QUESTION ITU-R 242/1[[1]](#footnote-1)\*

Spectrum management framework for the introduction of
Ground- and Wall- Penetrating Radar (GPR/WPR) imaging systems

(2021)

The ITU Radiocommunication Assembly,

considering

*a)* that Ground- and Wall- Penetrating Radar (GPR/WPR) imaging systems have been used by professionals for over 30 years globally in investigation and detection applications;

*b)* that GPR/WPR emissions spread over a very large frequency range and the frequency bands used by GPR/WPR tends to expand gradually;

*c)* that GPR/WPR devices may be integrated into the scope of Ultra-wideband (UWB), but it may differ with characteristics, technical requirements and the impact on other radiocommunication services of generic UWB devices;

*d)* that the emissions from GPR/WPR devices have not been studied in detail on the current complex electromagnetic environment;

*e)* that GPR/WPR imaging systems present a potential to transmit in bands allocated to passive services that are covered by footnote No. **5.340** of the Radio Regulations (RR) that prohibits all emissions;

*f)* that the licensing regime for imaging systems varies between administrations, with most handling the issue with experimental or short time licenses,

considering further

*a)* that a report on the status of GPR/WPR system by administrations would support ITU membership, in particular developing countries which plan to introduce a system for the use of GPR/WPR;

*b)* that the sharing of experiences and case studies of countries that have already introduced and used GPR/WPR within their institutions will greatly contribute to the efficient spectrum use and promotion,

noting

*a)* that [ECC Decision (06)08](https://docdb.cept.org/document/402) shows the conditions for use of the radio spectrum by GPR/WPR imaging system;

*b)* that [FCC Title 47 Part 15.509](https://www.ecfr.gov/cgi-bin/text-idx?SID=7e5b42c309088bd040ec002f9a51551e&mc=true&node=se47.1.15_1509&rgn=div8) presents Technical requirements for GPR/WPR systems,

decides that the following Questions should be studied

1 What technologies and what range of frequencies are used in GPR/WPR systems?

2 What are the conditions and measures to ensure that GPR/WPR devices do not cause harmful interference to any radiocommunication service, in particular those services operating in accordance with RR No. **5.340**?

3 What are the current spectrum management policies and future plans of the national authorities for management and authorization of the use of GPR/WPR?

further decides

1 that the results of the above studies should be included in Recommendation(s) and/or Report(s), as appropriate;

2 that the above studies should be completed by 2027.

Category: S3

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1. \* In the year 2023, Radiocommunication Study Group 1 extended the completion date of studies for this Question. [↑](#footnote-ref-1)