european communications office

ANNUAL REPORT 2010

OUR MISSION

The European Communications Office (ECO) is the Secretariat of the European Conference of Postal and Telecommunications Administrations (CEPT), an organisation where policy makers and regulators from 48 countries across Europe collaborate to harmonise telecommunication, radio spectrum and postal regulations.

The ECO provides advice and support to the 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 the CEPT's day-to-day activities.

The ECO further supports the 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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SECTION 1

The ECO has delivered a **strong** performance across its core activities this year.

600,000 people have visited our website, with an average of **1,700 visits per day**

More than **890,000 documents** have been downloaded from the **ECO document database** by some **270,000 visitors**

We have carried out **31 public consultations** and administered 17 questionnaires

We have hosted **40** meetings attracting over **700 participants**

YEAR IN BRIEF

We have **delivered** speeches at **8 key events** providing **valuable** communications and networking opportunities

We have **organised** two workshops tailored to specialist audiences

We have **developed** many new and **important** business relationships

We have produced three ECO Reports

CHAIRMAN'S FOREWORD

Chris van Diepenbeek
Chairman of the ECO Council

I am pleased to present the European Communications Office's (ECO) second Annual Report.

We, the ECO, entered 2010 with a key commitment to be as effective as we can in delivering high quality support to the European Conference of Postal and Telecommunications Administrations (CEPT[1]) and the Electronic Communications Committee (ECC) which is so essential to the smooth running of their activities.

In following the ECC's strategic path, we have been focused on developing a range of new international business relationships with research and academic institutions and many industry players to create greater understanding about the work of the CEPT and ECC, and to build effective partnerships with those helping to drive technological change. When we meet colleagues, it is clear that they value having a frank and direct exchange of information about spectrum matters which we believe benefits us all.

We are committed to working effectively with our collaborative partners and supporting the ECC's initiatives to explore new and innovative solutions to increase the efficiency in spectrum use to support our flourishing communications industry.

Consumers have come to depend on digital technology and the many services it provides; these are now an everyday necessity woven into the patterns of our lives. With the emergence of new technologies such as Cognitive Radio Systems and an increasing demand for spectrum, regulators will have to develop new regulations and challenge the current allocation or designation of spectrum in order to allow for the development of future applications. Therefore, it is increasingly important that regulators work together and with a wider range of partners to deliver effective policies that make way for new communications technologies whilst continuing to protect existing ones.

These are challenging times. But the ECO with the vital support of ECO members countries is well-equipped to meet the challenges in this changing environment and to continue to enhance the work of our regulatory partners. Within this context, I am delighted to welcome Montenegro to the ECO which joined as our 31st member country in 2010. I sincerely hope that Montenegro will be followed by the many other administrations which are a member of the CEPT, but not yet of the ECO.

[1] CEPT (Conférence Européenne des Administrations des Postes et des Télécommunications)

DIRECTOR'S STATEMENT

This is our second Annual Report, and the time since the first one seems to have gone very quickly. In terms of our organisation and type of work, we see continuity and steady evolution. But in terms of what we do, 2010 again focused on facilitating the rapid changes in the use of electronic communications for the benefit of all.

This is against the tough background of the deep global economic crisis which was revealed to us in 2008. Now its effects are felt increasingly in Europe as companies and governments try to deal with the consequences. Budgets are tightening – or worse – in many administrations and some industries. Thankfully, the commitment given by the 31 countries now in the ECO Convention to support the Office creates an important area of stability for the ECC and all of its 48 member administrations.

The economic crisis makes it vital to maximise the opportunities and minimise the difficulties for people and industry who seek to use the spectrum. Telecommunications is part of the solution, so it is more important than ever to increase the benefits of harmonisation, clarity and flexibility in managing spectrum. These objectives do not always seem to sit so comfortably together – but that is precisely what we work hard to achieve.

As technology and markets change then so too does our focus. For example, our work on numbering and naming in the ECC's new NaN group is now more and more about pathways for future networks and the 'internet of things' rather than about telephone numbers. We have to think about these issues now – getting the experts together – so that we are enabling technology deployment and not holding it up.

In 2010, we saw the results of the ECC's work – which had included significant expert and administrative support from the Office – in the Digital Dividend. We published the final set of ECC deliverables on the subject, many prepared under the framework agreement with the European Commission (the 'Radio Spectrum Decision'). The first spectrum auction based on these plans and technical criteria has already been held in Europe's largest economy, Germany. The winning bid of about 3.5 billion Euros, just for the spectrum rights, indicates the value that mobile broadband services are expected to have.

But equally important is our work in other areas of spectrum management, including the short range devices – which have a much lower profile in the attentions of journalists and politicians but which are vital parts of our everyday lives. They help us in areas from lower supermarket prices through to keeping the hearts of some 15% of the population beating in many countries across the world!

Mark Thomas
Director of the ECO

OUR ROLE

The ECO plays a pivotal role in the work of the CEPT and particularly one of its business committees, the Electronic Communications Committee (ECC), responsible for telecommunications harmonisation.

As well as providing operational support to the CEPT and its three committees, we are also fundamentally responsible for maximising the effectiveness of the ECC.

The ECC 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.

The ECC's approach is strategic, open and forward-looking, and based on consensus between the member countries. It applies its expertise in partnership with all stakeholders, the European Commission and ETSI[2] to facilitate the delivery of technologies and services for the benefit of society.

We seek to complement and support the ECC by:

- improving collaboration across its membership and extending its reach beyond;
- ensuring its communications are open, consistent and effective;
- delivering new initiatives and providing strategic input to its work; and
- helping the CEPT's consensus model of working to operate effectively.

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.

OUR TEAM

To help us achieve a high standard in the specialist services we provide, the ECO relies on the experience and expertise of our team of 14, based in Copenhagen, Denmark. Seven of whom are experts in the field of radio and telecommunications recruited from across Europe. Working alongside our experts are seven team members from Denmark who are responsible for managing our support and administrative services.

