ELECTRONIC COMMUNICATIONS COMMITTEE

ECC Decision
of 15 November 2001

amended 5 October 2007,13 March 2009, 15 June 2009 (Annexes 2 and 5),
2 November 2009 (Annexes 1 and 2)

on ERO Frequency Information System (EFIS)

(ECC/DEC/(01)03)
(2007/344/EC)

EXPLANATORY MEMORANDUM

1 INTRODUCTION

Understanding how frequencies are actually utilised is an important step in harmonising spectrum within Europe and beyond. Industry, the European Commission and administrations have expressed a strong interest in having a database containing frequency utilisation information that is comparable across Europe.

Its purpose would be

- to give the CEPT a tool to illustrate the extent of harmonisation within Europe,
- to allow administrations to quickly search for and compare spectrum utilisation information of other

CEPT countries, and

- to meet the European Commission and industry requirements that have been made known to CEPT at many occasions.

The ERO made a proposal to develop the ERO Frequency Information System (EFIS) that would fulfil this purpose. The development of EFIS takes place in close collaboration with those that have to input information into EFIS (i.e. administrations) and those that will use the information contained in EFIS (i.e. administrations, industry and other interested parties). Comments from EICTA (European Information and Communications Technology Industry association) and ETSI (European Telecommunications Standards Institute) have been received encouraging CEPT to develop EFIS and signalling that industry is willing to support this process with their expertise.

2 BACKGROUND

The issue of frequency databases has been discussed for some time and it is evident that there are many different approaches that have been taken on the national level in presenting frequency data. Discussions have also shown that administrations are reluctant to having all national frequency data collected in one central place and to providing additional resources beyond those needed on the national level.

EFIS can basically be described as a search engine that allows the user to search for a specific utilisation in one or more CEPT countries, thus enabling a comparison between the Radio Regulations, the European table (ERC Report 25) and current national utilisations. The result of the search is a list of frequency bands or a frequency range showing the relevant allocations and applications. Further details are not necessarily contained in EFIS, but can be accessed via a link to the relevant national table or to other important documents. The limitation of the actual database to concise information simplifies the task and the expected workload, while providing a commonly accessible search and comparison tool that complements and adds value to the national initiatives.

One of the main objectives of EFIS is to ensure that it provides good quality information, which is regularly updated and maintained. This ECC Decision is the mechanism for ensuring that this objective is met. Furthermore, this ECC Decision provides two lists of harmonised terms, which are essential for making an efficient and meaningful search for frequency information. Especially the List of Searchable Applications in Annex 2, is an important part of EFIS, because it describes the utilisation of a certain frequency band. This is key information that industry is interested in and the terms provide the starting point for a more detailed search in the national frequency tables, which are established and maintained by administrations.

Just like the List of Radio Services in the ITU RR in Annex 1, the List of Searchable Applications in Annex 2 has several layers of detail that allow administrations to choose the level of detail it would like to indicate within a certain frequency band. When searching for and comparing information EFIS makes use of these layers. For example, a search for a specific term in layer 2 will automatically start a search for all terms in layer 3 under that specific term. This functionality allows for an efficient and meaningful comparison, even though each administration has the flexibility to choose the level of detail it would like to indicate in a specific band. Annex 3 contains the list of parameters for radio interfaces in EFIS, developed on the basis of the template and the guide developed by TCAM RIG II and adopted by TCAM. The use of these parameters in EFIS allows an efficient comparison of interfaces within Europe. In Annex 4 a standard for information on the right of use for frequency bands of high economic interest, where market mechanisms apply, is given.

3 REQUIREMENT FOR AN ECC DECISION

Administrations have developed different formats for presenting national frequency utilisation information. Furthermore, it is often difficult to compare the information contained in the numerous national tables, because of different expressions and languages being used. Consequently, there is a need for a tool that provides administrations, industry and the interested public with comparable spectrum information. This information will then lead the user to more detailed information on the national level or it will give a reliable picture of the spectrum harmonisation that has been achieved in Europe. For this tool to be successful administrations must agree upon a harmonised list of terms to be used as well as a procedure that will ensure that the information that has been collected is updated regularly and of good quality.

An ECC Decision will ensure that the harmonised terms and procedures, which are essential for the success of the system, are used by administrations and ERO when entering data into EFIS.

ECC Decision
of 15 November 2001

on ERO Frequency Information System (EFIS)
(ECC/DEC/(01)03)
(2007/344/EC)
amended 5 October 2007
amended 13 March 2009

Comparable technical specifications to those given in this ECC Decision are given in EC Decision 2007/344/EC. EU Member States and, if so approved by the EEA Joint Committee, Iceland, Liechtenstein and Norway are obliged to implement the EC Decision..

