# Revision of ECC Report 173 on current use and future trends for the fixed services in Europe

**Group:** WG SE, SE 19
**Submission dates:** 12-05-2016 - 14-10-2016
**Introduction:**

WG SE and SE19 are in the process of updating ECC Report 173, which was prepared between 2010 and 2012 to update previous ECC Report 003 of 2002.

As part of this exercise, a first Questionnaire was sent in 2014 to Administrations, operators and industry to seek the information related to frequencies above 50 GHz, since limited information was available for these bands when ECC Report 173 was published in 2012.

WG SE considered that it would be useful for both industry and administrations to have a new and updated situation of the fixed service in Europe across all frequency bands.  This is of particular importance and timely taking into account new technology developments and requirements in the fixed service, and other competing requirements (e.g. studies towards WRC-19) so that a complete picture is available of current and future spectrum use and requirements of the fixed service.

WG SE tasked PT SE19 to extend the revision of ECC Report 173 to all frequency ranges.

**Main Tasks of the new study**

The main tasks of the new study are:

1. To provide a comprehensive overview of the development of the fixed service since the original data since 1998 and to document the expected trends, spectrum use and requirements in CEPT post-2016. This should be of interest to administrations, manufacturers and telecom operators;
2. To provide a reference source for administrations, manufacturers and operators to better understand the market and spectrum issues surrounding the developments of the fixed service in CEPT;
3. To provide information and highlight areas that might require further attention of CEPT.

**Questions:**

**Purpose of the questionnaire**

The questionnaire consists of two parts: **Part 1** containing a list of questions (for both industry and administrations) and **Part 2** consisting of a table with a band-by-band analysis (mainly addressed to administrations).

The purpose is to collect information on the actual utilisation of the various frequency bands, where the fixed service is currently deployed and to gain an overview of the likely spectrum requirements in the future, as well as the technology trends. This information will be used to analyse the current situation with respect to the development of the fixed service, and to allow a better vision of future deployment trends and spectrum issues.

CEPT Administrations, operators and manufacturers are invited to contribute to the study by answering this questionnaire and providing figures for the excel table or otherwise submitting their views on the subjects of the study.

**PART 1:** Please respond to the questions below.

**PART 2:** Please fill in the [table](file:///C%3A%5Cfiles%5C1051%5CTools%20and%20Services%5CECC%20Questionnaires%5CWorksheet%20SE%2816%29029A3_Questionnaire%20on%20revision%20of%20ECC%20Report%20173-rev1.xls) in the Excel file for those frequency bands which you use or intend to use in the future for the fixed service as shown in the example [here](file:///C%3A%5Cfiles%5C1051%5CTools%20and%20Services%5CECC%20Questionnaires%5CSE%2816%29029A3_Image.docx). The Excel document should be uploaded under question 12.

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**PART 1 - Questions on the current national practices for allocation and assignment of fixed service frequencies/licences and future trends/requirements (for both administrations and stakeholders)**

|  |  |
| --- | --- |
| Responding organisation:  |  |
| Country:  |  |
| Address:  |  |
| E-mail:  |  |
| Contact name:  |  |

**PART 1 - Questions on the current national practices for allocation and assignment of fixed service frequencies/licences and future trends/requirements (for both administrations and stakeholders):**

**Question 1:** What are the expected further changes that are likely to happen in various frequency ranges with respect to the fixed service applications (e.g. number of links, capacity, modulation, network topology etc.) over the next few years in the following frequency ranges? Note: In particular please provide information about remaining Fixed Service use in the 14.25-14.50 GHz band (national use).

1 - 10 GHz

10 to 20 GHz

20 to 50 GHz

**Question 2:** What are the new technology developments/requirements that are going to drive future FWS use in existing bands below 50 GHz? Please give details. Note: Please indicate which technology/requirements and timeframes (e.g. small cell/macro cell backhaul, NLOS and other FWS applications).

**Question 3:** Are there any bands that are likely to become strategically more important than others considering all frequency bands? Please provide details. Note: Please indicate which bands, possibly timeframes and reasons (i.e. driven by trends in various FWS applications including backhaul for mobile).

**Question 4:** Considering all frequency bands, how is a given frequency band selected over others (i.e. technical, economical criteria and other policy considerations)? Are there any changes foreseen in the criteria used when selecting a specific frequency band? Please give details.

**Question 5:** Which frequency bands do you believe are suitable for licence exemptions and/or block assignment (e.g. by auction) in future?

**Question 6:** For bands above 50 GHz, what are the planning methods for links and interference criteria used and how are the interference calculations done? Is there any lack of availability of appropriate methodology and models? Please give details. (In case no reply was provided in 2014 Questionnaire or if the situation has changed). Note: Please refer to ITU-R/ECC deliverables or any other public information (e.g. propagation models, interference criteria, etc.)

**Question 7:** In your spectrum engineering process, do you find the ten consecutive severely errored seconds criterion, derived from ITU-T G.827 and extended to ethernet by ITU-T Y.1563, still to be appropriate to assess availability in packet based networks? If not, which criterion do you use and why do you prefer it?

**Question 8:** Are the spectrum management/licensing approaches used in your administration likely to change? Please give details.

**Question 9:** Are there any FWS bands which are congested? If yes, please give details including how the congestion is defined/measured?

**Question 10:** Do you have any experience or plans of sharing spectrum for both FWS backhaul and mobile access technologies in the same bands? Please give details, in particular of any studies on this subject.

**Question 11:** You may also add any other statements or observations that you wish to make on the subject of fixed services development.

**PART 2 - Current use and future developments of fixed service**

Please fill in the table in the Excel file which can be downloaded at the top of this page for those frequency bands which you use or intend to use in the future for the fixed service, as shown in the example available at the top of the page.

**Question 12:** Please upload the completed Excel file here.