Having a dedicated and expert team to support the CEPT and ECC ensures we are ideally positioned to optimise their work across Europe. 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. In particular, in October 2010 several ECO staff members followed a course on "Writing English for a global audience", this aimed at providing additional support to the ECC groups in the development of ECC deliverables.

- Mark Thomas, Director, United Kingdom
- Marc Le Devendec, Deputy Director, France (Broadcasting; ETSI; Spectrum Engineering (SE24))
- Alexander Gulyaev, Russian Federation (Regulatory Affairs, IMT (ECC PT1); Electronic Working Methods (EWM))
- Jean-Philippe Kermoal, France (Spectrum Engineering (WG SE; SE19; STG);, SEAMCAT; fixed services)
- Stella Lyubchenko, Russian Federation (Spectrum Engineering (SE7; SE21; SE40; SE43); cognitive radio; academic research)
- Jukka Rakkolainen, Finland (Numbering and Networks (NaN))
- Thomas Weber, Germany (Frequency Management (FM22, FM38, FM44, FM48, SRD/MG), ECA and Satellites)
- Fatih Mehmet Yurdal, Turkey (Frequency Management, Short Range Devices, ECA) - (contract expired September 2010)

- Pia Hammer Bloch (EFIS, Communications, Council)
- Søren Conradsen (Office IT, web and mail services technical enquiries)
- Vibeke Hansen (Webmaster editor; reception)
- Susanne Have (Questionnaires, CEPT, administration, SAT MoU)
- Bente Pedersen (Public consultations, ECC deliverables' library ('DocDB'), administration)
- Merrete Wagner (Finance, premises, HR)
- Martin Jespersen (New website project manager – short-term contract ends April 2011)

[2]European Telecommunications Standards Institute

SUPPORTING THE CEPT

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

- Mr. Thomas Ewers, co-President of the 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);
- Mr. Ulrich Dammann, co-President of the 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); and
- Mr. Anders Jönsson, co-President of the 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 ensure a more consistent and joined-up approach across its main areas of work to improve efficiency.

The CEPT Assembly remains as the supreme body of the organisation, and is convened as required. The next Assembly planned for 2011, will evaluate the effectiveness of the strategic and political reform of the organisation.

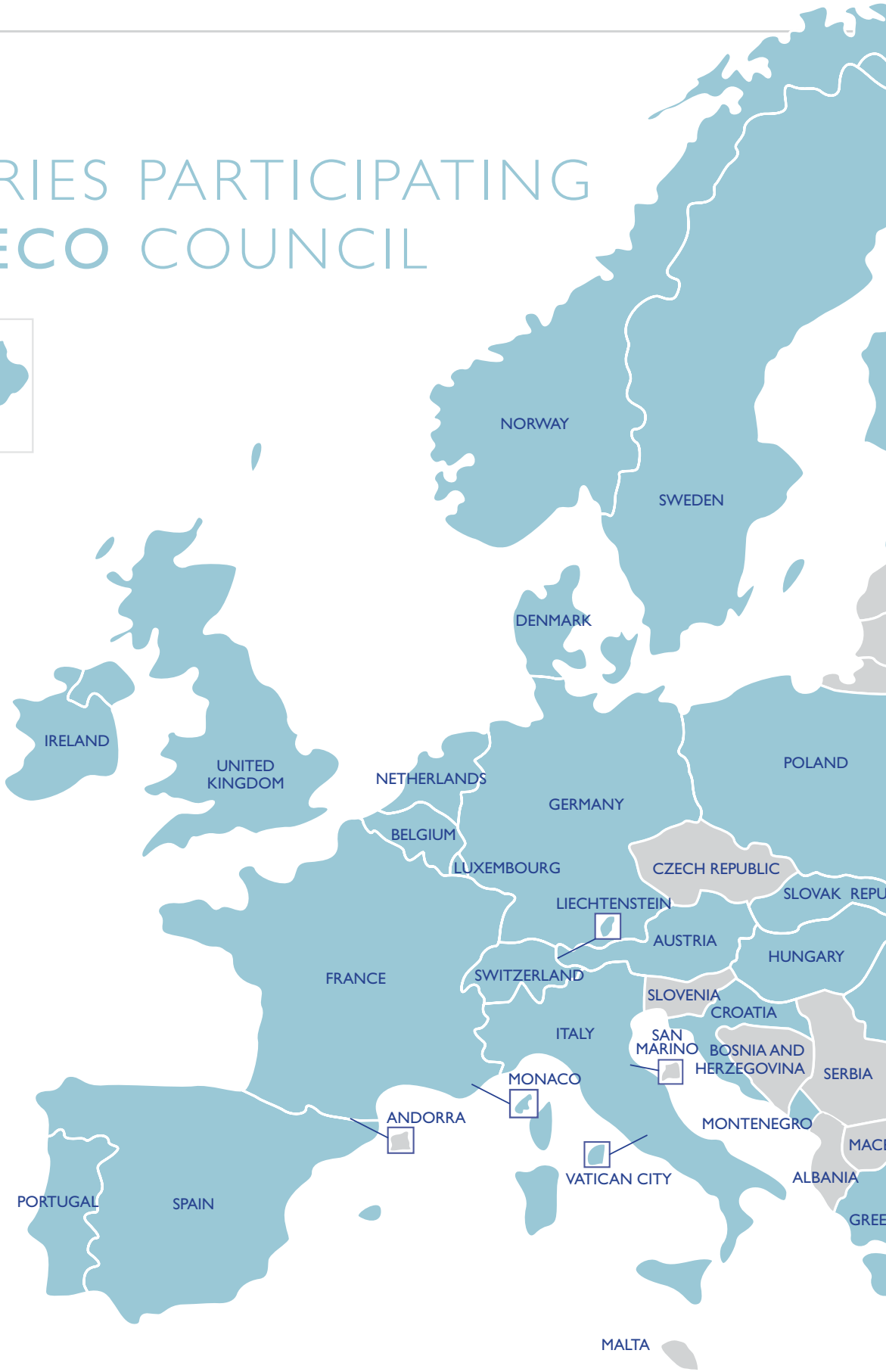
Mr. Thomas Ewers,
Chairman of the Electronic Communications Committee (ECC), Germany

