



**Public consultation on the Draft RSPG Opinions
on a long-term strategy on the future use of the UHF band (470-790 MHz)
in the European Union and on Common Policy Objectives for WRC-15**

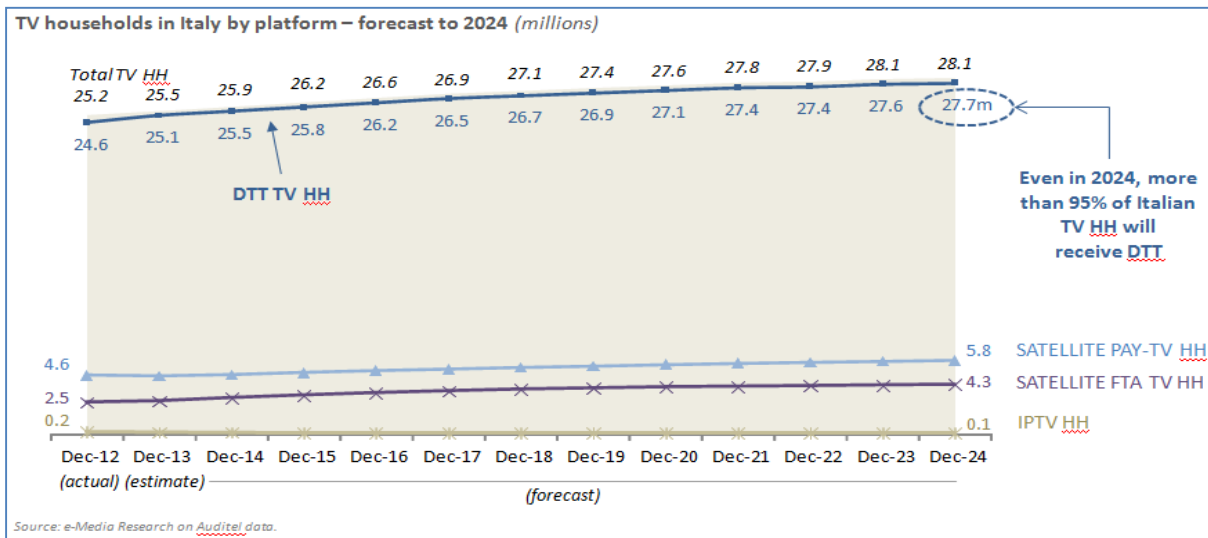
**Response by Mediaset S.p.A.
12 January 2015**

Mediaset acknowledges the effort undertaken by the Radio Spectrum Policy Group, both as an impartial advisor of the European Commission and as a multinational body where sustainable and widely shared solutions can be achieved. In addition to the contributions provided by Broadcasting Network Europe and Confindustria Radio TV, Mediaset welcomes the opportunity to participate to this timely public consultation.

The value of the RSPG analysis is undeniably confirmed by the content of this Draft Opinion on a long-term strategy on the future use of the UHF band. Most of the observations and recommendations included in this document are consistent with the views that European broadcasters have been promoting in recent years, in light of varied national circumstances and within a wide range of interests.

- **DELIVERY SOLUTIONS FOR A “LINEAR” FUTURE**

Networks are not self-sufficient: they exist in order to deliver services, to address consumers' behaviors and to meet their expectations. Nevertheless, in the past 10 years, most of the forecasts produced by the Telecom Industry, predicting a rapid shift to an On-Demand audiovisual world, the death of linear TV and a consequent reduction of spectrum demand for DTT services have failed to materialize. In fact, it is now commonly accepted that the level of linear consumption will remain stable in the next 10 years, as in the predictable future, and that, in a context in which linear TV keeps its position as a major form of consumption, **DTT will continue to be the main platform for point to multi-point distribution of audiovisual media services.**



