

# ANNUAL REPORT

2011

across Europe collaborate to harmonise telecommunication, radio spectrum and postal regulations.

The ECO provides advice and support to CEPT to help it to develop and deliver its policies and decisions in an effective and transparent way. Its core duties are to provide a European centre of expertise in electronic communications, to contribute to the work of the three CEPT committees and to manage CEPT's day-to-day activities.

The ECO further supports CEPT member countries and other stakeholders providing a forum to debate and advance European communications policy for the benefit of all Europe's citizens.

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STRUCTURE AND GOVERNANCE FINANCIAL SUMMARY

### The European Communications Office (ECO) is a centre of expertise for the European Conference of Postal and Telecommunications Administrations (CEPT), an organisation where policy makers and regulators from 48 countries



Luxembourg, Monaco, Montenegro, the Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and Vatican City.



This is my first Annual Report as Chairman of the ECO Council, having served as Vice Chairman for the last three years. It is a privilege to take up the role at such a pivotal time in the telecommunications industry and the economy. Chris van Diepenbeek's tenure ended in November 2011 and this report covers much of the period under his leadership.

CHAIRMAN'S FOREWORD

The ECO over its 20 year history has had to evolve to reflect the changing nature of the industry that it serves and to ensure it remains efficient and effective. This year we've seen CEPT's Electronic Communications Committee (ECC) evolve too with a new streamlined structure and more effective processes to make it fully fit for the digital age. The limitations of analogue technology have all but gone but pressure on the radio spectrum remains. The ECO has a responsibility to continue to work actively with the ECC to find the best regulatory solutions for its changing use. Much has already been achieved in areas such as Cognitive Radio but further opportunities need to be explored in this and other areas for the long-term health of our growing wireless economy.

Geir Jan Sundal CHAIRMAN OF THE ECO COUNCIL

The huge swell in demand for spectrum presents us with a very real and ongoing challenge. We have responded to this by improving some important regulatory and technical tools to help bring about greater efficiencies in spectrum use. This will enable improved spectrum analysis leading to improved spectrum planning and management. We've also assisted the ECC's Regulatory Affairs Working Group with a number of different studies which introduce new regulatory models to increase flexibility in spectrum use to enable even more efficiency.

Looking ahead to the coming year, we will continue to make every effort to ensure our work programme is fully aligned to key objectives set out in the ECC's multi-annual strategic plan. We will build on the specialist services and tools we provide to, and on behalf of, the ECC to support its significant efforts in reshaping spectrum policy in Europe to make way for the transformation in telecommunications we're seeing today and in paving the way for tomorrow.

On that note, I would like to extend my thanks and that of my Council colleagues to Chris van Diepenbeek for his valuable contribution and dedication to our work over the years. Chris has left the Office in very good shape to meet the new and important challenges ahead. I am also pleased to welcome Peter Pauli, a long-standing council member, as our new Vice Chairman.

#### ECO ANNUAL REPORT 2011

### DIRECTOR'S STATEMENT

It's now more than 20 years since the European Radiocommunications Office was set up in 1991 - one of a package of measures to modernise CEPT at that time. Now as the ECO, well into the digital age, we are taking forward the vision of its founders by giving a permanent and daily home, capability and visibility to the ECC. This year we have given a particular emphasis to the range of services which are integral to how the ECC itself functions, and particularly how it can be an open and accessible organisation for its hundreds of millions of stakeholders - that is, everyone in Europe!

But if the principles are the same, what we do to apply them changes all the time. As an example, our EFIS frequency information system helps industry to tackle markets from a pan-European perspective, which greatly benefits the end-users. But we have taken great strides at the end of the year to make it do more, so it also acts as a reference portal for a lot of information about future spectrum planning. I hope that in 2012 we can continue this, and also try to harmonise further the nature of the data which countries enter into it. Then there is Seamcat, our well-established compatibility analysis tool. In 2011 we made it better than ever, with a wider range of possibilities. These compatibility analyses are vital to creating new opportunities for spectrum use, without sacrificing the high value of all the existing uses.

We have widened and improved the options for the many meetings in the ECC to be conducted with electronic arrangements. We will always need face-to-face meetings, for practical reasons, and because we are in a people business. But travelling is very expensive and our electronic methods of participation are allowing more administrations and industrial experts to contribute.

Every organisation renews its website from time to time, and we were pleased to re-launch ours this year. I hope you agree that it was worth the wait. I like to think that it embodies some of our values: flexible, fit for purpose, discreet, and not, for example, wasting time on large amounts of distracting content and slogans that take forever to load. As well as being an integral tool to the ECC's work, it also enables us to present the whole CEPT in a more logical fashion. I hope this will clearly reflect what the organisation is and how it works: CEPT belongs to its members and its focus is outward-looking.

We have also been working closely with our ECC colleagues to produce a regular ECC Newsletter. We hope this will place more clearly in people's minds the huge impact of use of radio spectrum, and the central role that the ECC plays in making it work effectively in Europe.

But having listed some of the particular service developments this year, I also have to thank my excellent team in the Office for other initiatives supporting the ECC's five year Strategic Plan, including workshops and outreach to academia. But particularly we should recognise their core work within the ECC's working groups and project teams which is our main business.

With Europe now focused on achieving an effective digital single market, our work remains as vital as ever as we continue to support the ECC in its endeavours to make the spectrum as technically efficient as possible to improve its market effectiveness across Europe.

I hope you will find this report an interesting exposition of the large amount of work this represents. Whether you are surfing on an iPad, or desperately keen to get a better understanding of global warming, or in an aircraft flying through a cloud, confident that your flight will land safely.



Male trong

Mark Thomas DIRECTOR OF THE ECO

### HIGHLIGHTS FOR 2011



workshops:

one tailored to a specialist audience;

the other providing a general introduction to CEPT

# 20th

ANNIVERSARY OF THE OFFICE

Reception organised to celebrate our 20th Anniversary with current and former staff and Council members

2011 has been another busy year for the ECO with a high volume of work achieved across many of our cores activities. During 2011, we have delivered:

### IN ADDITION, WE HAVE CONTINUED TO MAINTAIN AND IMPROVE:

- the EFIS frequency information system which has been significantly enhanced to make it the most authoritative central resource for information on spectrum use across Europe
- the ECO document database which some 370,000 people have visited, downloading over 1,000,000 documents
- our SEAMCAT software which has been downloaded by 350 people from all around the world

meetings attracting over 770 participants

public consultations questionnaires

A new look website which has been visited by more than people since its launch in July.



### **KEY MILESTONES MARKING THE ECO'S** ESTABLISHMENT AND DEVELOPMENT

In 1991, a 'Host Agreement' was signed with the Danish Government, and the European Radiocommunications Office, ERO, was established on the basis of an MoU with 19 signatories

In 1993, the ERO Convention was agreed by the parties to the MoU

In 1994, the European Telecommunications Office, ETO, was established on the basis of an MoU

In 1996, the ERO Convention entered into force

In 2001, the ERO and the ETO merged

In 2009, the merger was formally recognised by a change of name to the ECO, European Communications Office

In 2010, Montenegro joined bringing the number of countries contributing to the financing of the ECO to 31

### THE ECO

The European Communications Office (ECO) provides advice and support to CEPT to help it to develop and deliver its policies and decisions in an effective and transparent way. Our core duties are to provide a European centre of expertise in electronic communications, to contribute to the work of the three CEPT committees and to manage CEPT's day-to-day activities.

As well as providing operational support to the CEPT and its three committees (ECC, CERP and Com-ITU), we also have a central duty to maximise the effectiveness of CEPT's Electronic Communications Committee (ECC).

The ECC is a leading expert group within CEPT responsible for harmonising the efficient use of the radio spectrum. It brings together 48 countries to develop common policies and regulations in electronic communications and related applications for Europe, and to provide the focal point for information on spectrum use. Its primary objective is to harmonise the efficient use of the radio spectrum, satellite orbits and numbering resources across Europe. It takes an active role at the international level, preparing common European proposals to represent European interests in the ITU and other international organisations.