Mr. Ulrich Dammann,
Chairman of the European Committee for Postal Regulation (CERP), Germany

Mr. Anders Jönsson,
Chairman of the Committee for ITU Policy (Com-ITU), Sweden

Additional information and details of how to get in touch with us are available from our website: www.cept.org/eco

COUNTRIES PARTICIPATING IN THE **ECO** COUNCIL



Austria, Belgium, 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 are all members of the ECO Council.

SPECIALIST SUPPORT TO THE ELECTRONIC COMMUNICATIONS COMMITTEE (ECC)

The ECO's fundamental role is to provide specialist support to the ECC and its many working groups and project teams. Central to this is our responsibility to deliver the following set of core activities which form the basis of all that we do.

CHAIRMANSHIP

We currently chair 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 "SRD" 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 Group;
- 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.

PUBLIC CONSULTATION

Public consultations are an important part of the CEPT and ECC policy-making process as they help to deliver better proposals and policies and improve understanding. Furthermore, CEPT decisions are usually reached by consensus among its members. Therefore, the views and opinions of administrations are highly valued and regularly sought to achieve support and acceptance across a range of policies and decisions.

The ECO is responsible for conducting consultation on behalf of the ECC. 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, including: government departments, public radiocommunications operators, manufacturers, users, private network operators, service providers, research institutes, academic institutions, standards making bodies and national, European or international organisations whose membership has an interest in European communications matters.

QUESTIONNAIRES

Questionnaires are developed within the framework of ECC working groups and project teams. The ECC use 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 and submit them to relevant ECC groups.

MEETING FACILITIES

The 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 four meeting rooms all of which have internet access:

- Hamlet, 50 seats, 3 screen 46 inches, projector, meeting audio system, webcasting;
- Langelinie, 20 seats, projector;
- Ophelia and Mermaid, 10 seats, 1 screen 46 inches.

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

THE ECO WEBSITE

Our website is a key platform for communicating the work of the CEPT and its committees, working groups, and many project teams. It is an important communications tool for raising awareness about public consultations and key initiatives being undertaken by the CEPT.

ONLINE INFORMATION SYSTEMS

Our website is also a vital resource for a range of bespoke online information systems which are described as follows.

DOCUMENT DATABASE - ECODOCDB

Our document database **(ECODocDB)** is an important online resource. It acts as a library for all ECC decisions, recommendations and 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.

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

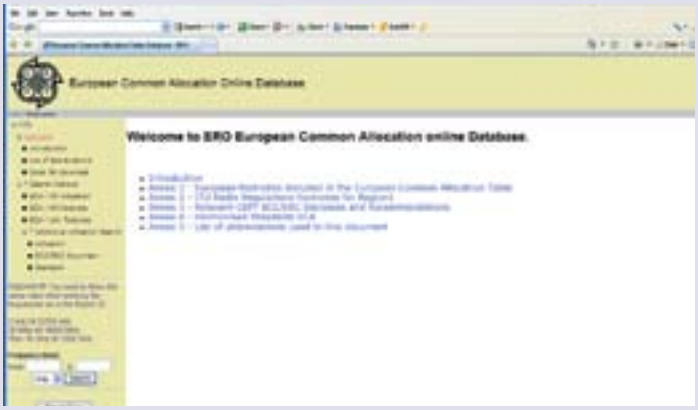
In addition, the ECO uses a Tractool management platform to make the development of the tool as transparent as possible. This platform allows SEAMCAT users to report any errors or to consult the list of tickets to be solved.

ECO FREQUENCY INFORMATION SYSTEM (EFIS)

The ECO Frequency Information System (EFIS) is an online frequency information system where CEPT administrations publish their 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 users with easy access to spectrum information across CEPT countries. Also available is an ITU table with the radio service allocations and a table containing the European common allocations data, in the same format as the national tables of frequency information and searchable and comparable in the same way as national information.

In 2007, the European Commission decided to use EFIS as a common spectrum information portal within the member states under Commission Decision 2007/344/EC.

EUROPEAN COMMON ALLOCATION DATABASE



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.

The Frequency Management Working Group (WG FM) is responsible for developing and maintaining the ECA Table. Much of this work is carried out by the ECO on its behalf. The ECA Table is reviewed periodically and updated as a result of decisions taken at the ITU Radiocommunication Conferences, ECC/ERC Decisions and Recommendations, European standards, and other relevant developments.

WG FM decided in 2010 to merge the ECA database with EFIS and this is expected to be completed in the course of 2011.

ECC WORK PROGRAMME DATABASE

The ECC work programme database has been developed in order to provide a sophisticated tool to manage all projects underway across the ECC. It also provides external partners, such as the European Commission and ETSI, with greater transparency of work undertaken across the ECC.

The database is updated on a regular basis and is available at: **http://eccwp.cept.org**

CENTRAL SOURCE OF INFORMATION

The ECO works together with CEPT countries and other stakeholders to provide accurate and up-to-date information in a number of key areas.

ECO BULLETIN

Three times per year, the ECO prepares a Bulletin on relevant activities in other world regions for the ECC, particularly with regard to new technologies and preparations for the next World Radiocommunication Conference. The ECO Bulletin is available to all ECC working groups.

SATELLITE 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.