The Digital Agenda for Europe objective of deploying a NGN IP network providing European citizens with the same capacity, resilience and universality of existing broadcasting networks, seems ambitious and unrealistic in the foreseeable future, unless a massive public funding plan is put in place, especially in countries like Italy where private investments on NGN networks are limited only to highly profitable/urban areas¹. Therefore, as a service provider that is more and more engaged in delivering audiovisual services over IP networks, Mediaset believes that policy makers should reconsider the practicability of some of the DAE objectives², and concentrate their efforts on deploying a basic universal broadband network, that is sufficiently capable to satisfy consumer demand for point to point services³ on 100% of the territory covering 100% of the population⁴, reinforcing the complementary/synergic relation between broadband and broadcasting platforms, such as DTT, through the use of hybrid devices.

¹ 2014 Report on Implementation of the EU regulatory framework for electronic communications - <https://ec.europa.eu/digital-agenda/en/news/2014-report-implementation-eu-regulatory-framework-electronic-communications>

² According to the 2014 Report on Implementation of the EU regulatory framework, only 0.1% of the Italian population have access to a connection of more than 30 Mbps, a considerable gap distant from the 50 % target to be achieved by 2020.

³ According to Mediaset's analysis, an average bandwidth of 8-10 Mbps would be sufficient in order to deliver a very high (HD-UHD) level of quality for on-demand services.

⁴ Mediaset has been one of the first (if not "the" first) European broadcasters providing hybrid DTT/IP solutions through GEM/MHP standards allowing customers to access both on-demand and linear content from the same device. Hybrid technologies allow the most efficient use of current infrastructures, satisfying all the expectations of Italian customers by a synergic relation between the point to point and point to multi-point technologies.

- **RELEASE OF THE 700 MHZ BAND**

In the past 10 years, spectrum policy has been heavily influenced by a strong bias in favor of mobile industries, based on the overall assumption that any request for spectrum coming from MNOs should automatically become a political priority for European decision makers. At present, the European Union (just one year after the deadline for the release of the 800 MHz) is preparing to promote the reallocation of another essential portion of spectrum currently licensed, as far as Italy is concerned, to broadcasters until 2032⁵: the 700 MHz band. Despite the yet unclear outcome of the 800 MHz release, both in terms of 4G coverage - which was supposed to be the main objective to be pursued with the first Digital Dividend⁶ - and in terms of added value for European consumers, - the European Union keeps insisting on a technology, LTE, that is likely to play a residual role in the delivery of wireless broadband services in the years to come, making this technology a much less future proof technical solution than other delivery platforms, including Digital Terrestrial Television.

Therefore, notwithstanding a strong pressure for a rapid release of the 700 MHz band, especially from countries with low deployment of DTT, the RSPG and the EU could **recommend a three-year moratorium before any final decision over the exclusive allocation of 700 MHz to mobile broadband.** This approach would not slow down the process of a possible release and it would grant a well-grounded decision making process, based on: **evidence-based market assessment, opportunity cost analysis** (costs of migrating DTT vs. benefits deriving from LTE), **proper international coordination**, including the rectification of GE06 agreements to abide by the 'equitable access principle'.

1) Market assessment of the real potential of LTE broadband in relation to the evolution of alternative platforms for the provision of IP services

The reality of the market is proving to be much more complex and unpredictable than in the rather optimistic forecasts promoted in recent years by the mobile industry. Expenditure capability and consumer' propensity to pay for services that are already accessible through existing networks at a more predictable and lower cost do not increase as a function of broadband speed.