Our role with the ECC enables us to work across a wide range of technologies, from mobile communications to broadcasting, medical implants to aeronautical radars, satellites to wireless LAN networks, identifying and applying our expertise and resources on the key issues and technical challenges of the day.

#### OURTEAM

The ECO employs a small team of 13, based in our offices in Copenhagen, Denmark. Seven of the team are experts in the field of radio and telecommunications recruited from across Europe. Working alongside our experts are six colleagues from Denmark who are responsible for managing our support and administrative services.

This provides us with a good combination of expertise and experience to help us achieve a high standard in the specialist services we provide. We are committed to improving our collective business skills and our own professional development to ensure we consistently add value to the many activities undertaken within the ECC.



### THE ECO TEAM AND THEIR MAIN AREAS OF RESPONSIBILITY Mark Thomas, Director, United Kingdom

Marc Le Devendec, Deputy Director, France (Broadcasting; ETSI;

Spectrum Engineering (SE24))

**Alexander Gulyaev**, Russian Federation (Regulatory Affairs, IMT (ECC PTI); PPDR (FM49); Electronic Working Arrangements (EWA))

Jean-Philippe Kermoal, France (Spectrum Engineering (WG SE; SE19; SE44; STG); SEAMCAT; fixed services)

**Stella Lyubchenko**, Russian Federation (Spectrum Engineering (SE7; SE21; SE40; SE43); cognitive radio; academic research)

Jukka Rakkolainen, Finland (Numbering and Networks (WG NaN))

**Thomas Weber**, Germany (Frequency Management (FM22, FM44, FM48, SRD/MG), ECA and Satellites)

Pia Hammer Bloch (EFIS, Communications, Council)

Søren Conradsen (Office IT, web and mail services technical enquiries)

Vibeke Hansen (Webmaster editor, reception)

Susanne Have (CEPT, administration, Sat MoU)

**Bente Pedersen** (Public consultations, ECC deliverables' library ('DocDB'), administration)

Merrete Wagner (Finance, premises, HR)

#### First row left to right

Jean-Philippe Kermoal, Merrette Wagner, Vibeke Hansen, Mark Thomas, Stella Lyubchenko, Susanne Have

#### Second row left to right

Alexander Gulyaev, Jukka Rakkolainen, Pia Hammer Bloch, Søren Conradsen, Bente Pedersen, Marc Le Devendec, Thomas Weber

### CEPT



The ECO provides a Secretariat for CEPT (including its Presidency) as an umbrella organisation for its three autonomous business committees. The Chairmen of the three committees are also co-Presidents of CEPT.





THOMAS EWERS, co-President of CEPT and Chairman of the Electronic Communications Committee (ECC), responsible for telecommunications harmonisation, as well as European co-ordination and preparation for meetings in the Radiocommunication Sector of the International Telecommunication Union (ITU),

ULRICH DAMMANN, co-President of CEPT and Chairman of the European Committee for Postal Regulation (CERP), responsible for postal regulation, as well as European co-ordination and preparation for

meetings of the Universal Postal Union

(UPU).

**FRF** 



ANDERS JÖNSSON, co-President of CEPT and Chairman of the Committee for ITU Policy (Com-ITU), responsible for European co-ordination and preparation for meetings of the International Telecommunication Union (ITU).

The CEPT joint presidency works together to deliver greater efficiency through the effective co-ordination of its work to create a dynamic market in the field of European posts and telecommunications for the benefit of society.

ad-hoc ones:

- I) the day-to-day handling of correspondence into and from the Presidency, with some secretarial and advisory support to coordination between the co-presidents;
- 2) the provision and maintenance of content of the parts of the CEPT website which relate to the Presidency and CEPT as a parent organisation for its three committees;
- 3) the preparation of reports to the membership on the activities of the Presidency (these should be annual) and assistance to the Chairmen with other aspects of reporting to the membership;
- 4) the invoicing and collection of CEPT member financial contributions, used to pay for the Office's support and such external expenditure as required (see (5) and (6) below);
- 5) (as required): technical support to CEPT delegations at some major international conferences (e.g. WRC, WTSA), this is usually an SMS-based messaging and chat system;

The CEPT Assembly is the supreme body of the organisation, and is convened as required. The ECO organised an Assembly in December 2011 in Copenhagen. Further details on this are set out in the second part of this report in the 'Managing our operational services' section on page 32.

The ECO's support to the Presidency is mainly as a permanent office in five routine areas and two

6) (as required): preparation of facilities and secretariat support for CEPT Assemblies.

#### SUMMARY OF SPECIALIST SERVICES

The ECO plays a fundamental role in one of CEPT's leading business committees: the ECC. We do this by providing a range of specialist support to the ECC, and its many working groups and project teams, to maximise its effectiveness across all areas of its work.

#### CHAIRMANSHIP OF KEY PROJECT TEAMS

In 2011, we chaired six project teams which support the work of the ECC and its working groups on a range of radio and telecommunications issues. These include:

- Project Team SE24 of the Spectrum Engineering Working Group (WG SE) and Project Team SRD-MG of the Frequency Management Working Group (WG FM) responsible for short range devices;
- Project Team SE19 Fixed Services of the Spectrum Engineering Working Groups;
- Project Team STG responsible for the development of the CEPT compatibility tool, SEAMCAT within the Spectrum Engineering Working Group;
- Project Team RA2 Radio Amateur Issues of the Regulatory Affairs Working Group (WG RA); and
- Project Team EFIS-MG responsible for the development of the EFIS tool within the Frequency Management Working Group.

#### CONDUCTING PUBLIC CONSULTATIONS TO DELIVER BETTER POLICIES

The ECO is responsible for conducting consultations on behalf of the ECC (see at: www.cept.org/ecc/tools-and-services/ecc-public-consultation). In addition to bringing together member administrations, our consultation procedures set out the ways in which other stakeholders can get involved. The ECC is interested in receiving a broad range of views from a wide range of stakeholders.

The ECC website includes a gateway page to present and past consultations at: www.cept.org/ecc



Comments to the draft deliveracies below are invited from CGPT administrations as well as any other interested partials. These should be furvained to the European Communications ORDs contract perior preferably by 4-mail to later than the deadline inductor. In cases where the EOC Temary approves that documents for Audio Computation the will proceed without the triv vegle anotheration.

CONDUCTING QUESTIONNAIRES FOR IMPROVED **REGULATORY OUTCOMES** 

Questionnaires are developed within the framework of ECC working groups and project teams. The ECC uses them to gather information from administrations to improve the development of ECC deliverables. The ECO mostly acts as a contact point in order to collect responses from administrations, summarise and analyse them, and submit them to relevant ECC groups.

#### PROVIDING MEETING FACILITIES FOR COLLABORATIVE WORKING

CEPT's work is based on collaboration between different countries' regulators and industry. Creating a forum for these important discussions is one of our central services. We provide facilities for both physical and electronic meetings.

#### Meeting premises at the Office in Copenhagen

Four meeting rooms all of which have internet access for delegates:

Hamlet, 50 seats in rows, 3 screens (46 inches), projector, meeting audio system, video and audio webcasting;

Langelinie, 20 seats in boardroom layout (some additional peripheral seating is possible), projector;

Ophelia, 10 seats and Mermaid, 8 seats: each 1 screen 46 inches.

We also provide conference call facilities and have a meeting room available for those participating in a conference call. A delegate facilities room is also available.

#### Meeting management

The CEPT website hosts a meeting document server for all the Committees. This allows both open and protected document access, and maintains an archive of meeting documents. Access for uploading documents can be adjusted to suit the meeting Chairman's preferences.

A meeting calendar allows viewers to see all meetings, or only those of interest, for efficient planning. This portal also provides meeting registration facilities.

