the competitive pressure from other players.

Signed

*Tiziana Talevi*

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