As now widely acknowledged even by the most convinced LTE promoters, no significant contribution to an efficient delivery of audiovisual services can be provided by the LTE technology. As rightly highlighted in this draft Opinion, "the current WBB⁷ platform is not a viable solution for television

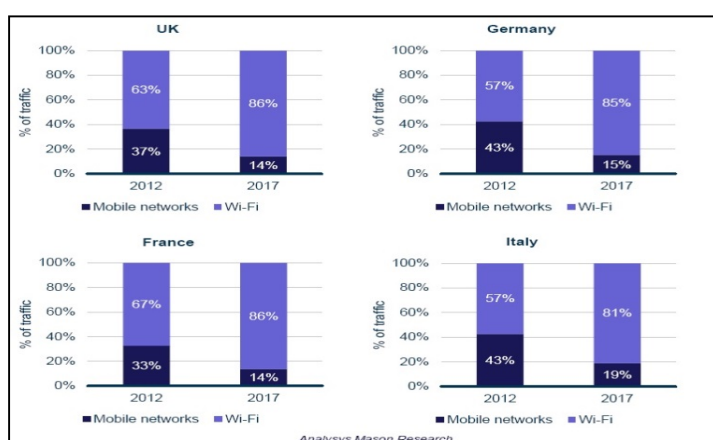
⁵ Art. 5.6 – Provvedimento assegnazione diritto d'uso definitivo in ambito nazionale – Prot. n. DGSCER/ div III/ 53914 – 28. 06. 2012 – Ministero Sviluppo Economico.

⁶ See, among others, the COMMISSION DECISION of 6 May 2010 on harmonised technical conditions of use in the 790-862 MHz frequency band for terrestrial systems capable of providing electronic communications services in the European Union. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:117:0095:0101:en:PDF>

⁷ RSPG should change the reference to "Wireless Broadband" with "Mobile Broadband" or "LTE". WBB could be misinterpreted as including also WiFi.

delivery of free to air or commercial programmes with high public interest which have to be delivered to large audiences and to wide geographical areas”⁸.

In fact, while the average efficiency of DTT is proven to be 4,5 bit/sec/Hz, the maximum efficiency that could be delivered by LTE would be 3 bit/sec/Hz, and this could be achievable only if the distance between each site were less than 2km. Therefore, even with high density of sites, DTT is 50% more efficient than LTE, which means that in order to deliver the same amount of TV programmes that are currently delivered by DTT on the 700MHz band (694-790 MHz), the LTE would require 144 MHz instead of 96 MHz (790-694). Moreover, Wi-Fi is already the preferred transmission option for media-related broadband services and its relevance is set to increase steadily in the next five years.



Meanwhile, the MNOs could achieve better use of their spectrum capacity with TDD (Time Division Duplex) rather than FDD (frequency division duplex). So far, broadcasters have been most effective in maximizing their efficiency with the digital switchover and analog switch-off and are now committed to increase their network efficiency through DVB-T2 and HEVC. In addition, in 2020, when the roll out of LTE should be well under way, **5G will be marketed and allow phenomenal bit rates**: up to 1 gigabyte per second (Samsung) and 100+ Gbps (Huawei)⁹ – currently experimenting on 71-76 GHz and 81-86 GHz bands. According to Samsung, which is currently experimenting on 28GHz (1 Gbps), bands that could be assigned to 5G are: 13.4-14 GHz, 18.1-18.6, 27-29.5, 38-39.5. GHz.

2) Cost of migrating the ‘value’ of DTT to lower bands

Digital Terrestrial Television is not just a ‘distribution platform’ that could be easily replaced; **Digital Terrestrial Television is a fundamental pillar of the European Audiovisual Model**, where European

⁸ This idea was recently confirmed by Plum-Farncombe - Challenges and opportunities of broadcast-broadband convergence. Moving to a converged platform, William Webb, Third stakeholder workshop 4 November 2014.

⁹ "Huawei predicts that the first 5G networks will be ready for commercial deployment in 2020, delivering 1.000 times the capacity of current mobile networks and reaching peak data rates of over 10 Gbps" (se att. Huawei 2)

www.huawei.eu/press-release/5g-europe-huawei-leads-way

content providers can flourish by competing with each other on a level playing field. Any weakening of DTT competitiveness would be to the advantage of distribution platforms where wholly European champions are suffering from profoundly unfair competition with global aggregators.