#### Electronic meetings

The Office provides a range of facilities for electronic meetings:

- All-electronic meetings based on audio links, with document visibility to delegates ('Go-to-Meeting')
- Remote audio participation (audibility and interventions) and document visibility for physical meetings, optional management facility for meeting secretary; these facilities have some technical and procedural limitations;
- Video and audio streaming combined with external audio intervention from the Hamlet meeting room at ECO, Copenhagen.

#### SUMMARY OF SPECIALIST SERVICES

#### ONLINE INFORMATION SYSTEMS

The ECO provides a range of bespoke online information systems on which many of our European stakesholders rely.

#### DOCUMENT DATABASE - ECODOCDB

Our document database (ECODocDB) is an important online resource. It acts as a library for all ECC Decisions, Recommendations and Reports and CEPT Reports. The homepage (www.ecodocdb.dk) sets out the most popular documents in each category.



#### SPECTRUM ENGINEERING ADVANCED MONTE CARLO ANALYSIS TOOL (SEAMCAT)

SEAMCAT (Spectrum Engineering Advanced Monte Carlo Analysis Tool) is a software tool based on the Monte-Carlo simulation method which permits statistical modelling of different radio interference situations. It has been developed to deal with a diversity of complex spectrum engineering and radio compatibility problems.

It is a generic compatibility analysis tool which is neither system-specific nor service-specific. This enables it to address any interference scenario regardless of the type of victim receiver and interfering radio systems.

The tool is designed for systems that operate in shared or adjacent frequency bands. It can also evaluate radio equipment parameters (e.g. transmitter emission masks, receiver sensitivity and density of interfering transmitters) where all interference mechanisms can be taken into account.

The tool is updated on a regular basis and is downloadable free of charge at: www.seamcat.org.

The ECO organises regular public workshops on SEAMCAT, which are available to administrations, industry and universities for free. Details on our 2011 workshops are set out within the Review of the Year section on page 28.

The ECO also provides an online manual facility which is regularly updated at: www.seamcat.org/xwiki.

In addition, the ECO uses a "Tractool" management platform to make the development of the tool as transparent as possible. This platform allows SEAMCAT users to report any errors or to consult the list of tickets to be solved.



#### ECO FREQUENCY INFORMATION SYSTEM (EFIS)



On 31 January 2002, the ECO launched a frequency information system called EFIS. EFIS is available to the public on the Internet either via the ECO website or directly under www.efis.dk.

This tool provides a valuable service to all those with an interest in spectrum utilisation. EFIS also meets the CEPT policy objectives of harmonisation and transparency as well the European Union policy objectives laid down in the Decision of the Council and European Parliament on Radio Spectrum Policy.

In 2005, the European Commission issued a mandate to CEPT on the feasibility for EFIS to develop into a European portal for spectrum information. An EC Decision on this issue was published on 16 May 2007. EFIS has been enhanced to fulfill this ECC Decision (2007/344/EC) on the harmonised availability of information regarding spectrum use in Europe.

A short introduction to EFIS and links to related documents can be found on the ECO website. With EFIS you can search for and compare spectrum use across Europe as well as related information such as CEPT activities, radio interface specifications according to the R&TTE Directive and other national or international regulations.

### ECC WORK PROGRAMME DATABASE



#### http://eccwp.cept.org/

The ECC Work Programme Database (ECC WP DB) is a part of the European Communications Office's software tools to support CEPT. The purpose of the WP DB is to provide the ECC and its constituent bodies with online facilities for maintaining and updating their work programme on an ongoing basis. The database consists of a number of individual items and details for them are stored in the database. The layout of the database was changed in 2011 and there is an ongoing improvement process of the WP DB facilities. The database is available at http://eccwp.cept.org/.

#### PROVIDING A CENTRAL SOURCE OF INFORMATION

In addition to the reference and analysis tools, the ECO works together with CEPT countries and other stakeholders to provide more accurate and up-to-date operational information in a number of key areas. This includes a number of web pages providing information on the ongoing activities within the ECC, as well as the following services.

#### ECO Bulletin

The Office brings to each ECC meeting (usually three times per year) a bulletin on activities in radio communications in other world regions, where a regulatory dimension is raised (e.g. by innovative services or technology). The primary objective is to identify whether the ECC needs to investigate further or consider possible new actions. A secondary but more frequently addressed objective is to enable comparison to be made with the regulatory approach in other regions to subjects already treated by the ECC (including, where relevant, to the work of the ECC's Conference Preparatory Group).

#### Satellite Monitoring Memorandum of Understanding

Due to the highly specialised and costly nature of satellite monitoring facilities, national authorities have established an agreement under the Satellite Memorandum of Understanding (Sat MoU) to have access to the monitoring earth station in Leeheim, Germany. The agreement facilitates satellite monitoring activities within CEPT, particularly to investigate interference to and from the satellites.

The ECO provides secretariat support to the management committee responsible for the Sat MoU and manages the CEPT's Sat MoU account set up to cover the costs of using the Leeheim facilities.

In 2011, Luxembourg joined the previous signatories of the Sat MoU signatory. The other Sat MoU signatory countries are Germany, France, the United Kingdom, Switzerland, the Netherlands, Spain and Luxembourg. Further information on the Sat MoU is available from our website at: http://cept.org/eco/groups/eco/sat-mou/client/introduction.



#### Terrestrial-Digital Audio Broadcasting Plans

Another of our tasks is to manage two CEPT digital broadcasting plans across Europe. One of these is a residual 10 MHz (230-240 MHz) used for T-DAB, but not covered by the GE06 plan used for most T-DAB broadcasting in Europe between 174 and 230 MHz. The other is the MA02 (rev CO07) plan covering L-Band frequencies between 1452 and 1479.5 MHz, designed for T-DAB but with some flexibility now available for variants to this system. The plans are available from the ECC website at: (http://www.cept.org/ecc/topics/broadcasting). These provide details of the allotments for each country. They also give a list of individual transmitters which have been co-ordinated between CEPT administrations and their agreed characteristics.

Our management of this activity involves developing online tools in order to facilitate the organisation of the data contained in the Plans. We are also required to inform CEPT administrations of any new or potential changes to the Plans through the publication of Circular Letters, updating the Plans when new stations are coordinated, and notifying the administrations. However, in accordance with WG FM's decision to discontinue WG FM PT 45, the lead project team within the CEPT on broadcasting issues, the Office will now report directly to WG FM about the updates.

#### Amateur Radio

The ECO has taken the lead role in the activities of the regulatory affairs working group (WG RA PT2) on amateur radio issues. We are working closely with the International Amateur Radio Union (IARU) Region I.

We also work with non-CEPT countries which have inconsistent entries in CEPT deliverables on amateur radio and those non-CEPT members who have expressed an interest in joining the CEPT regulatory framework.

Following the closure of WG RA PT2 in the second part of 2011, the Office is now leading this activity and reporting directly to WG FM.

#### Earth Stations on Vessels and Aircraft Earth Stations

The ECO Documentation database includes technical information on the operators' networks of Earth Stations on Vessels (ESVs) and Aircraft Earth Stations (AESs). We maintain and update these files as prescribed by the regulatory frameworks for ESVs and AESs. The information is available in the ECO Documentation database in connection with the relevant ECC Decisions (05)09, (05)10 and (05)11. Five submissions from operators were received during 2011 of which four were included in the documentation of compliant networks in the ECO Documentation database.

#### Cognitive Radio

The ECO has established a web page on Cognitive Radio (CR) and Software Defined Radio (SDR) http://www.cept.org/ecc/topics/cognitive-radio-systems-and-software-defined-radio), which presents an overview of the CEPT activities on these subjects. In order to give a broader context to the information, the website page also presents short summaries and links on activities within ETSI, the EU Research Framework Programme, and some other research institutions.



Entry of Luxembourg, Mr. Thomas Weber (ECO) and Ms. Odette Wagener (Director of the Regulatory Authority of Luxembourg) signing the Sat MoU (31 January 2011).

Sat MoU signatory countries (France, Germany, Luxembourg, the Netherlands, Spain, Switzerland, the United Kingdom).

