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### Our mission

The European Communications Office (ECO) is the permanent office of the European Conference of Postal and Telecommunications Administrations (CEPT), an organisation where policymakers and regulators from 46 European countries co-operate and contribute to developing more vibrant and dynamic markets for electronic communications and postal services.

The ECO provides expert advice and administrative support to CEPT to help it to develop and deliver its policies and decisions effectively and transparently. The Office is a European centre of expertise in electronic communications providing a platform for CEPT member countries and concerned stakeholders to discuss, debate and collaborate on advancing European communications policy for the benefit of all Europe's citizens.



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### Chairperson's Foreword

In May 2021, after the conclusion of her two terms, Marta Leandro stepped down as Chairperson of the ECO Council and in her stead I was elected into the position. I am no stranger to the work of the Office and the Council. The first meeting I attended was in November 2000 as Council secretary, then served as the Councillor from Ireland and was elected for two terms as Vice-Chair in 2015.

In my day job, I am the Radio Spectrum Advisor to the Commission for Communications Regulation in Ireland and I cannot see myself doing anything but being involved in the management of the radio spectrum resource. What better place to view the changes in technology than from the ECO that plays such a vital role as an information provider and support for administrations in Europe as they try to manage that spectrum resource.

As I took up the position as Chair of the ECO Council in May, Europe was beginning to emerge from the Covid-19 lockdowns and while the December Council meeting was held virtually I was able to travel and attend the meeting in the Danish capital. This gave me the opportunity to reacquaint myself with and see first-hand the dedication and commitment shown by the 12 individuals who work at the Office.

My visit gave the staff the opportunity to provide feedback on the running of the Office and to tell me about their experiences over the past couple of years, of closing the office, working from home, and redefining how they carried out their roles. What stood out to me was the ability of the Office to fulfil its brief even when its team members were scattered all over Denmark and beyond. This small team has done an exceptional job.

The year was not without its sadness. Mark Thomas, who acted as director of the ECO between 2007 and 2015 died after a battle with cancer in July. Mark's work was transformational in many respects and his contribution to the ECO is still felt today. I offer my condolences to his family and those of you who got to work with and know him over the years. On a brighter note, I would like to welcome Ms Sidsel Huse, of Norway, who has come on as Vice-Chair. I look forward to working with her over the next few years.

As I settle into my role as Chairperson of the ECO Council, I do so knowing that the CEPT is facing immense challenges ahead. But I am also confident that the Office is ready and prepared to support the CEPT through each of these challenges as they arise.

Dr Samuel Ritchie Council Chairperson

### Director's Statement

When historians look back on the year 2021, they will see a time not just of crisis in the world but also one of great innovation. We have seen it in nearly every area of society over the past year: from the world's scientists who collaborated and innovated to produce life-saving vaccines, to the artists who used their talents to create art in lockdown, to the companies that adopted new practices or pivoted their businesses in order to survive.

I am proud to say our own team at the ECO has also shown true innovation over the past year, particularly in the development of a brand-new technological tool for hybrid meetings – i.e. those meetings in which people can attend either online or in-person.

If 2020 was to be defined by virtual meetings, 2021 and the years that follow may very well be defined by the hybrid meeting. Some people have been able to travel in 2021 but it was important that those who were unable to get on a plane were not prevented from 'attending' meetings. Their contribution is valuable.

Kenneth Karlsson, our IT Expert, has worked with tech professionals, and with valuable input from the ECO Team to develop the MeetingHub, an online tool that creates a more seamless experience for hybrid meetings. You will get a more detailed explanation on this new creation on pages 8 and 9 but I wanted to use this opportunity to commend Kenneth and the team for their success.

I expect this is a tool that will be used for many years to come across the three committees in CEPT: ECC, Com-ITU and CERP. Already, we are seeing the benefits of giving people the option of attending online or in person – there has been an increase in participation at some meetings which can be directly attributed to giving people the option of attending online.

Unsurprisingly, the introduction of a dual way of working has thrown challenges up for meeting organisers and the entire ECO staff, which has reminded me once again what a dedicated team I have. Indeed, the ECO team has been hard at work over the past year, and I can only repeat what I have said in my previous statements: without their willingness to be flexible, to improvise and to innovate, the Office would be nothing. Time and time again, I have been impressed by how our staff has been able to adapt to the new way of work.

While the world was changing around us, I was lucky to steer a steady ship at the ECO in 2021. The nature of our job is that experts change roles every eight years but this year was the first in my tenure where there were no vacancies in the office. It gave us some breathing space, and allowed us as a team to settle back into office life.

We have much to be proud of from this past year, and our work has spanned everything from conducting public consultations to contributing to meetings. It has been a busy and productive year.

Per Christensen ECO Director

### The ECO: Our role, our team

#### Our role

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The European Communications Office (ECO) provides expert advice and administrative support to CEPT and its three committees. We help CEPT to develop and deliver its policies and decisions effectively and transparently. Our duties are threefold: to provide a European centre of expertise in electronic communications; to support and contribute to the work of the three CEPT Committees; and to manage CEPT's day-to-day activities. We also have a core objective of maximising the effectiveness of CEPT's Electronic Communications Committee (ECC).

The primary objective of the ECC is to enable the efficient, effective and harmonised use of the radio spectrum, satellite orbits and numbering resources across Europe. To achieve its mission, the ECC develops common policies and regulations for Europe in the field of electronic communications, taking into account European and international legislation. It also prepares European common proposals to represent European interests in international organisations, especially in the International Telecommunications Union (ITU).

The ECO supports the ECC by:

- providing a platform based on trust and openness to improve collaboration across its membership and extending its reach beyond Europe;
- ensuring its communications are transparent, consistent and effective;
- delivering new initiatives and providing strategic input to its work; and
- supporting CEPT's bottom-up approach to policy development by consensus.

We help CEPT to develop and deliver its policies and decisions effectively and transparently.

We work effectively as a team and we strive to identify new and innovative ways to maximise our impact and value to CEPT. 

#### Meet the ECO team

The ECO team comprises 12 people, usually based at its offices in Copenhagen, Denmark. The team includes the Director, six experts in the field of electronic communications – recruited internationally from across Europe – and five experienced team members from Denmark with responsibility for facilities management, IT, finance, human resources and general day-today administrative support to CEPT and its three committees.

Together, our team members have the expertise and experience necessary to deliver the specialist services required of the ECO. We work effectively as a team, and we strive to identify new and innovative ways to maximise our impact and value to CEPT.







Deputy Director, Portugal

Per Christensen Director, Denmark



Doriana Guiducci Italy (Spectrum Engineering, Frequency Management, WRC preparation, liaison with academia and research bodies)



United Kingdom (Frequency Management, EFIS Management)



SAT MoU, Administration)

Susanne Have

Germany (Com-ITU; Numbering and Networks)

Denmark (Finance, Human Resources, Projects)



Mette Tobiassen

Anne-Dorthe Hjelm Christensen Denmark (Public consultations, ECO Documentation Database, EFIS, Administration)









#### Peter Faris Ireland (Spectrum Engineering, Frequency Management, Mobile Broadband)

(Frequency Management, Spectrum Engineering, EC co-ordination, ETSI co-ordination)



Zeljko Tabakovic Croatia (Spectrum Engineering, SEAMCAT, Frequency Management, Broadcasting Plan Management)



Denmark (CEPT, ECO Council, CERP,

Vibeke Hansen Denmark (Webmaster, Reception, Premises, Meetings, Administration)



Kenneth Karlsson Denmark (IT support and development. Technical enquiries, Projects)

### Creating a new tool for hybrid working

If 2020 was the year of remote working due to the Covid-19 outbreak, 2021 was when people and businesses across the world tried to get back to some normality – even if that normality was sometimes punctuated with lockdowns.

Before Covid-19 entered the lexicon of people across the world, the vast majority of the ECC's meetings, those of its working groups and project teams, were held in-person. In mid-March 2020, everything changed.

The ECC's meetings were shifted online using the ECO's GoToMeeting platform. Virtual meetings raised unprecedented challenges for the ECO team as the numbers attending meetings started to rise – with people not having to board planes, more were willing to attend – and meetings generally taking longer due to the fact that people didn't have to board planes.

As the pandemic evolved, the ECC regularly reviewed its policy around online meetings. By late 2020, CEPT issued guidance around what the future format of meetings would look like as the pandemic situation began to stabilise across Europe.

Instead of a return to the pre-pandemic style of in-person meetings only, it was recognised that not everyone would be willing to travel. A return to 'normal' meant embracing the hybrid meeting, and giving people the option of attending meetings in-person or remotely.

"It was decided that we should try hybrid meetings on an experimental basis," says Jaime Afonso, Deputy Director of the ECO. "This was the first time CEPT used this as a full fledge concept."

This left the ECO team and particularly Kenneth Karlsson, its IT expert, with a particular challenge: how to ensure that those attending meetings remotely could get as much from them as those attending in-person.

Virtual participation in meetings was not entirely a Covid-19 phenomenon. The ECO had been using the GoToMeeting platform for a number of years to handle remote participation, and in 2019 expanded its use by connecting AV infrastructure to the Office's main meeting room. This meant that virtual attendees could both hear the speakers who were in the room and see them through a video feed.

However, the system wasn't perfect. Remote participants could not see the other participants gathered at the meeting which

meant they could not always see the person who was speaking. The ECO now wants to introduce a solution that will allow a camera to focus on the speaker in the room.

As meetings were held throughout 2020, the ECO sought feedback from the participants about the GoToMeeting platform. Generally, those surveyed felt there was "room for improvement" in relation to how the meetings were managed. For example, they wanted a raise-hands function, simple polling and a more secure way to access virtual meetings so that uninvited people could not attend.

While many of the existing remote meeting software tools – such as Zoom or Microsoft Teams – had some of those features, they never had them all. For example, while the raise-hand function exists in some of these platforms, it doesn't have the ability to list those raised hands in chronological order.

"They didn't have the function and there was no prospect of having it," says Kenneth. "So we developed our own tool".