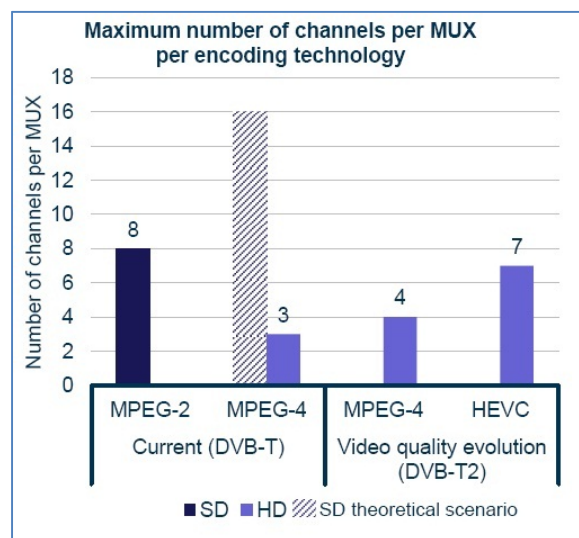
In Italy, DTT is the most important TV platform for broadcast TV distribution (for 64% of households at the end of 2012, DTT is the only TV reception mode) and for 90% of households, it is the TV reception mode of choice (including secondary sets). The DTT network offers a large number (100+) of free and pay channels:

- higher than those available in other European markets;
- in addition to national channels, around 200 local channels are available free of charge only on local DTT;
- the wide choice of channels is among the reasons why DTT is the main platform in Italy.

DTT is the only TV platform playing a universal role on the Italian territory, distributing publicly funded services as well as both national and local commercial free-to-air television channels. Thanks to its 20 multiplexes, it distributes 76 national free-to-air channels. In addition, DTT delivers hundreds of local TV channels and 15 national radio stations.

The inherent value added of LTE broadband deployment on the 700 MHz band would then have to be confronted with the cost related to the migration of DTT services to lower bands and the need to migrate to new encoding technologies (from MPEG-2 to MPEG-4 and from MPEG-4 to HEVC) allowing for an increase in spectrum efficiency parallel to the provision of TV quality standards (SD, HD, UHDTV) that are essential to ensure the competitiveness of DTT vs. other TV platforms.

Any decision to migrate from the 700 MHz band would have to be preceded by a fully financed transition roadmap, with the aim of leaving broadcasters in a situation that would not be worse than the one they would encounter without the release¹⁰. This means that a full implementation of



the transition roadmap that was agreed in Lamy's HLG should be granted, and should be seen as a pillar of the overall strategy concerning the release of 700 MHz. In fact, the two processes - the release of the 700 MHz and the transition roadmap for DTT - are, and should be treated accordingly, structurally related to each other: **there cannot be any release of the 700 MHz without a parallel full**

¹⁰ RESULTS OF THE WORK OF THE HIGH LEVEL GROUP ON THE FUTURE USE OF THE UHF BAND (470-790 MHz) By Pascal Lamy ANNEX2 o - AGREED TRANSITION ROADMAP: ' Specifically, Member States should ensure that broadcasters and PMSE users are left no worse or no better off than they would have been without any clearance of 700MHz'.

and timely implementation of the transition roadmap. Therefore, an immediate start of a coordinated transition process is the first prerequisite for an early release of the 700 MHz band that **could not in any case take place earlier than in 2022**¹¹.