Further information on the Sat MoU is available from our website at: **http://cept.org/eco/groups/eco/sat-mou**

TERRESTRIAL-DIGITAL AUDIO BROADCASTING PLANS

Another of our management tasks is to monitor and report on the progress of terrestrial-digital audio broadcasting (T-DAB) across Europe. We do this in accordance with two CEPT Plans which are available on the ECO website **(http://cept.org/ecc/topics/broadcasting/t-dab).** 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 informing CEPT administrations of any new or potential changes to the Plans, updating the Plans when new stations are co-ordinated, and notifying the administrations and the lead project team within the CEPT on broadcasting issues, WG FM PT 45, about the updates. Furthermore, we develop the tools in order to facilitate the management of the data contained in the Plans.

AMATEUR RADIO

The ECO takes 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 1.

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.

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.

COGNITIVE RADIO

The ECO maintains a number of web pages providing information on the ongoing activities within the ECC. In particular, we have established a web page on Cognitive Radio (CR) and Software Defined Radio (SDR) **(http://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.

COLLABORATIVE WORKING

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. An example of these is set out below.

We attend ETSI **(www.etsi.org)** meetings on electromagnetic compatibility and radio spectrum matters (ERM) and several of its 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.

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.

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 working groups: WP 1A, WP 1B, and SG 1 on spectrum management. In particular, in WP 1B, the ECO chairs the group dealing with Resolution 54 of Radiocommunication Assembly on the regional and global harmonisation of SRDs and radio frequency identification (RFID) technology and with the revision of Recommendation ITU-R SM.2153 on technical and operating parameters and spectrum use for short range radiocommunication devices.

We regularly contribute to the ECC Working Group on Numbering, Naming and Addressing (WG Na 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. We are also actively involved in the lead study group for next generation networks (NGN) and mobile telecoms systems, as well as the Focus Group on Future Networks.

SECTION 2

REVIEW OF THE YEAR

This section of the report reviews our core activities throughout 2010. The first part of the section looks at how we are moving forward with the implementation of the ECC's Strategic Plan. The second part focuses more on our operational activities across the year and the ways in which they enhance the work of the ECC.

ECC STRATEGIC PLAN

The ECC's Strategic Plan published in March 2010 sets the course it will follow over the next five years. It identifies the key challenges and priorities that will drive spectrum management over the coming years and its strategic approach to meeting them over the medium to long term.

A key priority for the ECO during 2010 has been to work together with the ECC to put a number of its strategic initiatives into action. The ECC's Strategic Plan identifies some key areas on which the ECO is required to focus. An update of our work in these areas is set out below.

COMMUNICATIONS STRATEGY

One of our objectives in the ECC Strategic Plan is to develop a communications programme to support the promotion of the ECC's work.

Over the past year, the ECO has moved forward with the implementation of a new communications strategy for the ECC which is based on openness and transparency and greater collaboration with stakeholders. Central to this, is the development of a new corporate identity for the ECC which will bring greater consistency to its work and reinforce its field of expertise. This will be rolled out in 2011 across a range of new publicity material which aims to improve understanding about the role of the ECC and encourage greater participation in its work.

Our website is a key platform for communicating the work of the ECC. During 2010, the website received some 600,000 visitors providing a valuable information resource for stakeholders. The ECO Annual Report is another way for us to bring greater transparency to our work and to report on our performance across the various activities we undertake on behalf of the ECC. In addition, we are developing a more proactive strategy with the media. In December, the French amateur radio magazine 'Ham-Mag' published an interview with Mark Thomas, the Director of the ECO, which addressed the role of the CEPT and the ECO, with particular emphasis on amateur radio.

NEW CONTACTS FOR 2010

Another of our objectives within the ECC's Strategic Plan is to develop relations with universities and relevant scientific institutes that would be willing to do research in spectrum management and give advice to research institutes on issues to investigate or on specific research and to explore relationships with European research programmes.

Within this framework, ECO experts have participated in a number of events during 2010 to establish a range of new contacts. In addition, the ECO has established a Research activity web-page **(http://www.cept.org/ecc/topics/research-activity)** which presents information on a range of projects dealing with spectrum management such as IMT, Femto, cognitive systems. Regular updates on the status of each of these projects are provided.

BEFEMTO PROJECT

The ECO is part of 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.

RAS CLUSTER WORKSHOP, JANUARY 2010

The RAS (Radio Access and Spectrum) Cluster Workshop took place on 28 January 2010. The workshop was attended by 48 participants from research institutes, industry, and standardisation bodies. As well as a range of European participants, representatives from the Republic of Korea attended the meeting. The workshop considered FP7's projects on Cognitive Radio and Spectrum Sharing, presenting their technology concepts and associated regulatory implications. The presentations are available on the Cognitive Radio area of the ECO website at: **http://cept.org/ecc/topics/cognitive-radio-systems-and-software-defined-radio.**

WIFI ALLIANCE, PARIS, FEBRUARY 2010

In the development of ECC Report 140 dealing with Radio Local Area Network (RLAN) on board aircraft, SE24 established contacts within the RLAN community. In this framework, the SE24 Chairman, Marc Le Devendec (ECO), was invited to join the Wifi Alliance meeting in Paris on 22 February 2010. This offered the opportunity for ECC members and representatives of the RLAN community to meet face-to-face and exchange views and information.

INTER-UNION COMMISSION ON FREQUENCY ALLOCATION FOR RADIO ASTRONOMY & SPACE SCIENCE (IUCAF) SUMMER SCHOOL, MAY 2010

The 3rd IUCAF Summer School took place in Tokyo, 31 May - 4 June 2010. The ECO was invited to participate in this event in order to introduce the ECC and its activities. The event offered a comprehensive view of both the technical and regulatory issues related to radio astronomers' use of the spectrum. A subject which is rapidly growing in importance for the radio astronomy community as well as for other radio service providers. The IUCAF Summer School offered delegates an opportunity to gain an insight into spectrum management from a number of experienced colleagues who work in the field of frequency management.