Enter the MeetingHub, a web tool that is seen as a "binding tool between the virtual and the physical".

Kenneth worked with a team of software engineers to develop the tool in a five month-long project. MeetingHub was released in the second half of 2021, and can be run on the desktop of meeting attendees as a separate tool to the GoToMeeting application, or on a smartphone.

"This handheld capability means virtual attendees can declutter their desktop screen, using that to solely focus on the meeting through GoToMeeting," says Kenneth.

"One of the biggest challenges was rolling MeetingHub out. We had to educate meeting participants on using the tool and the benefits of it," he says.

The MeetingHub has a range of capabilities on the management of meetings, including raise-hands functionality, simple polling and a more secure way to access virtual meetings in order to avoid uninvited attendees. Overall, this tool leverages the hybrid meetings as it allows the chair to better manage the interventions of both those physically present at the meeting and those attending remotely.

As well as improving the experience for online participants, the MeetingHub makes it easier for organisers of meetings to manage them, according to Kenneth.

hand function on MeetingHub if they want to ask a question. the list of requests will be visible in the correct order."

how they felt.

"In the ECO office, complementing the MeetingHub, we will have video cameras installed which will be dynamic which means they will move and shift their focus towards the speaker, as they will link up with the microphones and be able to see when they are turned on," says Kenneth.



### Supporting CEPT



and its three autonomous business committees.

The ECO provides a secretariat for CEPT (including its Presidency)



**European Conference of Postal** and Telecommunications Administrations - 46 European countries cooperating to regulate posts, radio spectrum and communications networks

#### Our structure



CEPT has a Co-Presidency comprising the Chairs of the three committees.

CEPT Electronic Communications Co



The ECC develops common policies and regulations for Europe in the field of electronic communications and related applications and prepares European positions and common proposals to represent European interests in international organisations, especially in the ITU.

The European Committee for Postal Regulation (CERP) is responsible for postal regulation, as well as European co-ordination and preparation for meetings of the Universal Postal Union (UPU).

Mr Germán Vázquez, Spain, is Chair of CERP.

Mr Chris Woolford, UK, is Chair of the ECC.

The CEPT Co-Presidency co-ordinates the activities of the three business committees in order to contribute to developing more vibrant and dynamic markets for electronic communications and postal services - for the social and economic benefit of all Europe's citizens.

As the permanent office of CEPT, the ECO supports the Presidency as follows:

- 1) It handles day-to-day correspondence to and from the Presidency, with some secretarial and advisory support for co-ordination between the Co-Presidents;
- 2) It provides and maintains content for the different sections of the CEPT web portal that relate to the Presidency and CEPT as a parent organisation for its three committees;
- Chairs where appropriate;
- 4) It collects CEPT member financial contributions, used to pay for the ECO's support and external expenditure as required, namely the costs of CEPT Assemblies, and some of the facilities provided for CEPT delegations at international conferences; and
- 5) It makes logistical arrangements and provides secretariat support for CEPT Assemblies as required.

The CEPT Assembly is the supreme body of the organisation, and is convened as required. There was no need to call for an Assembly meeting in 2021.





The Committee for ITU Policy (Com-ITU) organises and co-ordinates CEPT actions for the preparation for, and during the course of, the activities of the ITU Council, ITU Plenipotentiary Conferences, WTDC, WTSA and other meetings as appropriate.

Ms Cristiana Flutur, Romania, is Chair of Com-ITU.

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3) It prepares reports to the membership on the activities of the Presidency and provides advice and assistance to the individual committee

SECTION ONE Overview

# 2021 in brief

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We participated in meetings and events outside of the CEPT framework, promoting our deliverables and the positions agreed within the

We continued to strengthen collaboration with the academic world involved in research on spectrum issues

Our Documentation Database

(DocDB) received about

280 000 page views from

around the world. Of our almost

700 ECC Deliverables in force,

40 000 copies were downloaded

from DocDB

We issued v5.4.2 of the SEAMCAT spectrum analysis tool, which included important improvements and new features such as on propagation models, interference calculations and enhancements to the user interface

We carried out 48 public consultations, which were used to inform the substance of new or revised ECC Deliverables. The office analysed and processed 256 responses to them

The ECO team organised more than 330 web meetings and 4 face-to-face meetings to support the work of CEPT Committees. Almost 12 000 delegates registered for participation

Our experts actively contributed to these meetings shared mainly between the six international experts from our team, plus the Director

In 2021, 36 countries contributed to the financing of the ECO

The ECO created and managed 14 questionnaires and processed around 330 individual responses in order to fully inform the work of the ECC

We published 3 ECC newsletters containing 7 specific articles on spectrum and numbering management topics

The CEPT portal, managed by the ECO, had more than 1.2 million page views

> During 2021, more than 560 meeting days were used by all **CEPT** Committees

## SECTION TWO Review of the Year

However, despite the adverse impacts, the CEPT Committees have



### **2.1** Providing specialist support to the CEPT Committees

One of the ECO's core duties is to actively contribute to the work of the CEPT Committees, in particular the ECC. We aim to maximise the ECC's overall effectiveness by providing first-class administrative support, regulatory and technical expertise and a range of specialist support services.

Our work in supporting the CEPT Committees is manifold. In 2021 we:

- Participated in and actively contributed to Working Groups and Project Teams right across the ECC;
- Promoted the ECC's deliverables externally and helped advance topics of interest internally;
- Supported the development of the 2020-2025 ECC Strategic Plan;
- · Assisted the CERP Chair with the development and distribution of the CERP newsletter, managed the meeting schedule and maintained the content on the CERP web page;
- Supported the Com-ITU Chair in preparing and distributing inputs to the ITU conferences;
- · Continued to upgrade and improve our tools and services such as SEAMCAT and EFIS, the ECO Frequency Information System;
- · Provided guidance on rules of procedure and working methods for each of the committees when required;
- Conducted public consultations and questionnaires on behalf of CEPT Committees to fully inform their work;
- Provided a central source for specialist information, and
- · Supported the CEPT Network of Women initiative to promote gender equality, equity and parity in the work of CEPT.

#### Contributing to the improvement of ECC's efficiency and its working processes

ECO experts strive to have a positive impact on the ECC's activities through their continuous work as embedded members of various Working Groups and Project Teams. Our team members participate as recognised observers in almost every meeting of the ECC and its many subordinate groups. We assist in the preparation and management of the meetings and the necessary follow-up work.

Our continued presence and active participation in these meetings demonstrate our important role in striving to continuously improve the ECC's efficiency, the effectiveness of its working processes and, ultimately, the quality of its deliverables.

We aim to maximise the ECC's overall effectiveness by providing first-class administrative support, regulatory and technical expertise and a range of specialist support services.

### Structure of ECC – December 2021



The ECO's participation in a group is driven by its objective to achieve positive outcomes through constructive engagement and by providing contributions to further the group's work, in particular, during the development of ECC Deliverables and the definition of CEPT common positions.

We help prepare and submit contributions to meetings in areas where our expertise is both beneficial and relevant to the work. As described in subsequent sections, our experts analyse the responses from public consultations and from questionnaires, a task that is essential as an evidence-based approach to fully inform the development of ECC Deliverables. Our bespoke tools, such as EFIS and SEAMCAT, facilitate the research and analysis that is required to provide sound reasoning and justification for the ECC's policy work. With EFIS, we contribute to ECC activities by analysing spectrum usage and related information. With SEAMCAT, we provide a software tool to carry out detailed compatibility and sharing studies between radiocommunication systems.

Our bespoke tools, such as EFIS and SEAMCAT, facilitate the research and analysis that is required to provide sound reasoning and justification for the ECC's policy work.

Our actions in 2021 were executed with the following objectives in mind:

- To promote the ECC's achievements through the development of electronic newsletters and communications initiatives;
- To facilitate an exchange of views through the organisation of workshops on thematic issues and the development of training sessions to increase stakeholders' awareness of ECC activities;
- To encourage the implementation of ECC deliverables by CEPT administrations and to assist administrations in making proposals for studies within the ECC;
- To increase the visibility of the ECC through presentations at relevant workshops and events;
- To support the ECC through continuous co-operation with other bodies, including the European Commission, ETSI, other external organisations and academia;
- To respond to the needs of various stakeholders and provide the necessary support to administrations in maintaining their national data in the system.

Further details on the ECO's specific activities in support of these objectives are outlined in later sections.

As a result of our involvement in the full range of ECC activities and our important co-ordination role, we also contribute to fostering co-operation between different groups on topics of mutual interest. This is an integral role for us in order to increase efficiency and consistency within the ECC and to avoid duplication of effort across different groups.

When meetings are in progress, our primary role is to provide assistance to the Chair and to advise and support the groups in their activities. Our central position and objective perspectives give us unique insights into the groups' work and often lead us to conduct drafting activities and to provide guidance on resolving specific issues.

Our central position and objective perspectives give us unique insights into the groups' work and often lead us to conduct drafting activities and to provide guidance on resolving specific issues.

When a meeting ends, our support continues. We editorialise and process draft deliverables, as well as developing summaries of meeting outcomes for publication on the ECC web page. We also assist in the general processes to make sure that the work in between meetings develop smoothly, for example, through the correspondence activity where so agreed.

In 2021, we actively contributed to the vast majority of ECC work items which led to new deliverables. Occasionally, the ECO is invited to provide a Chair for a Project Team or a Forum Group. Our leadership is called upon particularly in cases where we have been playing a central role in the related topic.

In this context, the Spectrum Engineering Expert Zeljko Tabakovic has chaired since October 2019, the Project Team STG, which is responsible for the development of the CEPT compatibility tool, SEAMCAT, within the Working Group Spectrum Engineering (WG SE). Moreover, in 2021, Jaime Afonso, ECO Deputy Director, was appointed as the interim Chair of SE40, until the process for nomination of the new chair was completed. Similarly, Robin Donoghue, our Frequency Management Expert, acted as chair of FM58 during the 3Q of 2021.