#### SUMMARY OF SPECIALIST SERVICES

#### WORKING EFFECTIVELY AND COLLABORATIVELY

Improving collaboration across the CEPT membership has always been a central duty for us. We work with the ECC to extend its reach beyond CEPT member administrations to foster effective working relationships with a wide range of stakeholders to improve co-operation, support innovation, and promote best practice in this increasingly global environment.

The ECO regularly participates in a significant number of meetings with stakeholders. The most regular are set out below.

### ETSI



The ECO coordinates a number of activities to facilitate effective cooperation between the ECC and the European Telecommunications Standard Institute (ETSI - www.etsi.org). To help with the coordination process, the ECO maintains a relationship matrix which shows whether there is ongoing cooperation or a potential relationship between various groups within the ECC and ETSI.

We also maintain a spreadsheet listing ETSI Harmonised Standards under development which relate to ongoing ECC activities.

In addition, we participate in ETSI meetings on electromagnetic compatibility and radio spectrum matters (ERM) and several ETSI workshops. We also participate in ETSI TISPAN (Telecommunications and Internet converged Services and Protocols for Advanced Networking) on next generation networks, their infrastructure, security and identification, and attend the joint ECC-ETSI yearly meeting.

#### EBU

The European Broadcasting Union (EBU – www.ebu.ch) is another of our existing partnerships. We attend its meetings on a regular basis and participate in the EBU Evolution of Digital Planning meeting and the EBU Technical Assembly.

### ITU

We are involved in a number of key International Telecommunication Union (ITU – www.itu.int) activities. This includes our participation in relevant ITU-R (Radiocommunication Sector) and ITU-T (Telecommunication Standardisation Sector) study groups where this is within the framework of our support of ECC Working Groups and Project Teams.

As part of our support to the ECC's activities on short range devices (SRD), the ECO also participates in three spectrum management working groups: WP IA, WP IB, and SG I.

We also regularly contribute to the ECC Working Group on Numbering and Networks through our participation in ITU-T SG2, the lead study group for service definition, numbering and routing of telecommunications for disaster relief or early warnings, setting standards for the prioritisation of calls during a disaster situation.

# SECTION TWO REVIEW OF THE YEAR

The ECC published its five year strategic plan in March 2010, identifying its approach to meeting key challenges and priorities that will drive spectrum management over the coming years, and identifying some actions specifically placed on the ECO.

- its work and its impact
- developing training sessions and materials for newcomers to ECC work
- developing the EFIS information tool its capabilities and how administrations use it, and
- establishing and developing links with academia and research programs whose work is relevant to the ECC's present and possible future work



### In 2011, the ECO took several of these further forward:

• improving the ECC's communications, promoting a greater understanding of its role,

• supporting the ECC in developing closer business relationships with industry and other external organisations and encouraging a regular exchange of views

#### MEETING THE OBJECTIVES OF THE ECC STRATEGIC PLAN

IMPROVING THE ECC'S COMMUNICATIONS, PROMOTING A GREATER UNDERSTANDING OF ITS ROLE. ITS WORK AND ITS IMPACT

In 2011, we continued to move forward with our communications programme to improve understanding about the work of the ECC. We have actively promoted the ECC's work at a range of key events, through improved online presence on its newly designed website which we host, and through the development of new stakeholder relationships.

To support this work, we have produced a range of publicity material directed at existing and new communities that the ECC is aiming to reach. The new publicity material was rolled out throughout the year displaying the ECC's corporate identity within a refreshed design to promote and reinforce the nature and impact of its work.

In January, we launched the ECC e-Newsletter to improve awareness and understanding about some of the important spectrum policy issues being considered within the ECC. The ECO produced and distributed three e-Newsletters on behalf of the ECC during the year which we sent to some 3000 stakeholders.

The articles were written by leading ECC and ECO experts who specialise in the field of electronic communications and spectrum management. By providing clear, authoritative and accurate information on key regulatory issues, such as the release of more spectrum for mobile broadband and a new spectrum strategy for public safety in Europe, we hope to improve understanding about the work of the ECC among current stakeholders. Over time, we also hope that it will help the ECC achieve a wider stakeholder reach. You can subscribe to the ECC e-Newsletter for free from the following link: www.cept.org/ecc/about-ecc/ecc-newsletters. An online archive of past copies is also available from this link.



In January, we also developed a new leaflet together with the ECC. The leaflet 'ECC: All About Our Organisation' gives an overview of the benefits of the ECC's work and sets out the scale and importance of the electronic communications industry across CEPT member countries more widely. It is aimed at stakeholders less familiar with the ECC's work and provides information on how external parties can get involved. Printed copies have been handed out at key events during the year. The leaflet has also been published online at: http://www.cept.org//files/1051/ECC/About%20ECC/ECC%20Leaflet%20pdf/ECC\_Leaflet\_v2.pdf

In April, we produced a brochure jointly with ETSI on behalf of the ECC, with support from the European Commission. It explains the roles of the ECC, ETSI and the European Commission and the regulatory systems and cooperation mechanisms in place for radio equipment and spectrum. It gives practical guidance to industry on how to place equipment on the European market and how to provide new services which use the radio spectrum. The brochure is available at: http://cept.org/ecc/about-ecc/ecc-etsi.



In order to improve the presentation of ECC and CEPT deliverables and to promote the organisations' corporate identities, the ECO has also developed a suite of templates for ECC Decisions, ECC Recommendations, ECC Reports, and CEPT Reports during the year. These have created a more cohesive and updated look and feel for the organisations.

In addition, the ECO contributed to three feature articles on specific areas of the ECC's work:

- For Global Business Magazine in February on creating the European space for using the radio spectrum efficiently to strengthen the digital economy.
- An interview by the RFID Journal in April for an article on the possibility of using the 915 to 921 MHz RF band for RFID applications.
- An article in September for mccmag.com on how Europe is working together for a harmonised frequency band for public safety broadband services.

European regulatory environment for radio equipment and spectrum



Alexander Gulyaev (ECO) at the 14th Economics of Infrastructures Conference (Delft, the Netherlands, May 2011)



Thomas Weber (ECO) at Annual Internet of Things Conference (Brussels, Belgium, June 2011)



International Symposium on EMC Courtesy of University of York and John Dawson

### **REVIEW OF THE YEAR**

SUPPORTING THE ECC IN DEVELOPING CLOSER BUSINESS RELATIONSHIPS WITH INDUSTRY AND OTHER EXTERNAL ORGANISATIONS AND ENCOURAGING A REGULAR EXCHANGE OF VIEWS

#### Promoting the work of the ECC at key telecommunications events

During the year, ECO experts have participated in a number of events to promote key areas of the ECC's work.

#### ITU Seminar - Number Portability - Regulatory Issues and Implementation Impacts (Chisinau, Republic of Moldova, May 2011)

Jukka Rakkolainen (ECO) provided a presentation during the ITU seminar on 'Number Portability: Regulatory Issues and Implementation Impacts' in Chisinau, Republic of Moldova, on 19-20 May 2011. The main aims of the seminar were to share experiences and inform participants of the latest developments on the following issues:

- Fundamentals of number portability
- Technical and regulatory problems of NP implementation in fixed and mobile networks
- High level economics of number portability
- · Operator implementation overview, and
- Next Generation NP solutions ENUM

#### 14th Economics of Infrastructures Conference (Technical University of Delft, the Netherlands, May 2011)

Alexander Gulyaev (ECO) made a presentation on 'European practices in trading of spectrum usage rights' at the conference held in the Technical University of Delft in the Netherlands. The presentation focused on the comparison of the roadmap outlined in the RSPG Opinion 04-54 'Secondary trading of right to use radio spectrum' (2004) with the results of the survey on spectrum trading conducted by WG RA in 2010 and reflected in ECC Report 169.