WIMAX FORUM, ESTONIA, JUNE 2010

The ECO promoted SEAMCAT during the WiMAX (Worldwide Interoperability for Microwave Access) forum conference in Tallinn in June 2010. Our objective was to increase the WiMAX community's awareness and understanding of SEAMCAT. The algorithm for implementation of WiMAX within the tool developed in collaboration with Intel, Samsung and the ECO was presented to the expert of the WiMAX Regulatory Working Group (RWG).

ITU REGIONAL DEVELOPMENT FORUM, GAMBIA, JULY 2010

This forum was organised by the International Telecommunication Union (ITU) at the kind invitation of the Government of the Republic of The Gambia through the Public Utility Regulatory Authority (PURA) from 14-16 July 2010. The forum considered the theme of Modern Spectrum Management and the Transition from Analogue to Digital Broadcasting. The ECO was invited to contribute to the forum and provided an up-to-date account of the transition to digital in Europe and the issues relating to the Digital Dividend.

National Astronomical Observatory of Japan (NAOJ) Nobeyama

COST (EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY) TERRA, BELGIUM, AUGUST 2010

The ECO promoted the new Cognitive Radio module in SEAMCAT to the COST TERRA EU funded project **(http://www.cost-terra.org/future-meetings)** in August. COST-TERRA is a forum which brings together regulatory, technical, and economic experts with the aim of spearheading a regulatory breakthrough in the development of Cognitive Radio and Software Defined Radio (CR/SDR) technologies in Europe.

COST TERRA, Belgium, August 2010

WROCLAW INTERNATIONAL SYMPOSIUM ON EMC, POLAND, SEPTEMBER 2010

During 2010, in its 20th Anniversary year, the Wroclaw EMC Symposium joined together with the EMC Europe Symposium to create one of the largest and oldest international conferences on electromagnetic compatibility in Europe.

The ECO, in collaboration with the National Institute of Telecommunications (Poland), organised a workshop at the event on SEAMCAT for beginners. In addition, we gave a presentation on the new Cognitive Radio feature which was implemented within SEAMCAT in 2010.

CHANGES IN LEGAL REGULATIONS OF THE TELECOMMUNICATIONS AND MEDIA WORLD, WARSAW, SEPTEMBER 2010

In September, Mark Thomas, the Director of the ECO, gave the keynote address at a conference in Warsaw. The conference was attended by leading figures from the Polish communications industry, and from regulatory and academic areas. The presentation, entitled "Spectrum, the last scarce resource in Telecommunications?", outlined some of the present trends and priorities in European spectrum management. It speculated that the environment in the long term may look increasingly "short-range, cognitive, and largely licence-exempt". However, spectrum would remain a scare resource for some time into the future, and much remained to be done, with harmonisation being an essential part of the regulatory framework.

COG ART, ROME, ITALY, NOVEMBER 2010

The 3rd International Symposium on Applied Sciences in Biomedical and Communication Technologies was attended by almost 230 participants from research institutes and industry. Together with a number of European participants, representatives from Canada, the Republic of Korea, Japan, and China were present.

Two Conferences were held in parallel: ISABEL 2010 and COG ART 2010. During the event, the ECO presented the new Cognitive Radio feature as implemented within SEAMCAT and provided an introduction to SEAMCAT in the conference sessions.

ORGANISING KEY EVENTS

As well as participating in a number of key events, we also host events for some of our specialist audiences.

Another of our strategic objectives is to develop training sessions and materials for newcomers (administrations, representatives of LoUs) focusing on various aspects of the ECC machinery: RoP, Working Methods, deliverables, internal expertise on: SEAMCAT®, compatibility studies. Some details on these are given below.

PUBLIC PROTECTION AND DISASTER RELIEF (PPDR) WORKSHOP, MARCH 2010

The ECO coordinated a workshop on the spectrum needs for Public Protection and Disaster Relief (PPDR) communication systems for the Frequency Management Working Group (WG FM) in Mainz, Germany, on 11-12 March. This brought together an array of stakeholders and experts in telecommunications with an interest in public protection and disaster relief. The aim of the workshop was to collect further information and exchange views and ideas concerning the future of PPDR systems, especially in relation to broadband. The event proved to be a unique opportunity to discuss some key issues related to the PPDR and the frequency bands to be used for these systems.

Public Protection & Disaster Relief (PPDR) workshop, Mainz, Germany, 11-12 March 2010

SEAMCAT WORKSHOP, OCTOBER 2010

In association with the SEAMCAT (Spectrum Engineering Advanced Monte Carlo Analysis Tool) Technical Group, we held a one-day workshop on SEAMCAT in October to provide training on the basic functionalities of the tool. Attendees learned the modelling of unwanted, blocking, and interference with basic examples of setting simulations. New functionalities like OFDMA LTE (3GPP Long Term Evolution) and cognitive radio modules were presented.

The workshop enabled participants to gain important hands-on experience in using the tool. 16 people participated in this one-day event and we expect to run a regular programme of such events in the future.

ECO FORUM

The new ECO Forum has been further developed this year since its launch in September 2009.

ECO Forum: http://forum.cept.org

The ECO Forum is based on an advanced software platform and has several useful features including the possibility to attach documents to postings and to create polls in order to seek participants' views on a wide range of issues, from selecting meeting dates to discussions on regulatory options.

Over the past year, the ECC has increasingly been using the Forum, either as a complementary or main tool, for correspondence activities which are widely used to develop various working documents (e.g. ECC Reports, internal group's reports, liaison statements etc.) which are then subject to approval at a higher level within the ECC. Although the Forum is still a relatively new tool for correspondence activities, it has been gaining popularity among ECC entities (ECC PT1, SE7, SE24) which used the ECO Forum in 2010 in order to consider various topics.