### Supporting the ECC on procedural matters and working arrangements

The ECO plays a central role in the ECC's overall governance, in particular on matters related to rules of procedure and working methods. ECO experts develop and maintain an in-depth understanding of these fundamental documents. We are often called upon to clarify various articles and provisions by members on issues such as the principles for appointment of chairs and vice-chairs and participation of observers in meetings. The Office also endeavours to ensure that the ECC is driven by a consistent set of rules, that its working arrangements are efficient and that it makes the best use of electronic means as appropriate. One key element of the ECC's work to improve Europe's spectrum efficiency through different forms of harmonisation is given mainly through its deliverables, namely Decisions, Recommendations and Reports. We publish these documents in the ECO's Documentation Database (DocDB). Publishing the extent of national implementation of ECC Decisions, and some Recommendations, is also an important part of making these measures effective. Therefore, following the provisions in the Rules of Procedure and the Working Methods of the ECC, the Office encourages CEPT administrations to update their national implementation or alternatively advise us of any changes to their implementation of Decisions and Recommendations as soon as they are made. ECO has communicated with CEPT administrations to confirm the list of national contact points and has also provided the ECC with guidance and advice on the follow up regarding national implementation of ECC Decisions and ECC Recommendations.

ECC Working Methods



## Supporting the maintenance of partnership with other organisations

The Office maintains a set of co-operation agreements – Memoranda of Understanding (MoU) and Letters of Understanding (LoU) – between the ECC and its external partners. The Office has a standing objective to assist the ECC in identifying possible future LoU partners.

This year two new LoUs were signed between the ECC and its partners in order to establish a close working relationship and foster co-operation with the Wi-SUN Alliance and the European Hearing Instrument Manufacturers Association (EHIMA).

### Conducting questionnaires – promoting a fully-informed approach to policy development

Questionnaires are an integral part of ensuring an evidencebased and fully informed approach to policy development within the framework of the three CEPT Committees: ECC, Com-ITU and CERP. These questionnaires are generally used to gather preliminary information from administrations and other stakeholders to improve the development of deliverables and to identify relevant technical, regulatory and market trends.

The ECO assists the relevant groups in the development of the questionnaires, acts as a contact point to release them and collects the corresponding responses. In most cases, the ECO also processes the information collected through the questionnaires and analyses and summarises the responses. Those responses are then considered by the responsible group in order to decide how to best utilise the information. Questionnaires can also be initiated by national administrations seeking to benefit from the experiences of colleagues in other countries on certain topics.

In 2021, the ECO managed 14 questionnaires to CEPT administrations and other stakeholders on behalf of ECC groups and national administrations. The questionnaires addressed a wide range of topics in the spectrum and numbering management areas, and the ECO processed almost 330 responses in total. Moreover, following the initiative to trial the hybrid meeting format during the autumn, four surveys were carried out to collect the feedback of the participants. It gathered around 150 responses from the various stakeholders. The questionnaire tool was also used to collect the manifestation of interests for the CEPT Mentoring Programme for female newcomers and this significantly helped forming the Mentor-Mentee pairs. All of these questionnaires were managed using the ECO's online questionnaire tool which has been available on the CEPT portal since 2013. The tool facilitates the distribution of the questionnaires and collates the responses received, which makes the task of analysing the results much more efficient.

We now have the results of almost 170 questionnaires stored in our systems. This is a valuable repository of information and a first point of reference for CEPT administrations when considering a new policy proposal or work item.

Questionnaires managed by the ECO in 2021	Replies received
Electronic questionnaires triggered by ECC groups	
CEPT NOW4WRC23 Mentoring Programme	19
Questionnaire to CEPT administrations on the availability of the 694-790 MHz band for Audio PMSE	37
Questionnaire to administrations on the inventory of CEPT administration with satellite monitoring capabilities	16
Questionnaire to CEPT administrations on Interference Statistics 2020	35
Questionnaire to CEPT administrations on possible use of the 5350-5470 MHz band by Meteorological Radars	33
Questionnaire on Use of Frequency Bands 6425-7025 MHz and 7025-7125 MHz in relation to studies in CEPT on WRC-23 agenda item 1.2	32
Questionnaire to CEPT administrations on treatment of Foreign Maritime Radio Operator's Certificates	22
Electronic questionnaires on numbering and network matters triggered by national administrations	
Portugal Questionnaire: Sub-assignment of E.164 numbers – Update	17
Luxembourgish and German Questionnaire: Sponsored Roaming	9
Malta Questionnaire: Applicable fee imposed by transferring providers for refund requests under Article 106	16
Russian Questionnaire: ENUM implementation in CEPT countries	12
Portugal Questionnaire: Eligibility criteria for the assignment of E.164 numbers to Wholesale Providers	15
CERP questionnaires	
Questionnaire about the UPU Congress	29
CERP working paper on the opening of the UPU	32

#### Developing the SEAMCAT spectrum analysis tool

#### SEAMCAT in brief

The Spectrum Engineering Advanced Monte Carlo Analysis Tool (SEAMCAT) is a software tool which can be used for modelling, simulation and analysis of sharing and compatibility scenarios between radiocommunications systems. SEAMCAT is managed, developed and maintained by ECO as an open source and free-of-charge tool in co-operation with the SEAMCAT Technical Group (STG), a project team of the ECC Working Group Spectrum Engineering (WG SE), and stakeholders. SEAMCAT as a tool is platform independent, reliable and transparent in calculations, flexible to simulate different scenarios, user friendly and of reasonable computation speed on personal computers.

The algorithms in SEAMCAT use the process of repeated random sampling of parameters which allows statistical modelling of diverse complex spectrum engineering and wireless compatibility scenarios. SEAMCAT can assess the potential interference between different radiocommunication systems that operate in shared, overlapping or adjacent frequency bands. SEAMCAT is distributed with a predefined set of libraries that are at the user's disposal but allows the user to build customised libraries – such as radio systems, antennas, spectrum masks, propagation models etc. SEAMCAT is not designed as a black box and users can design, adapt, and exchange system and simulation parameters, as well as view intermediate results of calculations and export results. Users are welcome to join the SEAMCAT community to contribute to the development of the software and its libraries.

Interested in joining the SEAMCAT development community? More information at: https://seamcat.cept.org

### SEAMCAT

Spectrum Engineering Advanced Monte Carlo Analysis Tool The tool is updated on a regular basis and is downloadable free of charge at: https://seamcat.cept.org Development of SEAMCAT continued with one official version release, five test versions and two external plugin releases in 2021. SEAMCAT development is actively focused on administration and other user needs encountered in simulation studies, enhancements and introducing new features, as well as reliability and quality improvements of the tool. In 2021, 45 different items were included in the software including new features, additions, enhancements and corrections. The current official version is v5.4.2, released in July 2021. ECO has also continuously updated the online SEAMCAT handbook and developed a revision of ECC Report 252 in order to help users in handling the tool. Work has also been done on the issue tracking system, code repository enhancements and SEAMCAT web portal developments.

Listening to, and carefully considering, the views of all concerned stakeholders is critical to delivering fair and effective policies and regulations.

As well as maintaining and developing SEAMCAT, the ECO continues to raise awareness of the tool. The following timeline presents the main activities related to SEAMCAT during 2021:

laguaru	Release of external SEAMCAT DTTB plugin (Rec ITU-R BT.2136)
January	Release of external SEAMCAT PMP plugin (Rec ITU-R P.1411-10/Rec. ITU-R M.2135)
April	Release of SEAMCAT v5.4.2 Alpha 4
lues	Release of SEAMCAT v5.4.2 Alpha 5
June	Release of SEAMCAT v5.4.2 Beta 1
July	Release of SEAMCAT v5.4.2
August	SADC SEAMCAT training
October	Release of SEAMCAT v5.4.3 Alpha 1
	Release of SEAMCAT v5.4.3 Alpha 2
November	CEPT SEAMCAT workshop for beginners
	UAE SEAMCAT workshop

#### Responding to the ECC needs for SEAMCAT development

The main purpose for the continuous development of SEAMCAT is to provide the ECC and its stakeholders with an open-source, free-of-charge software tool that allows them to perform coexistence studies. With that objective in mind, the ECO and the SEAMCAT Technical Group (STG) work in close co-operation with the relevant ECC groups and respond to their needs.

It is important to remember that SEAMCAT was conceived as a co-operative project in which CEPT administrations contribute not only with ideas and suggestions but also with specific proposals for the enhancement of the tool. In that respect, the ECO continuously encourages CEPT administrations and industry stakeholders to increase their involvement in the development of the tool, as they are ultimately the main beneficiaries of this work. To this effect the ECO promotes contributions to the tool through regular workshops and training sessions.

It is a very positive endorsement of the efforts made within CEPT that spectrum engineers involved in coexistence studies outside of Europe can also benefit from access to a continuously evolving tool.



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#### SEAMCAT Technical Group

The STG is a project team under WG SE that joins the expertise of administrations and industry with the aim to:

- Provide technical support on the development of SEAMCAT, including the drafting of supporting user manuals;
- Liaise with and contribute to relevant groups within the ECC to respond to their needs related to SEAMCAT implementation; and
- Promote SEAMCAT in Europe and beyond.

STG decides which changes should be made to the software to respond to the needs both of ECC Working Groups and Project Teams. In 2021, STG addressed a wide range of topics, including: the development of new and improved SEAMCAT tools such as the Terrain profile tool which considers DEM terrain; introducing new and updated propagation models; enhancements in antenna gain plugin with new interpolation models for H&V antenna and antenna pattern display features; advancements in systems; extension to the command line; large simulations performance enhancements; improving calculation speed, and improvements to the graphical user interface.

The importance of the work of STG is vital for the development of ECC Deliverables that encompass coexistence studies between wireless systems which require the use of a Monte Carlo simulator. Therefore, stakeholders involved in activities in WG SE project teams are regularly invited to take part in STG's work.