#### Annual Internet of Things Conference (Brussels, Belgium, June 2011)

In June 2011, Thomas Weber (ECO) presented at the Annual Internet of Things Conference in Brussels. The presentation focused on the ECC's activities on Future Spectrum Resources for UHF SRD (short range devices), RFID (Radio Frequency Identification Devices), Smart Metering and Smart Grid Applications. The presentation also included Numbering and Network Aspects.

#### International Symposium on EMC (York, United Kingdom, September 2011)

EMC Europe is the leading EMC Conference in Europe which this year was held at the University of York in the United Kingdom. EMC (electromagnetic compatability) research and conferences in Europe have a long tradition. From the series of independent EMC conferences based in Wroclaw, Zurich and Rome running every second year, has now emerged EMC Europe which will be organised every year in a European city to provide an international forum for the exchange of technical information on EMC.

Based on a paper prepared by ECO experts, a presentation on 'Spectrum Sensing capabilities in SEAMCAT' was delivered by Stella Lyubchenko (ECO) dealing with the calculations of the maximum in-block e.i.r.p of the White Space Device (WSD) based on a fixed location between the WSD and the DVB-T receiver.

#### Packet Microwave 2011 event (London, United Kingdom, October 2011)

In October, Jean-Philippe Kermoal (ECO), in his role as PT SE19 chairman, was invited to a session on European Fixed Service experience and understanding of the standardisation of spectrum for use in fixed microwave links (devoted to high capacity mobile backhaul applications), at a specialist event in London (www.layer123.com/microwave). The two day event was attended by around 120 senior managers from the FS industry. During the discussion, Jean-Philippe gave the ECC's latest view on the Fixed Service trends within CEPT (see ECC Report 173 http://www.erodocdb.dk/Docs/doc98/official/pdf/ECCRep173.PDF).

#### Conference on Perspectives for the Development of the Electronic Communications Market in the EU (Warsaw, Poland, October 2011)

In October, the Director of the Office, Mark Thomas, spoke at a Conference in Warsaw organised by the Presidency of the EU (then held by Poland), on the development of the electronic communications market within the EU. The presentation focused on the possible future harmonisation of mobile broadband services at 700 MHz. It's available from the presentations area of our website at: http://www.cept.org/eco/deliverables/eco-presentation-page

#### 13th International Space Radio Monitoring Meeting (Paris, France, October 2011)

In October, the ECO presented the satellite monitoring memorandum of understanding (Sat MoU) at the 13th International Space Radio Monitoring Meeting. Experts in satellite monitoring from communications regulatory administrations joined with representatives from the satellite industry for the two day event. On the second day, participants visited the Thales facilities in Paris and the radio astronomy of Nancay (http://nrt.obspm.fr/).

#### 4th IBBT/ MIT Joint Workshop (Brussels, Belgium, November 2011) and European Commission Workshop on the Standardisation Mandate for Cognitive Radio Systems (Ispra, Italy, November 2011)

Thomas Weber (ECO) presented the ECC's latest activities on Cognitive Radio Systems at the 4th IBBT/ MIT Joint Workshop and the EC workshop regarding the standardisation mandate for cognitive radio systems. This presentation included the results of a survey amongst the CEPT members regarding the protection requirements of PMSE applications from TVWS (Television White Space) devices and the latest status of spectrum engineering investigations regarding this subject in the ECC spectrum engineering working group.



Jean-Philippe Kermoal (ECO) at the Packet Microwave 2011 event



Mark Thomas at the Conference on Perspectives for the Development of the Electronic Communications Market in the EU (Warsaw, Poland, October 2011)



The Nançay Radio Telescope (NRT)

#### Participating in a regular programme of key meetings

As well as our regular collaboration with a range of external bodies described in the first section of this report, the ECO has also continued to work with the ECC to develop relationships with other important stakeholder groups throughout the year.

#### ETSI

In 2011, in support of WG FM PT 44 (the Project Team within WG FM responsible for satellite communications) the ECO has started to attend TC SES (Satellite Earth Stations and Systems) meetings and has contributed to the creation of new European harmonised standards which are developed in parallel with new ECC Decisions in WG FM, most notably on Earth Stations on Mobile Platforms in the Ka-Band.

#### European Commission

The ECO regularly supported the ECC Chairman as observer at the Radio Spectrum Committee of the European Commission. In particular, the ECO prepared the summary report of ECC activity for the meeting. This meeting is a key interface between the Commisson and the ECC in carrying out the Radio Spectrum Decision, which defines the relationship between the two.

The ECO also participated in the Radio Spectrum Policy Group (RSPG) working group on the Spectrum Review in 2011. This group delivered a draft RSPG Opinion which is also related to the ECO Frequency Information System (EFIS) and its possible role in future spectrum inventory measures and the collection of information.

Participation in the Telecommunications Conformity Assessment and Market surveillance (TCAM) Standing Committee continued during 2011. This was reflected in the effective role it played during the EC workshop on cognitive radio systems at Ispra, Italy, in 2011 and in the ECO questionnaire on contact points for experimental and demonstrational use of equipment in Europe which was triggered by a TCAM action plan and ended in the establishment of an information webpage linked to the EFIS and ECC webpages.

#### R&TTE CA and ADCO R&TTE

Following the agreement of June 2010 between the ECC, ETSI, R&TTE Compliance Association (R&TTE CA), and Administrative Co-operation in R&TTE (ADCO R&TTE) to strengthen the inter-organisational co-operation in the R&TTE equipment compliance area, the ECO continued in 2011 to provide the interface for bridging the relevant processes in the ECC and other organisations.

The ECO participated in both plenary meetings of R&TTE CA in 2011 and kept this ECC partner regularly updated on new ECC Decisions, Reports and Recommendations relevant to the work of R&TTE CA. Both technical and procedural issues, as well as the issues related to the ECC working process, including the new CEPT web-portal, were included on the agenda of the ECO-R&TTE CA cooperation in 2011.

The interest of R&TTE CA members to find out more about the ECC and how its regulation affects their work became more tangible with R&TTE CA members actively participating in the 1st CEPT Workshop in European Spectrum Management and Numbering held in February 2011 and with R&TTE CA request for the ECO to contribute to the revision of one of the organisation's basic documents - Technical Guidance Note 11 to Notified Bodies.

The ECO also continued its co-operation with another major group of the European regulators in the R&TTE compliance area, namely ADCO R&TTE. The principal objectives for the ECO in this co-operation are to monitor the progress within ADCO R&TTE, assess the necessity of informing ECC entities, and to aid the bridging of joint activities, where appropriate.

In 2011, ADCO R&TTE, which regularly reports to the TCAM Committee working within the framework of the European Commission, started extensive discussions on the introduction of the so-called 'risk assessment' procedure in the routine work of the national market surveillance authorities and sought a direct co-operation with the ECC's Working Group Spectrum Engineering. The ECO will follow this process and will continue to provide the necessary assistance and input to this ongoing dialogue.

#### International Railways Union (UIC)

The ECO has also established a new relationship with the working group in the International Railways Union (UIC) that deals with GSM-R and other wireless railway applications. This supports the new LoU between the UIC and the ECC and ensures a good information exchange between the organisations. For instance, Thomas Weber from the ECO updated the UIC working group on the ongoing work within the ECC in relation to GSM-R and other wireless railway applications. While the UIC provided the ECO with access to information on their activities in the field of wireless radio applications used by the railways.

#### COST TERRA

The ECO's collaboration with COST-TERRA was intiated in 2010 with its participation in a meeting in Belgion, August 2010. The collaboration was further developed in 2011 with:

- COST-TERRA Core Group meeting (11 March 2011) held at the ECO's offices. The ECO updated members of Core Group about CEPT activities relating to cognitive radio systems and, in particular, white space devices. It also discussed ongoing activity in CEPT and presented the outcome of CPM-12-2 meeting on WRC-12 AI 1.19.
- ECO representatives assisting in the organisation of web-meetings of COST-TERRA WGs and Core Group. This provides the ECO with a further opportunity to attend these meetings and gather information about the project.





