To the kind attention of:

Radio Spectrum Policy Group – Secretariat
DG CNECT B4: Spectrum – Office: BU33 7/065
European Commission, B-1049 Bruxelles, Belgium

By e-mail (CNECT-RSPG@ec.europa.eu)

Comments on behalf of Associazione Italiana Internet Providers ("AIIP") on the "*DRAFT RSPG Opinion on spectrum related aspects for next-generation wireless systems (5G)*"[1]

AIIP is an association representing more than 50 SMEs acting as electronic communications operators in Italy which provide broadband (BB) and ultra-broadband (UBB) access services to the public through their own access networks, both fixed (with FTTx and xDSL technologies) and fixed wireless.

It is noteworthy that many associates have overcome digital divide in many Italian distressed and rural areas by providing BB and UBB access through their own proprietary wireless access networks (usually through shared access frequencies such as Wi-Fi and Hyperlan, or Wi-Max) which were realized without any state aid in a fully competitive regime.

For this reasons AIIP wishes to provide the following comments on the above DRAFT RSPG Opinion aimed at providing a strategic roadmap towards 5G for Europe for maximizing both fixed and mobile operators access to such frequencies, by establishing a balanced regulation as to: spectrum sharing, usage and license conditions, incentive regulation, convergence of networks and services and technological neutrality.

As an evolution of 4G, expected to be implemented and effective in 2020, 5G goals should be: to develop enhanced broadband communications, machine to machine (M2M) communications, more environmental friendly communications (by reducing the energy consumption).

The all of the above, at the lowest possible cost for consumers.

a) Need for more coordination in standardization

In order to achieve the above goals with the lowest possible cost for consumers, AIIP stresses the need to achieve that the largest economies of scale also by better coordination in standardization between the EU and US "blocks", which are now proceeding in absolute autonomy (see as to US block: 3GPP last workshop on 5G held in *Phoenix (AZ), USA, on September 18-19, 2015, "RAN 5G Workshop - The Start of Something*")[2].

[1] *Deadline expiring on Sunday 31 July shall be deemed to be extended to the first subsequent working day.*

[2] *Which aimed at focusing on possible applications of 5G as well as to defining specific standards. The following were the* high level use cases highlighted for 5G:

- Enhanced Mobile Broadband

AIIP appreciated that at EU level this worry is also perceived, as per the following 5g-PPP statement: "*There is a shared awareness that the development of new communication networks is dependent on the emergence of globally accepted standards in order to ensure interoperability, economies of scale with affordable cost for system deployment and end users. The 5G-PPP aims to have European industry driving the development of 5G standards and to develop and exploit at least 20% of the 5G SEP (standards essential patents)*"[3].

b) Need for prompt and detailed harmonization at EU level

The "Internet of things" will only be achieved if at EU level a prompt harmonization of the frequencies bandwidth is established, as well a detailed description of their intended use, for each oh the different ranges of frequencies to be enhanced to 5G (i.e., 700 MHz, 3400-3800 MHz and above 24 GHz).

c) Need to ensure convergence of networks and services and technological neutrality, also through wholesale only models as well as by adequate shared access to frequencies.

AIIP wishes to stress that the frequencies to be enhanced to 5G should be granted to both fixed (FWA) and mobile operators on an equal and non discriminatory basis and without favoring either of them. Of course current needs and applications should be taken in the utmost account.

Instead, AIIP perceives that access to 5G might be restricted mainly, if not exclusively at all, to MNOs and that FWA providers might be excluded, and their investments would be vanished, although they have been very active in providing UBB services in distressed and rural areas at their own costs and without any public aid.

In this regard, AIIP appreciates much the 5G-PPP statement that "*The shared vision is that 5G is not just another generation of mobile networks. It is a new network concept that enables the integration of a ubiquitous access continuum composed of cooperative, cognitive fixed and heterogeneous wireless resources, with fixed optical access reaching at least the 10 Gb/s range, while implementing new functionalities that allow simplified and unified control.*"[4]

AIIP stresses that convergence and competition should be ensured by favoring the emerging of a "wholesale-only model" for 5G, as "*in particular in challenging areas where only one network could be rolled out even under favourable conditions*" "*additional incentives [should be given] for operators to deploy wholesale-only models where the business case of network owner is to sell capacity to as many retail providers as possible*",

- new radio access technology as part of 5G, supported by the need for LTE-Advanced evolution in parallel
- Massive Machine Type Communications
- Ultra-reliable and Low Latency Communications

The Workshop Summary stressed the need for "forward compatibility to be a design requirement for the new radio from the get-go" with the Study to "include careful investigation of design options to ensure forward compatibility for all use cases."
[3]

[4] https://5g-ppp.eu/coverage-plans/

being in such cases such wholesale-only SMP networks, are more desirable over vertically integrated ones.

Finally, it is necessary to grant a more flexible access and use of spectrum, especially appropriate in the future 5G environment, by way of promoting greater use of general authorizations and of measures such as spectrum sharing and adequate provisions aimed at ensuring an efficient use of 5G spectrum.

In this regard, AIIP points out that shared access to 5G frequencies is also necessary to ensure satisfaction of the new concept of Universal Service Obligation, which also includes the provision of affordable and widely spread Ultra Broadband Access services at fixed locations.

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Kindest regards,

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