#### Conducting consultations to deliver better policies

The ECC adopts a transparent and evidence-based approach to developing its deliverables. Listening to, and carefully considering, the views of all concerned stakeholders is critical to delivering fair and effective policies and regulations. Central to the success of this approach is the public consultation process; the ECO takes responsibility for conducting consultations on behalf of the ECC (available at https://cept.org/ecc/tools-and-services/ecc-

#### 22 consultation).

The role of the ECO in the consultation process is two-fold:

• Administrative responsibility: This includes the editing and formatting of the draft deliverables, the launching of the consultation process, the collection of the responses and, in many cases, the submission of a formal response to the consultation.

• Expert analysis: We perform a detailed analysis of the responses received. Those responses can include general comments, which provide views on the topics under consideration, and specific proposals (editorial, substantive or technical) intended to inform the draft deliverable under consultation. An amended version of the draft ECC Deliverable is then produced which takes due account of the views expressed by all stakeholders. The output of this activity frames the discussions that lead to the final approval of ECC Deliverables and, ultimately, their adoption and publication in the ECO Documentation Database (DocDB).

In 2021, we carried out 48 public consultations, which were used to inform the substance of new or revised ECC Deliverables. This represented an increase of more than 30% compared to public consultations in 2020. In total, we processed and analysed a total of 256 public consultation responses from administrations and other stakeholders.

#### Maintaining a record of important deliverables (DocDB)

The ECC's policies on spectrum and numbering matters are given effect through its deliverables, namely ECC Decisions, Recommendations and Reports. Once these deliverables are approved at ECC or Working Group level, we make them publicly available in DocDB.

DocDB also provides access to related European Commission Decisions and applicable EU legislation for each ECC Deliverable thereby providing a one-stop shop for those seeking context and background for these policies.

ECCO E	CO Documentation Database	<u>o</u>	4
uropeon Th ommunications an fice leg tec res	ECO Documentation Database provides an easily accessible library of ECC deliverables (decisions, into reports) in the field of radio spectrum, numbering and networks regulation. Related documents, including also care ETS inclusional standards are also provided for information, where applicable. All related ECD initial stranders produced by EED-CA, can be download by EED-CA, can be download performances and the distrance of the standards is available in res.	ommendations a relevant EC eliverables, ided from their	9
atest news	Popular	Quick Search	
ar 04 2022	ECC Oo to EFIS	ERCDEC(99)06	Search
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ar 04 2022	List of all Harmonised European Standards used in the European Common Allocation Table (ECA Table)	With SEAMCAT files	
pdate History		from to	MHz v
	Implementation Overview for ECC Decisions	Application Term	
	SRD implementation in Europe is found under ERC Recommendation 70-03 on Short Range Devloes.	Application term	¥
	PMSE implementation in Europe is found under ERC Recommendation 25-10 on Audio and Video PMSE.	ETSI Harmonized Standar	rd v
	Fixed Service implementation in Europe is found under ECO Report 04.	Organising Group	
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In 2021, there were over 280 000 page views of DocDB from users all over the world. They had access to all the documents available in DocDB, including almost 700 ECC Deliverables in force, an improved archive of withdrawn or superseded deliverables and many additional informative documents. This corresponds to 460 ECC Reports, 81 CEPT Reports, 107 ECC Recommendations and 115 ECC/ERC Decisions. These documents were downloaded more than 40 000 times in 2021.

#### What is EFIS?

Since its establishment in 2002, the ECO Frequency Information System (EFIS) has been administered by the ECO and managed under the supervision of the ECC through its EFIS Maintenance Group (EFIS/MG). ECC Decision (01)03 defines the needs for EFIS for the whole CEPT membership.

In 2007, EFIS became the 'European Spectrum Information Portal'. By doing this it fulfilled EC Decision 2007/344/EC on the harmonised availability of information regarding spectrum use in European Union Member States.

Freq. bands Allocation - Application - Documents Interfaces Right Of Use Tools - Information -

Some popular documents are automatically created from the data held within EFIS. This includes the European Common Allocation Table (ECA Table) in ERC Report 25.

eco	ECO Frequency Inform	nation System
ropean mmunications fice	EFIS is the tool to fulfill EC Decision 2007/ information regarding spectrum use in Eu EFIS.	344/EC on the harmonised availability of rope and the ECC Decision ECC/DEC/(01)03 on
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ed Aug 11 14:46:34 CEST 2021	Documents	Search by
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ational Frequency Tables	Recommendation 704 ERC Recommendation in Europe.	13 70-03 on Short Range Devices Bulgaria
		Search

In 2021 there were enhancements made to the EFIS both from a user perspective and for the CEPT administrations who provide the information relevant to their national frequency allocations. For users, the search results are now shown in a clearer more intuitive graphical format with enhanced options to export the data. For administrations the security of their national data has been enhanced with a more robust two-stage identification needed to log-in. The EFIS now has built-in tutorials to assist administrations upload their national frequency information data.

Some 46 CEPT administrations now publish national frequency information in EFIS. All information in EFIS is available to the public at https://efis.cept.org/.

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#### Providing a central source of specialist information

To support the ECC in its goal to be a focal point in Europe for information on electronic communications, the ECO provides relevant information on various topics. It does this through the ECC website and through our suite of tools, which are further described in this Report. A short, non-exhaustive guide is provided below. It describes the main types of information made available on the ECC website and in our databases and includes links to the respective areas.

	SUBJECTS	DOCUMENTS	NATIONAL INFORMATION	SPECIALIST SERVICES	EVENTS
ECC Website http://cept.org/ecc	Group area: provides access to information on ongoing activities and progress within each group belonging to the ECC structure <b>Topics:</b> information on a wide range of topics and long-term studies on which the ECC is currently working or has recently developed regulations	Meeting documents: access to contributions, working documents and meeting reports from all groups within the ECC Newsletters: three to four ECC electronic newsletters published each year to promote ECC work items and their context within regulatory and market developments Framework: reference documents which set up the framework and targets of ECC activities	<b>Contact points:</b> national contacts of CEPT administrations and on special topics <b>Regulatory information:</b> information on national regulations applicable in specific spectrum and numbering topics	Consultation: information on public consultations and links to draft deliverables under consultation Questionnaires: links to current and past questionnaires carried out to fully inform the development of ECC deliverables	ECC Meeting calendar: information on upcoming meetings News: information outcomes of recent meetings, events and monthly summaries of ECC activities Workshops: information, presentations and summary Presentations: made by ECO and ECC officials at different fora
ECO Documentation Database (ECODOCDB) https://docdb.cept.org		Deliverables: library of Decisions, Recommendations, Reports approved by ECC with associated archive and related information Related documentation: links to relevant documents (from EC and ETSI) related to ECC deliverables	Implementation status: national implementation of ECC deliverables		
ECO Frequency Information System (EFIS) https://efis.cept.org/	Modules: specific features gathering information (ECC deliverables, national usage, associated statistics) on key spectrum topics (short range devices, mobile bands, fixed service, PMSE)	Regulatory references: links to ECC, EC and ETSI relevant documents Spectrum inventory: library of information documents for spectrum inventory purposes	Frequency tables: tables of frequency use in national CEPT administrations Spectrum inventory: national information on frequency usage and spectrum rights		
ECC Work Programme Database (ECC WP DB) https://eccwp.cept.org/	Work items: follow the progress of, and find additional information on, individual items in the work programme of ECC and its subordinate groups				
SEAMCAT https://seamcat.cept.org	Software: access to SEAMCAT software, source code, release information and system requirements	SEAMCAT Handbook and ECC Report 252 as well as links to the document area of the SEAMCAT Technical Group		SEAMCAT community: information on bug reporting, related templates, bug reporting instructions and practical tips	SEAMCAT Workshops: links to information on upcoming SEAMCAT workshops
700 MHz Information Repository http://700mhz.cept.org/ countries			700 MHz repository: national information on the co-ordination status in the 700 MHz band		

In addition to the tools and services described in other sections of this Report, the ECO develops and maintains several pages on the ECC website dedicated to key topics such as those highlighted in the ECC Strategic Plan. They are designed to respond to some of the needs identified within the ECC by CEPT administrations and other stakeholders.

The main objective is to reflect on the progress made in the ECC Work Programme on work items related to these topics, to develop material which may complement, inform, support or promote ECC Deliverables and to make specific information – i.e. national contact points, national regulatory frameworks etc. – available to stakeholders. For historical purposes, we also maintain an archive of past topics which were previously the focus of ECC work.

#### ECO Bulletins

The purpose of the ECO Bulletin is to highlight technical, regulatory and market developments in the area of electronic communications in regions outside of Europe. The ECO brings to each ECC meeting a bulletin on relevant activities in radio communications and numbering in other regions outside CEPT. This specialist information, compiled by ECO, validates and further informs the ECC's work by examining and comparing the policy approaches taken in other regions of the world. It also helps identify issues that could potentially be addressed in Europe in the near future. In 2021, we produced three ECO Bulletins, which were submitted to each of the three ECC Plenary Meetings, and then disseminated them to the relevant subordinate groups. They addressed 31 articles covering a broad range of developments around the world.



## Providing support to Com-ITU in its international engagement

In 2021, the ECO assisted the Committee for ITU Policy (Com-ITU) and its four project teams with the preparations for three major ITU events – the World Telecommunications Standardisation Assembly (WTSA-20), the World Telecommunication Development Conference (WTDC-21), and the Plenipotentiary Conference (PP-22). ECO organised six web meetings throughout the year for Com-ITU's co-ordination activities inter alia for the 2021 clusters of Council Working Groups (CWGs) and Expert Groups (EGs) and the ITU 2021 virtual consultation of councillors. The latter decided to hold the WTSA-20 from 1-9 March 2022 in Geneva, Switzerland. Although Com-ITU's Project Team on strategic ITU-T issues (PT TU-T) had nearly concluded its preparations for WTSA-20 back in 2020, two further European Common Proposals (ECPs) for WTSA-20 were prepared. This made a total of 30 ECPs for WTSA-20. With regard to WTDC-21, Com-ITU's preparations have already been underway. Com-ITU's project team (PT WTDC-21), tasked with the region's preparations for the conference, was assisted by the ECO with the preparation of 13 ECPs and with Com-ITU's co-ordination activities for two WTDC-21 Inter-Regional Meetings (IRMs). WTDC-21 was originally scheduled to take place in Addis Ababa, Ethiopia from on 8-19 November 2021. After a consultation of ITU Council Member States, and with the concurrence of all ITU Member States, the conference was ultimately rescheduled to 6-16 June 2022.