#### Radio Amateur

As an ad-hoc activity, the ECO took part on 3 September 2011 in the so called 'Field Day' of the Danish national radio amateur society 'EDR', a member of IARU. The 'Field Day' is a traditional annual radio amateur competition within as well as between national radio societies. This event turned out to be a good opportunity for the ECO to better understand the needs of practising radio amateurs and discuss various technical and regulatory issues with EDR members.

#### DEVELOPING TRAINING SESSIONS AND MATERIALS FOR NEWCOMERS TO ECC WORK

Left to right: Peter Marlau Knudsen (permanent Danish representative in WG RA), Jørgen Kragh (chairman of former FM26 on frequencies for SRD in 1996-1998), Alexander Gulyaev (ECO expert, chairman of RA2).



Marc Le Devendec (Deputy Director of the ECO), SEAMCAT presentation at the CEPT workshop on future UHF spectrum use for SRD, RFID and Smart Metering (Mainz, April 2011) As well as participating in a number of conferences this year, we have also developed training sessions and materials for newcomers (administrations, representatives of LoUs) on SEAMCAT® together with a workshop on European spectrum management and numbering. In addition, we ran a specialist workshop on future UHF spectrum use for SRD, RFID and Smart Metering. Some details on these are given below. Additional information on the workshops is available at: http://cept.org/ecc/topics/cept-workshops.

#### SEAMCAT presentations

The ECO organised a number of ad-hoc presentations of the SEAMCAT tool and its new features throughout the year. We introduced the tool in WG SE in January 2011 (Cardiff, UK). We also presented the new sensing features at the CEPT workshop on future UHF spectrum use for SRD, RFID and Smart Metering in April (see next page).

In addition, in December, we delivered two presentations within the framework of WG SE to: PT SE43 (Cognitive Radio Systems and White Spaces) on the simulations of White Space Devices interference into broadcasting service and PT SE44 (Broadband Direct-Air-to-Ground Communications (DA2GC)) on the feasibility to simulate a Direct Air to Ground Communication type of simulation.

### CEPT Workshop on European Spectrum Management and Numbering (Copenhagen, Denmark, February 2011)

In February, the ECO organised a workshop specifically designed for newcomers in the telecoms area, both working for national regulators and in the industry, as well as for those with an interest in broadening their knowledge of modern regulation of telecommunications in Europe.

The workshop was attended by 46 participants representing 28 administrations. Presentations were delivered by experts from the Office and from ETSI.





### CEPT workshop on future UHF spectrum use for SRD, RFID and Smart Metering (Mainz, Germany, April 2011)

The ECC Frequency Management Working Group (WG FM) asked SRD/MG, chaired by the ECO, to organise an ECC Workshop considering the need for future UHF spectrum for SRDs, RFIDs and Smart Metering (improving the efficiency of the delivery of utilities to consumers, including electricity supply).

The workshop was attended by more than 130 participants and resulted in the development of a roadmap for SRD, RFID and Smart Metering and several other work items within the ECC afterwards.





On the left: Marc Le Devendec (ECO), Igor Minaev (ETSI) and Jukka Rakkolainen (ECO) On the right: Participants to the workshop Thomas Ewers, Chairman of the ECC, presenting at the workshop. Participants also had the chance to visit equipment presentations in the margins of the workshop.

DEVELOPING THE EFIS INFORMATION TOOL - ITS CAPABILITIES AND HOW ADMINISTRATIONS USE IT

Following the merger of the ECA database into EFIS, additional features were implemented in EFIS.

The enhanced and extended EFIS database provides national frequency data (allocations, applications, radio interfaces, right of use information). The system allows you to search and compare actual spectrum usage information across Europe. It also provides industry and other users with easy access to spectrum information across CEPT countries. In addition, an ITU table is available with the radio service allocations as well as European common allocations data. These are set out in the same format as the national tables of frequency information and searchable and comparable in the same way as national information.

At the end of 2011, a major upgrade of the EFIS software, version 4, went live. This version saw a completely new EFIS layout, updated to reflect the ECO website. In addition, the ECO also started to add strategic spectrum management information, applying EFIS's search capability to a range of relevant documents such as ETSI system reference documents, CEPT Reports, EC Decisions, 'RIS Models' (radio interface specification models, developed by the ECC) – all documents uploaded by the ECO. Also, a type 'Licensing info' which allows administrations to upload general information on licensing, procedures etc. to their national tables.

In addition, a number of enhancements were made to the EFIS software during the year. The search/compare functionality was greatly improved, now with two ways of selecting terms for allocations and application search and comparison, plus a much enhanced functionality which allows users to find information more easily in EFIS without knowing an exact term (allocations, applications). New pages were introduced: latest news, administration contacts for EFIS, update history and a page containing information/news from non-CEPT countries. For administrations improved system feedback/error messages makes XML upload of data to EFIS more user-friendly.

The European Common Allocation (ECA) Table for the frequency range 9 kHz to 3000 GHz provides a strategic framework for radio spectrum usage in Europe. A number of enhanced features have been included in the ECA database following its merger with EFIS. For instance: ITU-RR and EU footnotes are now included in the ECA table in EFIS (ERC Report 25). The 'RIS Models' (radio interface specification models) developed by the ECC, have also been included, together with information about EC Decisions, and some other additional information (such as: latest news, information about non-CEPT countries, update history, administration contacts).

Version 4 of the EFIS software also introduced a new section in EFIS: 'Spectrum inventory', which contains a wealth of non-regulatory information for spectrum inventory purposes and the evolution of spectrum use, in the form of documents uploaded under document types 'ECC-ECO' (where all CEPT, ECC and ECO Reports are found). Also, ETSI system reference documents and draft documents are available here. These documents are uploaded by the ECO. A further type, 'National', allows national administrations to upload additional information of a non-regulatory nature on the possible evolution of spectrum use under study in their country.

ESTABLISHING AND DEVELOPING LINKS WITH ACADEMIA AND RESEARCH PROGRAMS WHOSE WORK IS RELEVANT TO THE ECC'S PRESENT AND POSSIBLE FUTURE WORK

#### **Research** activities

The ECO was tasked by the ECC to develop relations with universities and relevant scientific institutes that would be willing to do research in spectrum management, and to give advice to research institutes on issues to investigate or on specific research. As well as benefitting from the creativity which it can gain from academia into the field of spectrum management, the ECC hopes that early guidance to the research community about the regulatory environment will make the outcomes of academic research more easily applicable in practice. As part of this process, the ECO created a web page at www.cept.org/ecc/topics/research-activity which charts a range of research projects which may be of relevance to the ECC's activities.

In 2011, the ECO initiated the next step of this activity by inviting relevant contacts from universities/projects to discuss with the Office areas of their work where closer cooperation might be of mutual benefit. With the guidance of the ECC, the ECO identified a smaller number of projects with which closer links may be developed.

The ECO may become directly involved in the follow up of some of these projects, subject to available resources, and the maintenance of a strict principle of independence from a particular technology or other interest. One example of where it already gives guidance is with its participation in the Advisory Group on the FP7 BeFEMTO EU (Seventh Framework Programme Broadband Evolved) project. The consortium targets: LTE-Advanced Femtocells as a key enabler for achieving new Radio Access enhancements, thanks to innovative Interference Mitigation algorithms; and Networking aspects and Routing algorithms. At the same time, it supports new services and applications where the regulatory aspects are playing a key role for the Femto deployment success. The ECO provides expertise on technical regulatory matters as well as on SEAMCAT within the BeFEMTO project. The project will present a synthesis of its results to the European Commission in January 2012.

#### MANAGING OUR OPERATIONAL SERVICES

We are committed to providing high quality support to CEPT and the ECC across the wide range of professional services we provide. Here is a summary of our operational performance for the year.

#### SUPPORTING THE CEPT PRESIDENCY

The ECO organised the CEPT Assembly in December 2011 in Copenhagen. This reviewed and endorsed the strategic and political reform of the organisation which CEPT made in 2009, establishing the present arrangements.



