



APWPT comments for the launch of the NGMN "5G Work Programme"¹

1. Linear growth in spectrum does not lead to a non-linear or exponential growth of wireless data. Therefore, only mobile service infrastructures based on a small cell structure will enable the use of high frequencies which can support high data rates and a large capacity.
2. However the 4G practice has shown the following scenario:
 - First, the wireless providers invest in "connectivity" - the client is reachable in the entire area, but unfortunately only with 2G and 3G.
 - In regions with high capacity requirements (mostly urban areas) there is a time delay (based on a sufficient number of customer complaints?) before additional infrastructure upgrading the bands to higher frequencies are deployed.
 - At the same token, mobile phone companies tend to invest outside of metropolitan areas in small cell infrastructure only in certain spots with a high "return on investment".
3. The mobile providers continue to use their assets and facilities that are already written off as long as possible to generate more income. This means that GSM, UMTS and 4G are operated in parallel, and thus substantial spectrum resources are wasted.

Therefore, APWPT is concerned that 5G networks will be built in parallel to GSM, UMTS and 4G. Efficient spectrum utilization, however, requires the use of the latest technologies. A logical consequence is that 4G and/or 5G must be used in all mobile frequency bands.

4. **The APWPT also fears that discussion about the use of frequencies below 1 GHz for 5G (and to some extent above that limit) will have the effect that all remaining bands that are currently available for PMSE will go to mobile applications in the foreseeable future.** The phrase "below 6GHz" shows that the mobile operators will exert massive pressure on the regulators etc. to act in that way.

The APWPT therefore demands that the harmonization efforts for PMSE for the daily production must consider the following principles:

- It has been proven that the duplex gaps alone are insufficient for PMSE to cover the demands of the daily production, in particular, due their low bandwidth and (partial) noise interference².
- For larger events that take place more and more often with high PMSE demands, there are currently no plans at all how to deal with the spectrum demands. This must change.
- All PMSE applications must also be covered. The situation is particularly critical for video PMSE, as these applications are directly affected by the changes in the mobile spectrum use.
- Ultimately, the PMSE frequencies must be harmonized to the largest extent possible on a global scale. The next WRC based on the work of the ITU-R JTG 4-5-6-7 provides an excellent opportunity to discuss SAB/SAP (PMSE) in parallel and take the necessary steps to safeguard PMSE.

¹ <https://www.ngmn.org/news/ngmn-news/ngmn-news-details/article/ngmn-alliance-pushes-for-5g-work-programme.html>

² <http://www.apwpt.org/downloads/using-mobile-duplex-gaps-and-guard-bands-for-a.pdf>

About the APWPT

APWPT is an international non-profit organisation, which is representing the needs of all users of the Programme Making & Special Event ("PMSE") sector.

Members of APWPT include PMSE organisations, users and manufacturers. The APWPT directly and indirectly represents far over 25,000 members of the PMSE community in Europe and beyond. PMSE is crucial on a daily basis for the production of content that has received world-wide acclaim and continues to attract a global audience. A vast array of organisations are reliant on radio spectrum for the production of content for Performing Arts, Broadcasting, News Gathering, Independent Film and TV Production, Corporate Events, Concerts, Night Venues, Sports Events, Churches, etc. In addition, other sectors that utilise the current UHF spectrum include the Health Service, Education, Local Government, Political Programming and Conferencing.

For more information about the goals and achievements of the APWPT please visit our website at www.apwpt.org or contact us at

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