Com-ITU also commenced its preparations for ITU's supreme governing body – the 2022 Plenipotentiary Conference (PP-22) set to convene from 26 September to 14 October 2022 in Bucharest, Romania. The ECO assisted with the establishment of two new project teams on policy topics (PT PP22-Policy) and on financial, management and organisational issues (PT PP22-FIMO). ECO set up the group pages, published the PT's' terms of reference, established email reflectors, and assisted the two newly elected chairmen with the preliminary PP-22 preparations.







### 2.2 Meeting the objectives of the ECC Strategic Plan

The ECO plays an important role in assisting the ECC to implement its five-year strategic plan as outlined in previous sections. The strategic plan outlines the policy goals, key challenges and priorities that lay the foundation for the ECC's activities over the course of the five-year period. The ECO contributes to the overall fulfilment of the plan through its specialist support, which is outlined in the following sections of this report. We are also assigned particular tasks in the context of the ECC's role as a focal point in Europe on electronic communications and its co-operation with other bodies.

#### The new CEPT Roadmap for 5G and beyond

The CEPT Roadmap for "5G and beyond", launched in November 2020, builds on the previous CEPT 5G Roadmap and identifies new topics which are foreseen as relevant in the short/medium term related to 5G and its evolution towards future technologies. It takes into account the **2020-2025 ECC Strategic Plan** which identifies wireless broadband and connectivity as a major topic to be studied during this period.

The Roadmap contains elements on spectrum harmonisation as well as other spectrum challenges such as the use of active antenna systems, the possible role of new technologies such as artificial intelligence and blockchain in spectrum management, and the regulatory options and challenges for frequencies in the 'THz' range.

The CEPT Roadmap for "5G and beyond" is regularly reviewed in order to report on the progress of ECC activities as well as to update the list of actions where appropriate. ECO assists this review process by identifying necessary updates to be presented to the ECC Steering Group for consideration.

ECO also maintains a **topic page** on the ECC website on 5G developments within CEPT, in order to keep the wider user community informed on the ECC's activities related to the Roadmap. This page is regularly updated with information on new deliverables and progress of work items.

#### Next generation satellite systems

The recent increased demand for spectrum for satellite-based Internet of Things (IoT) systems has created opportunities and challenges, in the "Little LEO" constellations, otherwise known as Satellite Personal Communications Systems (S-PCS) operating below 1 GHz. The ECO has been particularly active in providing clear and concise **information** to all stakeholders on this complex field, including an **article** in the September edition of the ECC Newsletter written by ECO experts. Furthermore, it has contributed in ECC groups at all levels, providing expert advice to ensure that the process and framework on spectrum access is better streamlined to facilitate the emerging initiatives in this field.

#### WRC-23 preparation

As the next World Radiocommunication Conference in 2023 (WRC-23) approaches, the CEPT preparation has intensified and the opportunities to exchange views with other regional organisations has become more crucial. The Office has provided continuous assistance to the Conference Preparatory Group and the Project Teams tasked for the preparation of WRC-23. In preparing for WRC-23, CEPT has fully embraced at European level the ITU Network of Women for WRC-23 (NOW4WRC23). This initiative has been promoted in ITU and welcomed in CEPT to encourage and empower more women to participate in the next conference. Several actions have been implemented during the year with the support and involvement of the Office.

#### Network of Women for WRC-23:

#### "Each one of us can make a difference. Together we make change."

The CEPT Network of Women for WRC-23 (NOW4WRC23) initiative fully supports the principles of gender equality, equity and parity in the work of CEPT towards WRC-23. The NOW4WRC23 addresses specific needs of women delegates within CEPT and promotes women's leadership in the CEPT preparatory process for WRC-23.

To better organise and lead the activities in the Conference Preparatory Group (CPG) and the other Project Teams, the Network of Women has established a co-ordination team, which is guided by the CEPT Co-Chair for the NOW4WRC23 and operates with the assistance of the ECO expert at CPG.

During the year, the activities of the NOW4WRC23 have progressively increased and become an integral part of the groups tasked for the preparation of the conference. At every meeting of the CPG and the other Project Teams, the Network of Women has organised sessions to update the delegates on the actions started in CEPT, inform on the initiatives in ITU and stimulate the discussion. Several keynotes have been invited also from other regions, with the aim to share experience on the actions in the different regions and to learn from the different contexts where the NOW4WRC23 operates. ECO has helped with the preparation of these sessions, provided support during the meetings and assisted the invited speakers as appropriate.

To give the proper visibility to the numerous activities in progress, the Office has developed a new area on the ECC website dedicated to the CEPT NOW4WRC23.

It was also agreed that the electronic tools provided by ECO, including the Forum, should be used for the preparation of the work in the Correspondence Group of the Radiocommunication Advisory Group (RAG) in ITU on the implementation of the WRC-19 Gender Declaration.

A major achievement during the year has been the launch in September of the CEPT Mentoring Programme, which promotes gender equality, equity and parity in CEPT by providing the development and the sharing of knowledge and experience. The programme is intended to match women newcomers with experienced delegates, without regards to gender, who participate in the CEPT preparation towards the WRC-23. This would facilitate ad-hoc knowledge sharing, long-term capacity building, and organisational learning within the CEPT preparatory process to WRC-23.

In co-ordination with the CEPT Co-Chair for the NOW4WRC23, ECO has drafted the guidelines of the mentoring programme, collected the applications for mentors and mentees, assisted in matching pairs and, in general, supported the implementation of the whole Programme. After one month, to give time for applications, the mentoring programme was launched.

The Office is also planning to organise in 2022 a CEPT workshop on spectrum management and WRC process. This event is part of the series of training events that ECO periodically organises for newcomers in CEPT and will be linked with the activities within the NOW4WRC23 initiative.

#### Promoting ECC Deliverables and activities through electronic newsletters and communications initiatives

As the administrative office of CEPT, the ECO leads in promoting the work of the three business committees. In particular, the Office has an explicit role in developing a communications programme to promote the activities, results and achievements of the ECC towards all its stakeholders, internal and external. As part of this brief, the ECO publishes a periodic online newsletter three to four times per year. The ECC Newsletter is designed to provide readers with a greater insight into the world of spectrum management and numbering in an accessible form while providing information on some of the important technology, regulatory and market developments in Europe.

In 2021, the office released three editions of the ECC Newsletters containing seven articles on various spectrum and numbering subjects. In addition to the publication and distribution of the three published editions, we also identified the topics for inclusion and our experts authored all articles covered in those editions.



#### Getting on board with 5G for passengers on aircraft and shins

As the take-up of 5G technology becomes ubiquitous across Europe, the Electronic Communications Committee (ECC) must reexamine regulations for aircraft and ships, writes Peter Faris, Spectrum Expert, European Cor cations Office

EC-CEPT Workshop on WRC-23 hears a wide range of views

December 2021 Articles

- The May edition included three articles. Two articles were spectrum management related. One was based on the European Table of Frequency Allocations and the related database; the other was on Programme Making and Special Events (PMSE) as one of the enablers for the creation of audio and video content distributed and consumed globally using a variety of platforms. Another article explored the policy situation regarding calls to emergency services from devices without a SIM card (SIM-less) or being in a "limited service state".
- The September newsletter contained two articles. One focused on satellite-based Internet of Things systems with an overview on ongoing and planned ECC activities for S-PCS below 1 GHz. The other, dealt with Radio Local Area Networks and in particular focused on the unlicensed use of the 5 and 6 GHz bands in Europe.
- The most recent edition of the newsletter, published in December 2021, addressed two articles. One was on 5G for passengers on aircraft/ships, while the other looked at the workshop regarding EU policy and CEPT preparation ahead of WRC-23. The former informed of the ECC regulations to ensure that consumers enjoy the same high-speed connectivity while travelling as they experience in other everyday situations. The article on the WRC-23 workshop provided a high-level overview of the topics discussed in the event and the status quo regarding the preparation of WRC-23.

The newsletters were distributed electronically to 3 200 stakeholders and were published on the ECC website. You can subscribe to the ECC Newsletter for free on our ECC newsletter page, where an online archive of earlier editions is also available.

Throughout the year, the ECO also informed ECC Newsletter subscribers about the ECC's main activities and events, such as the results from ECC Plenary meetings and the updates on the foreseen meetings, including the possibility to return to physical meetings. Subscribers were also notified about questionnaires, public consultations and any releases of new versions of our tools and services.

The publication of ECC Newsletters and of news releases are backed up by short notifications, disseminated through the ECC Twitter account, @CEPT\_ECC, which is managed by the ECO. Our use of Twitter continues to remain focused on the communication of factual information, rather than opinions, concerning the ECC's activities. During ECC workshops and major conferences, such as WRC, we endeavour to provide frequent updates to our Twitter followers on relevant issues and insights as they arise.



In order to describe the more routine activities within the ECC in greater detail, we also maintained our efforts in the development and publication of monthly news summaries on the ECC website. These monthly summaries provide a snapshot of the main outcomes of ECC Working Group and Project Team meetings and events that take place each month. They are developed from contributions provided by the ECO experts responsible for the various ECC groups. Throughout the year, the monthly summaries were published as news items on the ECC web page. (https:// www.cept.org/ecc).

ECC MONTHLY NEWS SUMMARY FOR DECEMBER 2020

#### 15 Jan 2021, 12:46

This summary provides a roundup of the main outcomes of ECC Working Group and Project Team meetings which have taker place in December 2020. Due to the ongoing coronavirus crisis, all meetings of ECC groups have been moved online for the foreseeable future.

During this time, we will endeavour to provide updates on the work of the different ECC groups. For further information, please watch out for communications from the CEPT Presidency which will be posted <u>here</u>, keep an eye on the <u>ECC Meeting</u> <u>Calendar</u> and for e-mail communications from the respective ECC groups of which you are a member.