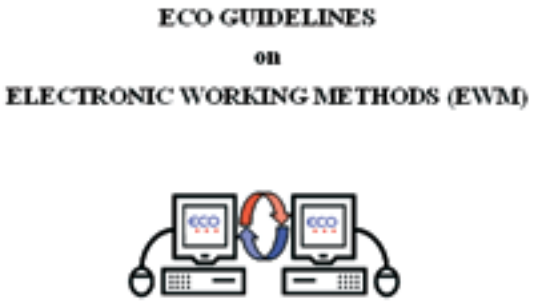
We have been gathering feedback on the use of the Forum during the year and have used this as the basis for updating the Forum section of the 'ECO Guidelines on the EWM' to improve its effectiveness for users.

ECO GUIDELINES ON ELECTRONIC WORKING METHODS

Following guidance from the ECC, the ECO has developed, in close co-operation with the Regulatory Affairs Working Group (WGRA), the 'ECO Guidelines on EWMs' which are being kept under continuous review since their launch in August 2009.

Significant progress was made in 2010 in developing new CEPT family websites which are planned to replace the current ECO (www.ero.dk) and CEPT (www.cept.org) websites in the first half of 2011. This process was accompanied by collecting and analysing the relevant information which will be used for a new section of the 'ECO Guidelines'.

Noticeable progress was also made during 2010 towards wider implementation and use within the ECC of the ECC Work Programme database (see page 15). The ECO reviewed the practical use of this database and took steps towards improving the user interface and the functionality of the system so that it would integrate more smoothly with the ECC's working processes. A new version of the ECC Work Programme will be made available in January 2011.



COOPERATION WITH OTHER BODIES

In the framework of the ECC-ETSI meeting, the ECO was tasked with coordinating the ECC contribution to the review of the document describing the cooperation process between the ECC and ETSI. This document was published in the second half of 2010.

The ECO, on behalf of the ECC and ETSI, maintains a relationship matrix, reflecting the work and information connections between groups of the ECC and ETSI. It shows whether there is an ongoing cooperation or a potential relationship between various groups in the ECC and ETSI. Our current aim is to update the matrix on an annual basis, however, this is subject to the level of its use.

Since mid-2010, the ECO has been maintaining a spreadsheet showing the list of ETSI Harmonised Standards under development in relation to the ongoing ECC activities. It has been developed within the framework of WGSE-ETSI cooperation. These documents are available at: http://www.cept.org/ecc/about-ecc/ecc-etsi.

Finally, a document describing the regulatory framework in Europe (ECC, ETSI and EC) is under development and is expected to be published in the first half of 2011.

ADMINISTRATIVE CO-OPERATION IN R&TTE

A joint meeting of the ECC, ETSI, R&TTE Compliance Association (R&TTE CA), and Administrative Co-operation in R&TTE (ADCO R&TTE) took place in June 2010 where it was decided to strengthen the co-operation between these organisations in the R&TTE equipment compliance area. The ECO was consequently tasked with a number of action points to set up this initiative.

Noting that the ECC and R&TTE CA signed a Letter of Understanding (LoU) regarding the mutual cooperation in July 2007, the newly agreed action points were aimed at bringing the cooperation into a practical dimension and, in particular, to create closer contacts and transparent mechanisms for presenting information requests between the ECC (mainly its Spectrum Engineering Working Group (WG SE)), Notified Bodies (NBs), and members of the R&TTE CA.

Following the guidance from the ECC, the ECO established in September 2010 a direct contact with the R&TTE CA which resulted, among other things, in a regular information exchange between the two organisations and participation in the working processes of the partner organisation from either side.

Some of the agreed action points were completed in 2010 while some others are ongoing. The ECO has been keeping the ECC informed of the steps it is taking to strengthen the ECC-R&TTE CA cooperation as appropriate.

MAINTAINING THE ECO FREQUENCY INFORMATION SYSTEM (EFIS)

Another of our responsibilities is to ensure the ECO Frequency Information System (EFIS) is maintained and developed. This includes upgrading the software when necessary, in order to respond to the needs of various stakeholders, and also provide the necessary support to administrations in uploading their national data into the system.

The EFIS system now contains data relating to all EU Member States and nine non-EU countries. During 2010, the amount of information published in EFIS and the level of detail increased considerably (49,300 items are provided for frequency allocations and 41,000 for frequency applications).

In addition, the EFIS software has been further improved during 2010. The ECO administers and plans changes of EFIS. Changes in 2010 included: new frequency table backup features; the possibility of clearing records; improved uploading of information; integration of new content such as contacts and latest change page; and spectrum news. We also published an EFIS User Manual in March 2010.

During the year, the ECC Frequency Management Working Group (WG FM) decided to merge the ECA and EFIS databases to create a comprehensive database on spectrum use. The merger will be planned and conducted by the ECO. It is expected to provide synergies and more efficient maintenance tasks as all the information will be contained in a single tool.

OPERATIONAL SUPPORT

In this part of the report, we provide a summary of what has been achieved operationally across core areas of our work to deliver effective support to the ECC and enhance its many activities.

DEVELOPING NEW ELECTRONIC WORKING METHODS

During 2010, the ECO has been trialling the use of new electronic working methods (EWM) which were introduced in 2009. A two-year trial period was set to enable us to assess the benefits of the following:

- web-casting;
- web-conferencing (web-meetings); and
- virtual participation in physical meetings.