Mr. Ulrich Dammann, Chairman of the European Committee for Postal Regulation (CERP) Mr. Thomas Ewers, Chairman of the Electronic Communications Committee (ECC), Germany Mr. Frédéric Riehl, Chairman of the Assembly, Federal Office of Communications, Switzerland Mr. Anders Jönsson, Chairman of the Committee for ITU Policy (Com-ITU), Sweden Mr. Mark Thomas, Director of the ECO



#### Managing CEPT's family of websites

The CEPT website is a key platform for communicating the work of CEPT and its three committees (ECC, CERP and Com-ITU), working groups, and many project teams.

2011 saw the launch of the new improved CEPT website, with a common main address (www.cept.org) and approach for the whole organisation, but distinctive areas for each of the three Committees, the Office itself and the Presidency as an umbrella organisation. These link together seamlessly where necessary. This is intended to reflect the nature of the organisation and the relationship of its constituent parts. We hope that the new website will improve the online experience for users and the online presence of each organisation to make it easier for people to access and participate in our work. At the end of 2011, about 1800 users have already defined a profile in the system.

The ECO has been making modifications to the functionality of the website since it went live in July 2011 based on internal and external feedback. This work is expected to continue up to the middle of 2012.

Number of visit: 280,739 (for the second half of 2011)

Average number of visit per day: 1,305

Average visit length: 15.31 min.

Further to the launch of the new website, the ECO has also produced separate user guides for regular users (which are available under 'General Links' at the bottom of all web-pages) and for those with website management rights (such as: the chairmen and secretaries of all ECC groups).

#### **CEPT** Leaftlet

To help increase awareness and understanding about the work of CEPT, the Office also supported the CEPT Presidency in devising and producing a new leaflet 'CEPT - All About Our Organisation' describing the role of CEPT and that of its three business committees. This was released in time for the CEPT Assembly in December 2011 and is available for download from the CEPT website: www.cept.org.

#### ECO DOCUMENT DATABASE – ECODOCDB

The ECO Document Database continued to provide an important online resource for users wanting to access ECC Decisions, Recommendations and Reports, and CEPT Reports.

In 2011, around 370,000 people visited the ECODOCDB, representing about 1,000 visits per day. In total, 1,066,000 documents were downloaded from the database.

The most downloaded document was ECC Report 159 dealing with Cognitive radio systems in the 'white spaces' in 470-790 MHz followed by Rec. 70-03 on Short Range Devices.



The overview of the most downloaded documents reflects the issues of most interest to people visiting the website such as: Frequency regulatory information (ERC Report 25 which provides an overview of spectrum usage in CEPT countries (European Common Allocation Table), the many wireless short range applications (ERC Recommendation 70-03), Digital Dividend (CEPT Report 30); Mobile issues (ECC Report 103, ECC Report 82, ECC Report 96, ECC Report 146); Radio Amateur (T/R 61-01); and SEAMCAT (ECC Report 68).





#### DEVELOPING BESPOKE ONLINE INFORMATION TOOLS

#### SEAMCAT

The ECO's work on SEAMCAT during 2011 was mainly targeted at the 'clean-up' of existing SEAMCAT features which through the years lacked maintenance (i.e. they existed, but were not 100% operational). The development was performed by two external subcontracting companies based in Copenhagen. This task was successfully completed as planned. Batch operation (i.e. possibility to run sequences of simulations) is now available for all sorts of scenarios (i.e. generic, CDMA or OFDMA), and the antenna convention is harmonised throughout the whole tool. A new set of library templates for CDMA and OFDMA is also now available for the user to store in various system configurations for re-use whenever necessary. The generation of simulation report is now complete.

Although not so visible to the user, the ECO initiated a process to benchmark the various mathematical algorithms of the tool using Java Unit facilities (i.e. allowing automated test routine). With this done, in 2012 we plan to focus on enhancing the usability of the tool (i.e. easier access to the simulation parameters from a visual point of view, harmonisation and improvement of the graphical interface) and its reliability (i.e. continuation of the test routine process).

A survey on SEAMCAT usage indicated that since June 2011, around 350 people have downloaded the latest release of SEAMCAT from CEPT and non-CEPT countries (Algeria, Argentina, Australia, Bangladesh, Bolivia, Brazil, Cameroon, Canada, China, Colombia, Ecuador, El Salvador, Gabon, Guinea, India, Indonesia, Israel, Iran, Iraq, Ivory coast , Japan, Madagascar, Malaysia, Mauritius, Namibia , Nigeria, Panama, Peru, Philippine, South Africa Senegal, South Korea, Sri Lanka, USA, Vietnam).



#### Overview of the connection to SEAMCAT download page (www.seamcat.org)

#### DEVELOPING NEW ELECTRONIC WORKING METHODS

Since the beginning of 2011, the ECO has divided its guidance on the use of various Electronic Working Methods (EWM) into two levels:

- support in the implementation of a platform for the virtual participation in meetings
- a more general description of the electronic tools and their main features (in 'ECO Guidelines on EWM')

As a consequence of this, the ECO has made the following progress to support the ECC's activities.

#### Virtual Participation

The ECC has been exploring the extent to which physical attendance at some of its meetings could be replaced by virtual (electronic) participation. Within the ECC, these are assumed to include web-meetings, virtual participation in physical meetings and webinars. When considering the introduction of the web-based collaboration arrangements back in 2008, the ECC requested its WG RA, which has been until recently responsible for the regulatory aspects of EWM, to develop a step-by-step implementation plan so that the impact of the new tools would be constructive rather than disruptive to the ECC's working processes.

The preparatory work carried out by WG RA and supported by the ECO resulted in a number of recommendations to the ECC. The main two were:

- to launch a trial period within the ECC in order carefully to assess individual advantages and limitations of the three virtual participation EWM and
- for the ECO to evaluate, propose and aid practical implementation of a suitable web-platform for virtual participation.

#### Trial period

The trial period for the implementation of the new virtual working arrangements took place from October 2009 to September 2011. This was marked by a gradual but steady increase in the use of the tools, mostly among the ECC entities which were creating deliverables rather than taking final decisions.

The ECO has been leading the implementation of virtual participation EWM based on the GoToMeeting software platform which has proved to be quite successful. A total of 64 virtual meetings were reported to WG RA during the trial period which corresponds to four meetings per month on average. 91% of these meetings were web-meetings while 6% of them were physical meetings with virtual participants.

#### NUMBER OF VIRTUAL MEETINGS REPORTED TO WG RA

	FEBRUARY - APRIL 2010	MAY - AUGUST 2010	SEPTEMBER 2010 - JANUARY 2011	JANUARY - AUGUST 2011
Overall number of virtual meetings reported to WG RA	13	17	16	15
Web-meetings	П	16	15	15
Virtual participation in physical meetings	2	I	I	
Webinars		Cognitive Radio- webinar in May 2010	NLF-webinar in September 2010	'White Spaces'- webinar in January 2011
Average number of participants per meeting	6	7	6	8
Problems reported in	60% of the meetings	36% of the meetings	50% of the meetings	34% of the meetings
Average effectiveness score	7	8	8	8.8

The trial period included meetings where the virtual participation in physical meetings was tested. Two configurations were considered:

- Meetings organised in the ECO premises, using a platform based on the web meeting tool, microphones and web cameras in order to allow virtual participants to follow a meeting.
- Meetings organised outside the ECO premises for which the ECO will continue to offer a facility using GoToMeeting with external USB speakerphone multiple microphones.

Based on the experience gained during the trial period, the ECO has developed documents providing guidance to the participants and chairmen which have been incorporated into the current 'ECO Guidelines on the use of GoToMeeting platform'.

#### Going live

The trial period was generally regarded by the ECC as successful and the 30th ECC meeting in December 2011 recognised the virtual participation as complementary ECC working arrangements, in addition to the traditional ones. It was also noted that the EWM should in future be referred to as EWA (Eletronic Working Arrangements).