3) Coordination measures

As rightly highlighted in the opinion, *“cross-border coordination issues between mobile and broadcasting have to be taken into account by Member states when determining the timeline for the introduction of mobile service in the 700 MHz band together with other elements such as national situations and coordination challenges”*. The general principle should be that the new service, in this case the LTE mobile broadband, will have to tolerate the interferences coming from the existing services. This approach is straightforward and more equitable, taking in consideration the loss of coverage that broadcasting services will probably suffer and the effort that they will be enduring in order to migrate their services to lower bands. In particular, Member States deciding to allocate the 700 MHz band to LTE at an earlier date, should be ready to deal with the interferences coming from existing broadcasting services until the neighboring country has also relocated the band to LTE. Moreover, in some borders - for instance between France and Italy - one Member State may currently happen to administer a greater number of frequencies below the 700MHz band than the other. In order to ensure equitable access conditions upon the release of the 700MHz, the EU Member States must devise a fair assignment plan within the EU prior to addressing coordination with African and Asian States within the WRC 15 process.

• 470 -694 BAND AND WRC 15

The RSPG recommends **“that the frequency band 470-694 MHz shall remain available for DTT in the foreseeable future, i.e. 2030”**., A more precise reference to 2030 would be advisable . In fact, the other precondition for any effort related to the migration of the 700 MHz, is the formal engagement, both at EU and national level, to leave untouched, **at least until to 2030**, the rest of the UHF band currently allocated, on an exclusive basis, to broadcasters, allowing a minimum level of certainty that is a prerequisite for the competitiveness of DTT, and for any possible release of the 700 MHz band.

In practical terms, a formal engagement of the European Union and Member States would entail:

- 1) Member States to oppose any co-primary allocation of the 470-694 until 2030, starting with the next World Radio Conference in 2015¹².

¹¹ Lamy Report, page 5: *Noting the recent assignments in the 800 MHz band, the 700 MHz band is not immediately needed for mobile services. This is an opportunity for a planned transition path (detailed in Annex 2) that would benefit from a coordinated approach at the European level (in order to manage the cross-border implications of radio interference caused by high-power transmitters) and from a common European deadline (in order to give a signal to industry to undertake appropriate and timely adaptations on the equipment side to ease financial impacts on operators and citizens alike). I consider this transition roadmap as a major achievement of the work of the HLG.*

2) In parallel, but independently, from ITU decisions, a formal commitment at the European Union level in the context of the next Radio Spectrum Policy Programme (2015-2020).

- **FLEXIBILITY MODEL AND SUPPLEMENTARY DOWNLINK**

Concerning the **flexibility model**, *“for which Member States should also have the flexibility to use the 470-694 MHz band for WBB downlink”*, provided that such use is compatible with the broadcasting needs, Mediaset’s concern is that this option might affect the integrity of existing services. Therefore, some clarity should be provided. In particular:

- 1) this flexibility should in no case question the exclusive allocation of the 470-694 MHz band to broadcasting services;
- 2) the flexibility should be implemented only in Member States where DTT is not a major distribution platform;
- 3) any possible interference should be avoided, and the measures and costs thereof should be under the responsibility of MNOs;
- 4) supplementary downlink should not be allowed in countries , such as Italy, where there is an intensive use of SFN networks.

It is perhaps worth considering whether this technical solution could be initially tested in the 700 MHz band upon implementation of the release decision, allowing some broadcast services while continuing to pursue a more efficient use of this band.

- **CONCLUSIONS**

In conclusion, Mediaset welcomes the RSPG opinion which sets the basis for defining and promoting an EU-led approach prior to WRC-15. A win-win solution, a gradual approach towards a coordinated release of the 700 MHz can be tailored under the auspices of the RSPG, so that Europe will be in a position to defend its pervasive and pro-competitive access to quality television services in a fully digital environment. Thus far, all major technology enhancements have been carried out in a seamless fashion, with no disruption and no additional costs to European citizens. Let’s continue to work together to deliver quality, diversity and equitable access.

Mediaset S.p.A.

[Transparency register n. 91471238809-21](#)

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¹² Mediaset welcomes the recent position officially taken by some EU Member States, in Particular Italy/Vatican and the UK, at the CPG-15 PTD #8 in Edinburg asking to leave the 470-694 MHz out of the band supported for Mobile Broadband.