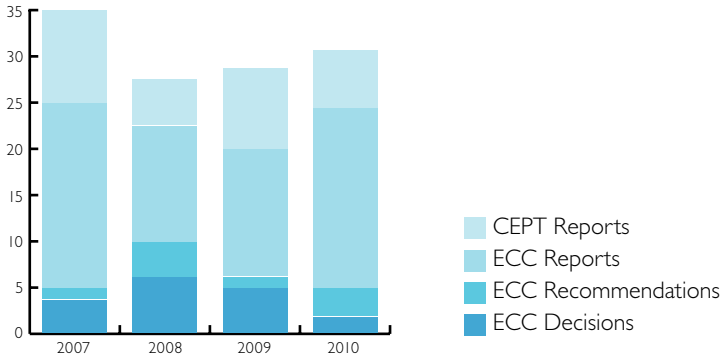
These new methods have the potential to improve the involvement of all CEPT members and observers in the decision-making process by providing an affordable means of participation. Participants can join electronic meetings (web-meetings) from their home places and access all meeting documents electronically.

These new participation models are being implemented based on the 'GoToMeeting' software platform which has so far shown to be compliant with the major requirements formulated by the Regulatory Affairs Working Group (WGRA), the ECC group developing, among other issues, the policy for the EWM implementation.

The ECO has also contributed to the work of the 'Regulatory Issues' project team RA3 which is trialling the 'GoToMeeting' software. RA3 will report its findings to the ECC at the end of the two-year trial period. However, early indications are that the new virtual participation methods are helping to bring further efficiencies to the ECC's work as well as encouraging greater involvement. The main challenge now is to improve the quality of the sound connections during the web meetings through the improvement of the sound systems and continuous training for the participants.

GAINING CONSENSUS THROUGH PUBLIC CONSULTATIONS

In 2010, we carried out 31 public consultations for new ECC deliverables: two of which related to ECC Decisions, three to ECC Recommendations, 19 to ECC Reports, and a further seven to CEPT Reports[3]. All responses received to these 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 2007 to 2010

[3]The ECC develops CEPT Reports in response to mandates issued by the European Commission.

IMPROVING ECC DELIVERABLES THROUGH QUESTIONNAIRES

In 2010, the ECO sent out 17 questionnaires to administrations (in some cases, the industry was also consulted) in the 48 CEPT countries dealing with:

QUESTIONNAIRE	REPLIES RECEIVED
Aeronautical radio interference	19
Benchmarking	31
ECA Table ERC Report 25	20
Revision of the ECC Report 003 on spectrum requirements	5
SRD_863_870	Results in March 2011.
2GHz unpaired bands	30
Mobile Broadband (August)	17
Mobile Broadband (December)	9
PLB update from 2009	8
PPDR FM38 Internal Questionnaire	27
Radars operating below 1400-1427MHz	21
Radio Amateur Maintenance of the implementation. info for TR 61-01	9
Trading of Spectrum Usage Rights	21
Usage (Update of 2009) of 111, 115 & 117 Number ranges	5
Usage of mobile number ranges	28
Generic inventory of candidate applications for the 1452-1492 MHz band	57
Mobile VoIP	19

PROVIDING A FORUM FOR DEBATE

During 2010, we hosted 40 meetings at our offices in Copenhagen bringing together over 700 participants from around Europe for a total of 73 days.

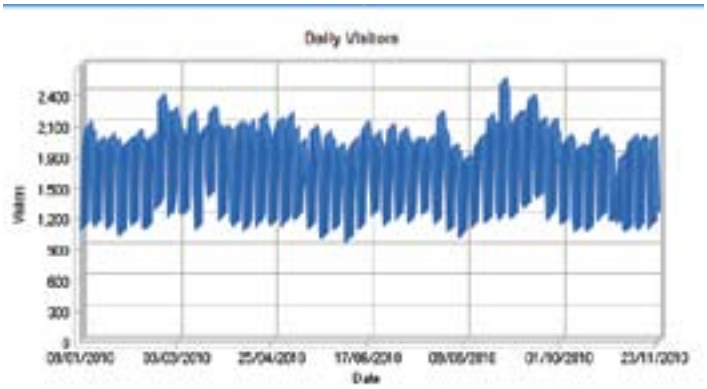
In particular, we hosted ECC PT1, the ECC Project Team dealing with IMT Matters (International Mobile Telecommunications). 77 delegates attended the meeting representing 18 CEPT Administrations, the ECO, other organisations, and representatives of operators and manufacturers.

ECC PT1- Chair table

Participants to 35th ECC PT1 meeting, Copenhagen, 19 – 21 May 2010

THE ECO WEBSITE

During 2010, over 600,000 people visited our website, with an average of 1,700 visits per day. Around 200,000 files were downloaded from the website.

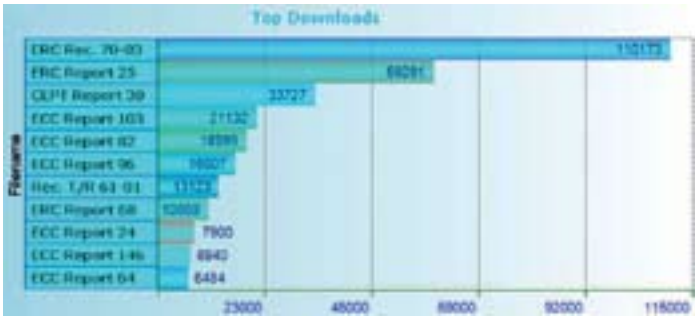


ECO DOCUMENT DATABASE – ECODOCDB

The ECODocDB database was modified in 2010 in order to include an additional column for CEPT Reports, which are developed in the framework of the ECC in response to EC Mandates.

In 2010, around 270,000 people visited the ECODOCDB, representing 760 visits per day. In total, 890,000 documents were downloaded from the database.

The most downloaded document was ERC Recommendation 70-03 dealing with Short Range Devices followed by ERC Report 25 which provides an overview of spectrum usage in CEPT countries.



The overview of the most downloaded documents reflects the issues of most interest to people visiting the website such as: 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); SEAMCAT (ECC Report 68); Power Line Transmission (ECC Report 24); and, Ultra Wide Band systems (ECC Report 64)

TRANSITION TO NEW WEBSITE

In 2011, the website will change. The initial plan was to have a new website available in 2010. However, due to some delays, this is expected to happen in the first part of 2011.