#### Included for this period

- 1-3 December: SE19 progressed on the draft ECC Report on microwave PMP technologies based on active antennas for SG backhaul,
  2-4 and 7 December: SE40 resolved all comments from public consultation on the draft revision of the ECC Report 271, dealing with the tated study with the SpaceX NGSO constellation:
- · 3 December: EFIS/MG agreed a revision of the Decision (01)03 Annex 1 to be forwarded to WG FI · 8-11 December: CPG approved initial draft CEPT Briefs, assigned the general agenda items of WRC-23 to PTA and provided further
- e to PTB and ECC PT1 on studies on Article 21 of the Radio Regulations -10 December: FMS6 initiated the amendment of ECCREC/(05/06 and ECCREC/(06/02)
   -9-10 December: STG progressed the work on the enhancements of the SEAMCAT software for the Generic System Plugin, Cellular
- system, EPP, Tools: 11 December: SE7 progressed work on a draft ECC Report on coexistence studies for the potential introduction of new terrestrial applications operating in the 2483 5-2500 MHz frequency band: • 14-16 December: SE21 continued its work on a draft ECC Recommendation on receiver resilience to transmission in adjacent frequency.
- ges, and a draft ECC Report on measurement methodologies for 5G AAS in the field: . 15-16 December: FMS8 further developed the ECC Report on the digitisation of maritime voice VHF and started development of the ECC n to operate Autonomous Maritime Radio Devices (AMRD) in CEP1
- 14-16 December: SE24 made progress on the draft ECC Reports for all its work items
  15-17 December: WG NaN adopted two amended ECC Recommendations and appr
  200 December: WG NaN adopted two amended ECC Recommendations and appr
- endations and approved one further deliverable for public consultation. WG NaN agreed to withdraw ECC Recommendation (04)04: • 16-18 December: FM44 continued discussions on the update of ERC Decision (99)06 regarding S-PCS satellite systems operating below

1-3 December 2020 - The Spectrum Engineering Project Team SE19, fixed service (FS), met via web meeting SE19 has made good progress on the draft ECC Report on microwave PMP technologies based on active antennas for 5G backhaul and furthe developed the working document towards a questionnaire to collect the views from administrations and industry in order to provide the basis to

#### Organising workshops on thematic issues and developing training sessions to increase awareness of ECC working methods and activities

Thematic workshops provide an excellent platform for exchanging information, raising awareness of ECC activities and informing ECC Deliverables and follow-up activities. The ECO plays a central and leading role in organising these events.

#### Joint EC-CEPT Workshop on WRC-23 preparation 25 November 2021

The European Commission and CEPT organised an online public workshop with stakeholders on the EU policy ahead of the ITU World Radiocommunication Conference 2023 (WRC-23) on 25 November 2021. CEPT provided an insight into the European preparation for WRC-23 and highlighted several key agenda items which are expected to be the most debatable at the conference. A **summary** of the workshop was prepared by the ECO.

#### CEPT SEAMCAT workshop for beginners 16 - 17 November 2021

The ECO held an online SEAMCAT workshop for beginners on 16 and 17 November 2021. The workshop focused on an introduction to SEAMCAT for compatibility studies. ECO presented on how to specify interfering and victim system characteristics;, on how to use libraries and plugins for specifying emission masks;, blocking characteristics antenna parameters, and plugins for propagation models. Participants of the workshop were told how to use the SEAMCAT tools, how to setup and run the simulation scenario and how to analyse the simulation results. The workshop was attended by more than 50 participants from CEPT members, organisations, companies and research institutions. Feedback from the workshop participants was very positive and experience gained will be used for the organisation of future workshops. The material from this workshop is available **here**.

#### Training session on SEAMCAT to SADC 26 August 2021

During the third Preparatory Meeting for WRC-23, ECO organised an online SEAMCAT session for the member states of the Southern African Development Community (SADC). The technical session was followed by more than 100 participants, and presented functionalities of the SEAMCAT tool and examples of compatibility studies between wireless systems. Presentations included an explanation of setting up radiocommunication systems and scenario parameters. SADC Member States showed their intent to use the SEAMCAT tool in performing sharing and compatibility analysis between radiocommunication systems of different technologies in the preparatory work for the WRC-23.

#### Workshop on SEAMCAT to UAE - 15 November 2021

ECO held an online introductory SEAMCAT training session for United Arab Emirates (UAE) radiocommunication experts. The training presented on how to set up interfering and victim system characteristics, how to determine propagation models to apply and set up a simulation scenario for generic systems, and how to run the simulation and analyse the results. The workshop was attended by around 20 participants with positive feedback.

#### Thematic workshop on satellite issues

The ECO had envisaged the organisation of a thematic workshop on satellite related topics aiming to address the technical and regulatory challenges raised by new satellite technologies and applications (e.g. mega constellations, satellite M2M/IoT, ESIM). It also wanted to look at the need to continue to meet the requirements of existing applications. However, the workshop was postponed due to the pandemic. The ECO remains committed to organising this workshop when feasible in future.

### Increasing the visibility of the ECC through presentations at events

During the year, ECO experts attended a range of conferences and workshops where we delivered presentations on thematic topics while promoting the work of the ECC on related matters. These events provide the Office with an opportunity to share information with relevant stakeholders and to increase awareness and understanding about the ECC's areas of expertise, its policies and regulations.

#### Spectrum management, regulation and standardisation for Energy Efficiency in Future Networks – PAINLESS – TeamUp5G Winter School

In December 2021, the ECO was invited to take part in a panel on energy efficient networks as part of a Winter School event organised by the Marie Curie PAINLESS and TeamUp5G Innovative Training Networks. The ECO provided a presentation called "The European regulatory context for spectrum management – Implications for energy efficiency" and participated in the panel discussion. The presentation discussed the implications of spectrum regulation on energy efficiency in the context of the ECC Strategic Plan.

### Spectrum sharing for the digital ecosystem towards 6G – Joint EUCNC and 6G Summit 2021

Together with the Joint Research Centre (JRC) of the European Commission of Ispra, Italy, ECO organised a full-day workshop on "Spectrum sharing for the digital ecosystem towards 6G", during the 2021 Joint EuCNC and 6G Summit, (EUCNC21, 8-11 June 2021). In line with the strategic principles of the ECC Strategic Plan, the workshop focused on the current status and future strategic challenges for studies, techniques and regulation to enable the shared access to spectrum. The ECO provided presentations on relevant activities within ECC on spectrum sharing and on the use of the SEAMCAT tool to support these activities.

#### "LSA – Spectrum sharing model", ANACOM

In May 2021, the Portuguese regulator (ANACOM) organised a webinar focused on Licensed Shared Access (LSA). It provided an opportunity to share the views of the different stakeholders, including the European Commission, ETSI and CEPT. The ECO **presented** an overview of the work carried out in CEPT and the most relevant activities related to LSA.

#### Presentation at RED-CA

The Radio Equipment Directive Compliance Association (RED-CA) is an association of notified bodies under the Radio Equipment Directive. It meets twice a year. The RED-CA hosts these meetings to discuss current issues relating to radiocommunications with representatives of the EU Commission, ECC, ETSI, ADCO RED and authorities from MRA countries. The ECO presented at both web-meetings in May and November 2021. In our presentations, the ECO highlighted the recently published ECC Deliverables, information about recent changes for RLAN, 60 GHz, short range devices and the European Common Allocation Table (ERC Report 25) now also available in Excel format.

### Supporting the ECC and CEPT through continuous co-operation with other organisations

The ECC represents European interests in the ITU on matters related to the use of the radio spectrum, satellite orbits and numbering resources. The ECC also recognises the benefits of a strong partnership with all key stakeholders, including ETSI and the European Commission, to facilitate the delivery of technologies and services for the benefit of society. In this context, the ECO plays a fundamental role in building effective working relationships with these key partners of the ECC so that policy, regulation and standards development activities are aligned. In order to increase the visibility of the ECC's achievements, the ECO is also active in helping the ECC extend its reach on a range of topics towards other external organisations, including the other regional telecommunication organisations, and also towards universities and research institutions.

The ECO plays a fundamental role in building effective working relationships with key partners of the ECC so that policy, regulation and standards development activities are aligned.



#### ETSI

The European Telecommunications Standards Institute, ETSI, is an essential partner of CEPT and its committees, in particular the ECC. The ECO plays an important role in this partnership through its direct participation in ETSI activities and its close co-operation with the ETSI Secretariat.

The primary objective of our involvement in ETSI activities is to ensure that the technical requirements resulting from the regulations and studies developed by the ECC are understood and properly taken into account in the related standardisation activities within ETSI.

The ECC and ETSI's arrangements for co-operation on standardisation and regulation for radiocommunications devices and systems is formalised in a Memorandum of Understanding (MoU).

The ETSI Technical Committee on EMC and Radio Spectrum Matters (TC ERM) is our main focus concerning radio spectrum issues. It is within this forum that the co-operation process is initiated in response to an industry proposal for a new system, service or application. A work item is created and considered for adoption in accordance with the ETSI Technical Working Procedures which are part of the ETSI Directives. The ETSI work programme is then updated accordingly (https://portal.etsi.org/).

Sometimes a proposal for a new or revised radiocommunications system, service or application is first presented within the ECC, typically within the ECC Working Group Frequency Management (WG FM). In such cases, the relevant ECC group will inform ETSI TC ERM about the proposed new work item and, when relevant, will advise the promoter of the new system to initiate a system reference document (SRdoc) and/or European standard through the relevant ETSI mechanisms. You can read more about the co-operation process at **cept.org** 

One of TC ERM's duties is to be responsible for ETSI's interface with the ECC on radio matters. In 2021 the ECO closely followed the TC ERM to contribute to the continued consistency between ECC and ETSI activities. The ECC website contains a dedicated page (https://cept.org/ecc/ecc-and-etsi) describing how our two organisations work together. It includes a set of documents and tools designed to strengthen the synergy between ECC and ETSI. This page contains useful reference information, developed in co-operation with the ETSI Secretariat, including:

- A SRdoc mapping spreadsheet providing a mapping of ETSI SRdocs (published and drafts) and the resulting ECC activities (mainly work items from the ECC Work Programme Database and then, once approved, corresponding deliverables in the ECO DocDB).
- A relationship matrix reflecting the work and information connections between groups within both organisations, including where there is ongoing co-operation between the different ECC and ETSI groups. The matrix is updated several times per year, subject to requirements.
  - A **brochure** which provides an introduction to the regulatory environment in Europe for radio equipment and spectrum.
  - Published ETSI Harmonised Standards (covering article 3.2 of the Radio Equipment Directive) which contain requirements which relate to both effectively use and support the efficient use of radio spectrum in order to avoid harmful interference and the list with the references to harmonised standards published by the Commission in the Official Journal of the European Union, are also referred.

