

## **Study on the current and prospective use of the 900 MHz band by GSM as a technology of reference, considering present and future Union policies**

The study analyses market and technology developments and their potential effect on policy objectives for GSM, the Global System for Mobile Communications.

The study evaluates whether it is still useful to maintain the protection for GSM services from interference from any new technology which may be introduced into the 900 MHz band, as guaranteed today by the 'GSM' directive (Directive 87/372/EC modified by Directive 2009/114/EC).

With the introduction of 5G, mobile operators are progressively likely to want to use their spectrum holdings in 900 MHz band for the latest available technologies, which use spectrum more efficiently. The study concludes that there are no technical or legal obstacles, including the GSM directive, that would prevent from doing so. The market assessment shows that GSM is already going through a phasing out process that will lead to a complete global sunset of the technology by 2030 at the latest. However, combined with the expectations of end users (especially those involved in providing public interest services such as eCall) and their timelines to migrate to new technologies, there may be a need to preserve the continuity of GSM technology.

The GSM directive in its current formulation does not pose any issue to making the most efficient use of spectrum and should therefore remain in force. It also grants protection against harmful interference to the existing GSM networks, which benefits those services that have no alternative connectivity method.

The study recommends at this stage to maintain the GSM directive without limitations. Any future repeal of the protected status of GSM and GSM Directive will follow the sunset of legacy networks in Europe.

Final Study Report (Reference: SMART 2019/0006)

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