The general focus in upgrading the website has been to change from an older web technology onto a newer platform to ensure better stability and future developments. However, the restructuring of the CEPT family has also played an important role in the development.

The new website is divided into five distinct areas (CEPT, the three business Committees and the Office) to reflect the new CEPT structure. The different CEPT activities and the contents of the existing website will be reorganised to reflect this structure and will be presented in a more cohesive way. Additionally, general navigation will be improved.

Selected features for the new website include:

- Personal profile page with overview of relevant information on group activity – allows user to log in and quickly get an overview of the groups/activities/news in which he/she is interested
- User friendly document area (meeting documents area a more integrated part of the website)
- RSS news for groups
- Harmonised layout and presentation of groups

The launch of the new website will happen in stages to ensure that key features work properly and users have proper guidance before these features are introduced into the functioning website. The concept of groups as it is known through the work of the ECC takes on a central role in the new website.

PROJECTS UNDERTAKEN BY THE ECO – NEW ECO REPORTS

During 2010, the ECO has undertaken three projects on behalf of ECC groups. The outputs of those projects are published in a new form of deliverables entitled 'ECO Reports' **http://www.cept.org/eco/deliverables/eco-reports**.

DYNAMIC EVOLUTION OF THE RADIO FREQUENCY IDENTIFICATION DEVICES MARKET (ECO REPORT 01)

Radio Frequency Identification Devices (RFIDs) are not new, but the very rapid expansion in their use is, especially in the field of logistics management. The distribution of so many of the goods that we buy and use in our daily lives is subject to close monitoring before and after manufacture in order to reduce theft and wastage, and to keep their prices more affordable. RFIDs are a form of Short Range Device (SRD), and a suitable technical environment needs to be created and protected so that they work properly.

In August 2010, based on the request from WG FM, the ECO published a Report on 'The Dynamic Evolution of the RFID Market'. The report contains information on how RFID devices have progressively evolved right from their very early use, technically as well as in the market place, and also includes forecasts. The most promising ranges for future growth are the HF and UHF bands. The present conclusion has been that spectrum is sufficient in the short term while additional frequencies might be considered to improve the functionality of future applications and also foster future market growth projected by industry.

RECEIVER PARAMETER PROJECT (ECO REPORT 02)

In June 2010, the ECO delivered ECO Report 2 'Receiver parameters pilot study'. This report is the result of the ECO's pilot study on the impact of different categories of receiver parameters on an individual spectrum management case. It also provided an opportunity to gain some experience in conducting impact assessments.

The ECC tasked the ECO with conducting a pilot study on the impact of receiver parameters in spectrum management at its meetings in June 2008 (Kristiansand) and October 2008 (Cordoba). The pilot study is exploratory in nature, and its scope is relatively limited in relation to the conclusions. The ECC considered a draft version of the Report at the June 2010 meeting (Baden). The final version of the ECO Report takes into account comments received from ECC groups and can be found under Deliverables/ECO Reports on the ECO website.

THE LICENSING OF 'MOBILE BANDS' IN CEPT (ECO REPORT 03)

This ECO Report presents the most recent information available to the ECO on the licensing of the following mobile frequency bands in CEPT countries:

- 790-862 MHz;
- 880-915 MHz / 925-960 MHz;
- 1710-1785 MHz / 1805-1880 MHz;
- 1900-1980 MHz / 2010-2025 MHz / 2110-2170 MHz;
- 2500-2690 MHz.

The frequency bands listed above are regarded in this ECO Report as 'mobile' since in many CEPT countries they are used for mobile systems like GSM or UMTS. We also know that our Report is well known not only within Europe but far beyond it. It is also being used as a reference source of information by many telecom consultancy companies.

The information in the current ECO Report 03 was available for the first time in July 1998 on the ECO website (previously ERO website) as 'ERO information document on GSM Frequency Utilization within Europe'. More and more information on the frequency utilisation has been included in the document over time (in March 2000 – on the so called 'E-GSM' band (880-890 / 925-935 MHz), in December 2005 – on IMT-2000/UMTS in the 2GHz (1900-1980MHz, 2010-2025MHz and 2110-2170 MHz) and 2.6 GHz (2500-2690 MHz).

Since May 2008, following the request of ECC PT1 'IMT Matters', the document has been updated once a year on the basis of the information collected by the ECO from the CEPT administrations. The 26th ECC meeting (21-25 June 2010, Baden, Switzerland) decided that it should be maintained as an ECO Report and thus the document has been given a more formal status.

SECTION 3

STRUCTURE AND GOVERNANCE

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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 Council appoints 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 ECO Convention states that the ECO's work programme should be based on proposals from the CEPT Committees.

At a more practical level, 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.

The ECO has no formal direct link to the European Commission. However, there are indirect links by virtue of the ECC's relationship with the Commission defined in the Radio Spectrum Decision (676/2002/EC).

FINANCIAL SUMMARY

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The ECO was approximately 95% financed by the following 30 countries in 2010:

Austria, Belgium[4], Bulgaria, Croatia, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, Monaco, 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 2010.

FINANCIAL SUMMARY 2010

	DKK	EUR
INCOME	**18,550,639**	**2,485,786**
EXPENDITURE		
Staff Costs (salaries, pension contributions, etc.)	12,815,462	1,717,272
Running Expenses (outsourcing, projects, professional fees, travel)	4,036,031	540,828
Office Facilities (rent, building related expenses)	2,485,248	333,023
EXPENDITURE TOTAL	**19,336,741**	**2,591,123**
OPERATING BALANCE FOR END OF YEAR	**-786,102**	**-105,337**

Based on exchange rate of DKK 1 = EUR 0.1340

[4]Belgium is not one of the Contracting Parties to the ECO Convention but contributes to the financing of the ECO.

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