In the field of numbering and networks, the ECC and ETSI maintain close co-operation on numbering and networks matters through technical liaison and participation by representatives of both parties in relevant Working Group, Project Team and Technical Committee meetings in accordance with the MoU. In 2021, the ECO, representing ECC interests, continued its participation in ETSI's Technical Committee on Emergency Telecommunications (EMTEL). This year the ETSI Board approved EMTEL's request to convert its status from a Special Committee to a Technical Committee, thus lifting the restriction to deliver Technical Specifications (TS) and Technical Reports (TR) and now allowing EMTEL to produce European Standards (ENs) in response to standardisation requests from the European Commission (EC SRs).

The ECO also participated in ETSI's Industry Specification Group (ISG) Fifth Generation Fixed Network (F5G), dedicated to studying the fixed network evolution required to match and enhance the benefits that 5G has brought to mobile networks and communications.



The ECO continued its task of providing regular support to the ECC as an observer representing the ECC at all the 2021 meetings of both the Radio Spectrum Committee (RSC) of the European Commission (EC) and of the Radio Spectrum Policy Group.

In particular, the ECO prepared the summary report of ECC activities for each RSC meeting and supported the ECC Chair during his presentation, when required. In 2021, we also participated in two ECC-EC consultation meetings held in March and October as part of the ECC Delegation.

Our involvement in these activities is mainly driven by the need to ensure an efficient interface between the ECC and the EC in implementing the Radio Spectrum Decision. Furthermore, it also provides us with valuable background information that we can feed into our activities within the relevant ECC groups, in particular when developing CEPT Reports in response to Mandates from the EC.

The Radio Equipment Directive Expert Group (RED EG) has been set up by the Commission's Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs ("DG GROW"). It assists the European Commission in questions concerning the implementation of the Radio Equipment Directive (2014/53/EU, RED) and in the preparation of legislative proposals and policy initiatives concerning radio equipment. The RED EG is composed of the Member States' authorities, European standardisation bodies, the association of conformity assessment bodies and organisations operating at European level such as manufacturers, industrial users, equipment vendors and others. In 2021, the ECO participated in four meetings of the RED EG.

#### ADCO RED and RED CA

Directive 2014/53/EU, "The Radio Equipment Directive (RED)", specifies requirements that products must meet in order to be placed on the market and put into service. It includes the essential requirements for radio equipment to both use and support the efficient use of radio spectrum in order to avoid harmful interference. The implementation of the RED at European level involves several organisations including the European Commission and ETSI. The ECC has a key role to play in this area through its technical expertise in radio spectrum. The ECO has been active for many years in supporting ECC in this context. It led us to act as an ECC focal point with two influential bodies for the implementation of the RED: the Administrative Co-operation in RED (ADCO RED) and the RED Compliance Association (RED CA). Both of these are major groups of European regulators in the RED compliance area. In 2021, we attended one meeting of ADCO RED and two meetings of RED-CA where the ECO presented the ongoing activities in ECC, as described above.

### ECO activities in relation to International Telecommunication Union (ITU)

ECO experts participate in the relevant study group meetings of ITU within the ITU-R (Radiocommunication) and ITU-T (Telecommunication Standardisation) sectors. Our participation in these meetings provides us with the opportunity to promote European achievements to other regions of the world and to engage and exchange views with regulatory experts on activities and developments outside of Europe. In 2021, the activities of ITU continued to be impacted by COVID-19, and participation in relevant ITU-R and ITU-T activities was undertaken on a virtual basis.

## Promoting relationships between CEPT and the other regional telecommunication organisations

As the CEPT secretariat, the ECO acts as a permanent point of contact with other regional telecommunication organisations recognised by the ITU. We are the point of contact in the course of preparations for the main ITU conferences. In 2021, CEPT's engagement with ITU was mainly dominated by preparations for the World Telecommunication Standardisation Assembly (WTSA-20), the World Telecommunication Development Conference (WTDC-21), and the 2022 Plenipotentiary Conference (PP-22).

The ECO organised the participation of CEPT delegations in meetings of the Inter-American Telecommunication Commission (CITEL), the African Telecommunications Union (ATU), Arab Spectrum Management Group (ASMG) and Asia-Pacific Telecommunity (APT) and vice versa. Our central position in the exchange between CEPT and the other regional telecommunication organisations helped us to facilitate closer working relationships and a spirit of co-operation, collaboration and compromise.

The co-operation with the other regional organisations continued also for the preparation of the World Radiocommunication Conference in 2023. ECO has compiled and maintained the informative material on the status of the WRC-23 preparation in CEPT, which has been distributed to the other regional organisations. ECO has also attended most of the WRC-23 preparatory meetings outside CEPT, as part of the CEPT delegation.

### 2.3 Managing our operational support

The ECO is committed to delivering first-class support to CEPT and its committees through the provision of a wide range of administrative, operational and expert services. This back-end support is vital in the day-to-day operations of CEPT as it provides our stakeholders with timely and relevant information on technical, regulatory and market developments, as well as providing a central point for enquiries and facilitating communications between our members throughout Europe.

Our objective is to ensure that relevant information is available to people when they need it, and we do this through managing, maintaining and updating various information sources on our web portal throughout the year. We also provide meeting facilities, both physical and virtual, as well as offering administrative support to CEPT and its committees as required.

#### Managing CEPT's family of websites



The CEPT portal provides a window for the world

to explore the work of CEPT and its committees.

It provides a common platform to the websites of CEPT, its three

Office (ECO) – the five entities that constitute the CEPT family.

In 2021, building on the previous analysis to fully evaluate our

system hardware and software components with the objective

of defining the next generation of the CEPT portal, we invited interested parties to tender an offer to develop our next generation web portal. Only one bidder submitted an offer, which only

partially met the requirements specified. We will further consider

the next steps in 2022.

business committees (ECC, Com-ITU and CERP) and its permanent

#### THE CEPT PORTAL IN 2

Number of user profiles registered to the portal	3 148	
Unique visits*	240 000	
Page views	1 350 000	
* Multiple visits having the same IP and date are counted as one unique visit		

#### Membership of CEPT Groups in 2021



\* Includes its subgroups

#### Managing our databases

Apart from EFIS, DocDB and SEAMCAT, the ECO also manages and updates other important online information systems on which our main European stakeholders and other interested parties rely.

### Maintaining and upgrading the ECC Work Programme Database



The ECC Work Programme Database (WP DB) is part of a suite of software tools developed by the ECO to provide the ECC and its constituent bodies with online facilities for maintaining and updating their respective work programmes on an ongoing basis. It provides our external stakeholders with visibility on our work items and associated timelines. ECO experts supporting the work of the various ECC groups take the lead on maintaining the information on work items in the WP DB.

This provides users with useful features in terms of providing an overview of current and past work items, a search and filtering facility and the ability to create Gantt charts to illustrate the work of any ECC group. The WP DB has become an integral tool for managing the ECC's work while providing interested parties with a high-level view on the overall scope of the ECC's activities.

At the end of 2021, the WP DB contained information related to over 628 ECC work items, either active or finalised, including an up-to-date status on the 114 work items which were in progress over the course of 2021. The WP DB is available at https://eccwp. cept.org/.

### Information repository on progress for co-ordination of the 700 MHz band

Following the implementation of the digital dividend in the 700 MHz band (i.e. change of use of the band 694-790 MHz from broadcasting to mobile services), the ECO developed a tool that allows users to monitor and review the progress of bilateral and multilateral co-ordination negotiations between CEPT countries on the use of this band. The repository is available on the website with the possibility for administrations to continue to upload information when appropriate.



#### The PSAP Directory

The PSAP Directory is a directory containing contact information for Public Safety Answering Points (PSAPs) to be used as a backoffice support tool for PSAPs to contact each other when a need arises. For example, the directory would be used in the event of an emergency call where assistance may be required in another country. The PSAP Directory came into service on 1 December 2018 and now contains contact information for 23 PSAPs from 18 countries across Europe. In 2021, PSAPs from the United Kingdom and Croatia joined the directory. It is expected that this number will continue to increase as in 2021 the ECO has been following-up with several other European countries which have expressed interest in joining the PSAP Directory. The information contained in the PSAP Directory is confidential in nature and is only accessible to participating PSAPs.



#### Promoting electronic working arrangements

The CEPT Committees are committed to improving the efficiency of working processes by making use of electronic methods of working to complement physical meetings. In this respect, we provide our stakeholders with access to four main tools and services dedicated to electronic working:

- Web-meeting facilities: Our web-meeting facilities are based on the use of the commercial 'GoToMeeting' platform combined with the meeting management features integrated into our portal. This platform together with the MeetingHub became the key cornerstone to support different groups within the three business committees. ECO experts can arrange on request the use of GoToMeeting to accommodate virtual participation in meetings hosted externally.
- Group email facilities: For the three CEPT Committees and their subordinated groups, we provide and manage a range of dedicated group email addresses to facilitate ongoing communications between the individual members of each group and across groups. The group mail functionality is enabled through an email list server which is integrated with the CEPT portal. When a user joins a group, they are automatically added to the email list for that group. An email group can relate to working group, project team or a group set up for collaboration on a particular work item. Users can customise their participation in various groups in their CEPT profile settings. In 2021, we managed more than 91 email reflectors to assist CEPT groups.
- CEPT Forum: The Forum features have been integrated into the CEPT portal since 2012 and have been further improved since then. The extent of its use depends upon the individual groups and project teams' needs. The CEPT Forum serves to complement physical meetings, web meetings and the email reflectors to progress the work on specific work streams and to exchange views on emerging topics of interest.