Since September 2011, the ECO has been observing not only more and more frequent webmeetings of the WG FM, WG SE and ECC PTI sub-groups, but also increasing demand for virtual participation in physical meetings, both in small groups (e.g. FM Maritime Forum Group with 19 physical and 3 virtual participants) and relatively large ones (a Com-ITU meeting with 32 physical and 4 virtual participants). This is largely new territory, and brings significant opportunities and challenges. It is unlikely that participants in ECC work will become strangers to airports in the near future. Collaboration and consensus run more smoothly when people know each other. But equally there is no doubt - especially under the current economic circumstances - that EWM, shortly to be known as EWA, is here to stay, and will grow in use. The availability of the EWM toolkit has become a vital element to maintain or improve the high efficiency of the ECC work while keeping the associated costs to an acceptable level.

Further information on the virtual participation to meetings are available in the 'ECO Guidelines on the use of GoToMeeting platform' which includes since December 2011 sections on the 'ECO Guidelines on EWM'.

#### User Guide for the ECO Forum

In March 2011, the ECO developed its 'User Guide for ECO Forum' which is available through the main menu of the ECO Forum webpage. The guide has been improved following a review of its operational performance. At the same time, the relevant section of the 'ECO Guidelines on EWM' has been revised in order not to duplicate information in the User Guide.

Following the review, the ECO has observed an increased average level of use of this facility in recent months and we expect this trend to continue, particularly in light of the ECC's recent decision to introduce Forum Groups. In that respect, ECO experts have been given the same management rights for the respective areas on the ECO Forum as they currently have for the management of the ECC groups' webpages. This shall increase the flexibility and responsiveness of our support in this area.

#### ECO Forum: http://forum.ero.dk

#### GAINING CONSENSUS THROUGH PUBLIC CONSULTATIONS

In 2011, we carried out public consultations resulting into the publications of new ECC deliverables: five of which related to ECC Decisions, ten to ECC Recommendations, sixteen to ECC Reports. The responses received to the consultations were distributed to the relevant working groups for careful consideration and taken fully into account in the decision-making process.



Overview of the ECC deliverables from 2008 to 2011



CEPT Reports ECC Reports ECC Recommendations ECC Decisions

#### IMPROVING ECC DELIVERABLES THROUGH QUESTIONNAIRES

In 2011, the ECO sent out 21 questionnaires to administrations (in some cases, the industry was also consulted) in the 48 CEPT countries dealing with:

QUESTIONNAIRE	REPLIES RECEIVED
I I × harmonisation.	24
Collection of information about the usage of the frequency band 169.4-169.8125.	54
Collection of information on the national implementation of the ECC/DEC/(06)08 (GPR/WPR).	56
Collection of country-related M2M information.	25
Current Number Portability issues.	18
ECC Report 003 on Spectrum Requirements.	12
FS use of the 28.8365-28.9485 GHz.	13
Generic inventory of candidate applications for the 1452-1492 MHz band.	42
Implementation Aspects of Accuracy of the Caller Location Information.	59
Implementation of Specific Measures on Emergency Calling Services for People with Disabilities.	4
Improving user information about contact points for authorisations for test and development use.	14
Narrowband or wideband PMR/PAMR/PPDR equipment.	39
National contact point(s) from CEPT Administrations relevant to the work in WG FM Project Team FM49 on Broadband Public Protection and disaster Relief (PPDR) Spectrum Requirements.	31
Protection of PMSE in UHF with WSD.	41
QoS Frameworks and Practices in Case of Residential Internet Access.	15
Radio Amateur Licences.	29
RF interference to aeronautical radio services.	15
SRC - Implementation of ERC/REC 31-04.	29
SRD (Use of 863-870 MHz).	73
Usage of ITXY number range.	25
Use and administrative handling of Personal Locator Beacons (PLB's) throughout CEPT.	12

#### PROVIDING A FORUM FOR DEBATE

We hosted 33 meetings in 2011 at our offices in Copenhagen bringing together over 770 participants from around Europe for a total of 65 days.

In particular, we hosted in October 2011 a CPG PTA meeting, which was attended by 69 delegates representing 15 CEPT Administrations, the ECO, other organisations, and representatives of operators and manufacturers.



Alexander Kuhn (BNetzA, Chairman of ECC CPG PTA) and Lars Herrmann (BNetzA, Secretariat of ECC CPG PTA) CPG PTA, 5-7 October 2011

### **SECTION THREE**

## STRUCTURE AND GOVERNANCE

Thirty one countries are now Contracting Parties to the 'Convention for the establishment of the European Communications Office' which defines the terms of reference for the ECO and its funding arrangement, since Montenegro became a Contracting Party in 2010.

The ECO is governed by the Council, consisting of representatives of the Contracting Parties to the Convention. The Council has 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 draft work programme is informed by the ECC's Strategic Plan and discussions between the responsible ECO staff member and the ECC (its Working Groups and Project Team Chairmen), as well as other parties for whom the ECO works, notably the CEPT Presidency. The ECO Convention also states that the ECO's work programme should be based on proposals from the CEPT Committees. The Council is also responsible for appointing the Director of the Office.

The Council's preferred method of working is by consensus. Consensus decision-making is defined as a decision being reached by common agreement among all member countries without sustained opposition to substantial issues. However, it does not mean unanimity. A negotiation process takes place to reconcile any conflicting issues and all Council participants have the responsibility to reach decisions by consensus.

However, where it is impossible to gain a majority view, the Council Chairman can either: postpone the issue to the next meeting; negotiate outside the meeting to reduce the alternatives or to achieve a common approach; or hold a vote. An issue should not be postponed for more than one meeting. Where a vote is held, votes are weighted in proportion to the financial contribution made by the country concerned.

The ECC is linked to the ECO by several references in the ECC's Rules of Procedure and Working Methods. Traditionally, the ECC Chairman (or Vice-Chairman) sits on the ECO Council, as Chairman or Vice Chairman. For practical purposes, these relationships are strengthened by the Director's membership of the ECC Steering Group.

#### Council Chairmanship

In November 2011, Chris van Diepenbeek retired from the ECO Council, after serving three constructive years as Chairman from 2008-2011 and for some years prior to that as Vice Chairman. Mr. van Diepenbeek was not eligible for re-election at the November 2011 Council meeting due to his scheduled retirement from his position at the Dutch administration at the end of February 2012. The Council expressed its heartfelt thanks to Mr. van Diepenbeek for his long and loyal service to Council, Office and member countries.

Mr. Geir Jan Sundal (Norway) has been elected as the new Chairman of the Council, having been Vice Chairman since 2008. Mr. Peter Pauli (Switzerland), a council member for many years, was appointed as our new Vice Chairman.



Mr. Geir Jan Sundal (NOR) and Mr. Chris van Diepenbeek (HOL)



Mr. Peter Pauli (SUI)

# FINANCIAL SUMMARY

The ECO was approximately 95% financed by the following 31 countries in 2011: Austria, Belgium<sup>1</sup>, Bulgaria, Croatia, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, Monaco, Montenegro, the Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and Vatican City.

The remainder is from directly funded services (e.g. administration of the CEPT and the Satellite Memorandum of Understanding) and income from investments of the ECO's net capital.

The following figures provide a financial summary for 2011.

#### FINANCIAL SUMMARY 2011

	DKK	EUR
INCOME	18,672,745	2,509,617
EXPENDITURE		
Staff Costs (salaries, pension contributions, etc.)	1,839,859	1,591,277
Running Expenses (outsourcing, projects, professional fees, travel)	3,835,677	515,515
Office Facilities (rent, building related expenses)	2,490,887	334,775
Expenditure total	18,166,423	2,441,567
Operating balance for end of year	+506,322	+68,050

Based on exchange rate of DKK I = EUR 0.1344

<sup>1</sup> Belgium is not one of the Contracting Parties to the ECO Convention but contributes to the financing of the ECO.

# european communications office

### ECO

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