- CEPT Chat system: ECO has developed electronic tools to support CEPT co-ordination at major events. The chat function is integrated with the CEPT portal and includes a feature to access the chat facility from a mobile device. This chat system is widely used for CEPT co-ordination e.g. during ITU-R Working Parties and Task Group meetings as well as during meetings of ECC groups. Information on how to use the chat can be accessed here.
- MeetingHub: As a result of the changed working environment, essentially based on virtual meetings, the ECO had the opportunity to gather further experience and feedback from the participants on the GoToMeeting platform. We foresaw the need to improve some features related to the management of meetings, e.g. the raise-hands functionality, chat and a more secure way to access virtual meetings. In this context, the ECO started the development of "MeetingHub", which is focused on assisting/complementing the current GoToMeeting platform. Furthermore, the MeetingHub provides a common environment which enables and facilitates the interaction and co-operation of the physical and remote attendance in hybrid meetings.

#### Providing facilities for collaborative working

CEPT's work is based on collaboration between regulators and industry representatives from different countries across Europe. We provide first class meeting facilities at our premises at Nyropsgade 37 in central Copenhagen, where we have been located since May 2014.

Our meeting rooms have internet access for delegates, as well as audio/visual facilities. We have supported remote participation in meetings hosted at our premises for many years. The remote participation facilities have also been upgraded with the option to use video connectivity, now with improved audio quality in the large room, enabling far better integration with web meetings. This facility allows remote participation in meetings hosted at the ECO with a very high-quality audio/visual experience. In late 2021, the ECO hosted four meetings, spread across 11 days, attracting 41 delegates to our premises in Copenhagen. This was the first time the "hybrid meeting" format was experimented in the CEPT.

Overall, the number of meetings and the participating delegates was roughly similar to 2020. These meetings ranged from small working sessions with 10 participants to larger events accommodating more than 200 participants. Obviously, the number of physical/hybrid meetings was significantly lower in 2021 compared to the pre-pandemic period. Against the backdrop of the pandemic, most of 2021 meetings were realised solely through a virtual platform, with more than 330 web-meetings.

#### Number of meetings and participants in 2021





#### Number of meetings per Committee (and ECC subgroups) in 2021

\* Includes its subgroups



#### Number of meeting days per Committee (and ECC subgroups) in 2021

\* Includes its subgroups



#### Providing meeting facilities at the ECO

The three CEPT autonomous committees, develop harmonised policies in the fields of electronic communications and postal services with a strong spirit of co-operation and collaboration where decisions are taken mainly by consensus.

Achieving consensus requires trust and empathy, and face-to-face meetings allow participants to build trust, develop friendships and foster closer working relationships. Meetings at the ECO provide our clients with a platform for informal discussions and networking over coffee and lunch which can be just as important as the formal proceedings of the meetings themselves.

We have three meeting rooms at the ECO – Hamlet Plus, Ophelia and Gertrude – whose names are inspired by Shakespeare's famous tragedy which of course is set in Denmark.

> Further information on meetings at ECO is available on our website including on our meeting facilities, how to reach ECO and on hotels nearby.



#### Hamlet Plus

**Total capacity** 60 Participants Layout Classroom

### Total capacity 25 Participants Layout

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Ophelia



#### Amenities

- Large co-view screens
- Projector with computer connections (HDMI, VGA, adaptors for iOS devices)
- Microphone and Sound system
- Remote participation facilities based on GoToMeeting
- Wi-Fi
- 230v standard European power sockets at each seat
- Writing materials
- Flipchart(s)
- Whiteboard
- Event Coordinator's setup support

Hamlet Plus can be split into two smaller meeting rooms (Hamlet and Horatio) with capacity for 40 and 20 participants respectively.

### • Large co-view screens

Amenities

- (HDMI, VGA, Clickshare, adaptors for iOS devices)
- Sound system
- Remote participation facilities based on GoToMeeting
  - Wi-Fi
  - at each seat
    - Writing materials
    - Flipchart(s)
    - Whiteboard
    - Event Coordinator's setup support

Ophelia was expanded in 2019 thereby increasing the capacity of the room from 15 to 25 participants.



### Gertrude

Layout

**Total capacity** 10 Participants Boardroom







#### Amenities

- Large screen with Computer connections (HDMI, VGA)
- Remote participation facilities based on GoToMeeting
- Video conferencing facilities
- Wi-Fi
- 230v standard European power sockets available
- Writing materials
- Whiteboard
- Event Coordinator's setup support

Gertrude is our newest meeting room and can accommodate up to 10 people. It is ideal for holding breakout sessions from larger meetings taking place.

• Projector with computer connections

• 230v standard European power sockets

#### Supporting the CEPT Presidency

CEPT ALL ABOUT OUR ORGANISATION

In 2021, various meetings were undertaken to support the CEPT Presidency in the context of maintaining CEPT stakeholders informed on the developments concerning the coronavirus pandemic and its impact on the overall activities in CEPT, in particular on the return to physical, face-to-face meetings while allowing for online remote participation. During 2021, the CEPT Presidency and the ECO endeavoured to keep updated the plans for CEPT meetings, and the CEPT

Moreover, the ECO assisted the CEPT

Presidency and ECO published three communications during 2021.

Presidency in the routine activities, such as: the invoicing and collection of CEPT member financial contributions; correspondence with the CEPT Co-Presidency; responding to requests about CEPT, and maintenance of the sections of the website which relate to the CEPT Presidency.

#### Supporting the European Committee for Postal Regulations (CERP)

In 2021, the members of the CERP developed a very intensive activity to prepare the Congress of the Universal Postal Union which took place in Côte d'Ivoire in August. In preparation for Congress, a significant number of web meetings were held and during the event, the chat function provided by the CERP website was a key tool to keep co-ordinated positions about the different topics.

In 2021, a report of the EU Commission about the reform of the postal regulations was submitted to the Council and Parliament for their consideration. This is a very important fact that has been analysed in depth by the correspondent CERP working groups.

ECO maintained its operational support to CERP and its Working Groups in 2021. This involved secretarial support, correspondence with the CERP Chairmanship, responding to correspondence from external bodies and maintenance of the CERP section of the website and CERP documentation. We also assisted on CERP outreach activities including on the development and distribution of three editions of the CERP newsletter.

We organised and facilitated 16 web meetings of the CERP Steering Committee, CERP Plenary and its working groups and promoted the use of our tools and services used by the other CEPT Committees to CERP throughout the year.

#### Supporting the satellite monitoring Memorandum of Understanding

Due to the highly specialised and costly nature of satellite monitoring facilities, a group of European national authorities have established an agreement under the Satellite Memorandum of Understanding (SAT MoU) to share access to the space radio monitoring station located in Leeheim, Germany. The agreement facilitates satellite monitoring activities within CEPT, particularly to investigate interference involving satellites. In 2021, the signatories of the agreement are: Cyprus, France, Germany, Liechtenstein, Luxembourg, The Netherlands and Switzerland.



Leeheim, Germany

Among the monitoring activities carried out in Leeheim, one can highlight those triggered by the Working Group Spectrum Engineering Project Team SE40 responsible for Space Service compatibility. In 2021 the Leeheim monitoring station concluded the satellite monitoring campaign of Iridium's NEXT constellation following the last update of the software aboard the satellites of the Iridium configuration. The monitoring station also completed tasks for two of the SAT MoU member administrations. In this context, the ECO provides secretariat support to the SAT MoU management committee and manages CEPT's SAT MoU account, which was set up to cover the costs of using the Leeheim facilities. The ECO also acts as the interface between the SAT MoU and the ECC.

In terms of the promotion of the SAT MoU, the ECO maintains a document describing SAT MoU activities since July 2013 and a leaflet that summarises the importance of the SAT MoU in the satellite monitoring activities. Further information can be found here.

## SECTION THREE Governance and Financial Summary



#### Structure and Governance

The ECO is governed by the ECO Council which consists of representatives of the Contracting Parties to the Convention for the establishment of the European Communications Office ('The ECO Convention'). The Convention inter-alia defines the terms of reference for the ECO and its funding arrangement.

In 2021, 35 countries were officially contracting parties to the ECO Convention while 36 countries contributed to the financing of the ECO. The Council has governance responsibilities, which include agreeing the ECO's budget and work programme on an annual basis. These are prepared by ECO staff under the guidance of the Director. The Council's preferred method of working is by consensus.

The ECO Council held its 24th and 25th meetings (online) in May and December 2021 respectively. Ms. Marta Leandro of Portugal has been Chair of the Council since her election in May 2015 and was re-elected for a second three-year term in May 2018. Dr. Samuel Ritchie, Ireland, who has been serving as Vice-Chair since December 2015 was elected as new ECO Council Chair at the 24th ECO Council. The 25th ECO Council has also appointed Ms Sidsel Huse, Norway, as the new ECO Vice Council Chair.

#### Financial Summary

The ECO was financed by the following 36 countries in 2021:

Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Montenegro, the Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and Vatican City.

Additional financing was earned from directly funded services (e.g. administration of the CEPT and the Satellite MoU).

The following figures provide a financial summary for 2021:

#### INCOME

Statement of income and expenses

#### EXPENDITURE

Staff Costs (salaries, pension contributions, etc.)

Operating Expenses (outsourcing, projects, professional fees, travel)

Office Facilities (rent, building related expenses)

Expenditure total

Operating balance for end of year

Based on exchange rate of DKK 1 = EUR 0.134

DКК	EUR
17 746 228	2 386 368
11 716 095	1 575 485
3 783 773	508 811
1 559 292	209 681
17 059 160	2 293 977
687 068	92 391



#### Countries participating in the ECO Council

In 2021, the following 36 countries were part of the ECO Council: Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Montenegro, the Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom and Vatican City.





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