"The European Conference of Postal and Telecommunications Administrations,

considering

a) that administrations, industry, and the European Commission have expressed a strong interest in having a database containing frequency utilisation information that is comparable across Europe;

b) that EFIS is designed to fulfil this requirement;

c) that the data collected in EFIS is to be used for a meaningful search and comparison of spectrum information available within CEPT member countries;

d) that for EFIS to be successful administrations must agree upon a harmonised list of terms to be used as well as a procedure that will ensure that the information that has been collected is updated regularly and of good quality;

e) the decision taken at the 12th meeting of the ERO Council to make available the necessary resources within ERO in order to fulfil the tasks required under this Decision;

f) that the List of Searchable Applications aims to facilitate an efficient and meaningful search and not a legally binding description of the applications used on the national level;

g) there is a need to administer and further develop EFIS;

h) that there is a need to establish a contact person within each administration for the maintenance of the national frequency information;

i) that the future development of EFIS should take into account the R&TTE Directive 1999/5/EC, Proposal for a Decision of the European Parliament and Council on a regulatory framework for radio spectrum policy in the EC, the ERC/DEC(97)01 and its future revisions on publication of National Tables of Frequency Allocations (NTFAs) and the publication of national frequency utilisation information;

j) that there is considerable difference in national licensing, laws and regulations;

k) that the EU Member States and Iceland, Liechtenstein and Norway adopted the EC Decision 2007/344/EC of 16 May 2007 which makes it mandatory for those countries to provide information on the radio interface specifications and rights of use of radio spectrum in accordance with Decides 2, however, the EC Decision does not apply to other CEPT countries which may provide the information on an optional basis;

l) that there is a need to limit the amount of resources needed to update and maintain EFIS as far as possible;

m) that the duplication of information should be avoided as far as possible;

n) that the availability of NTFAs in the English language and in PDF format would be preferable.

DECIDES

1. Administrations shall enter and maintain the following mandatory data into EFIS:
   a) Spectrum allocations on a national level according to the List of Radio Services in the ITU RR in Annex 1;
   b) Spectrum applications on a national level according to the List of Searchable Applications in Annex 2;
   c) A Contact Person within the Administration who will be responsible for the maintenance of the national frequency information related to EFIS.

2. Administrations should enter and maintain the following data into EFIS:
   a) Radio interface specifications on a national level according to the template in Annex 3;
   b) Right of use information on a national level only for frequency bands for electronic communication services, where spectrum trading is allowed or where comparative or competitive selection procedures are used according to the model in Annex 4.

3. Administrations may enter and maintain the following optional data into EFIS:
   a) Short comments related to an allocation or application;
   b) Documents or hyperlinks that can be filed within EFIS according to a frequency band, an application or both (e.g. related to Activities or R&TTE interface information).

4. Administrations shall provide ERO with a copy of their most detailed public national frequency table (e.g. NTFA or frequency utilisation table) in a format acceptable to ERO. The table should be sent to ERO no later than one week after publication.

5. ERO shall[1] enter and maintain the data in EFIS related to the Radio Regulations (Region 1), the European Table of Frequency Allocations and Utilisations, and other appropriate tables that are not maintained by an administration.

6. ERO shall[1] administer EFIS and execute further developments of EFIS according to agreements reached in the ECC and the ERO Council.

7. For uploading or downloading data to or from EFIS by administrations, the Harmonised Interface in Annex 5 shall be used. Administrations with a national frequency database are encouraged to develop a software tool that will allow automatic transfer of relevant data from their database into EFIS. This will allow for easy updating and maintenance of allocations, applications, radio interfaces and right of use information.

8. The List of Radio Services in the ITU RR, the List of Searchable Applications and the Harmonised Interface are the valid versions when this Decision comes into force. Depending on regulatory and market developments, the ECC or a delegated subgroup may develop new versions of these annexes subject to positive acceptance by administrations that have committed themselves to this Decision. ERO shall[1] archive all versions and distribute any new versions to all Contact Persons stating when the new version will come into force. The List of Searchable Applications shall be reviewed at least once a year through a procedure initiated by ERO.

9. that this Decision shall enter into force on 13 of March 2009;

10. that CEPT Member administrations shall communicate the national measures implementing this Decision to the ECC Chairman and the Office when the Decision is nationally implemented."

Note:
Please check the Office web site (http://www.ero.dk) for the up to date position on the implementation of this and other ECC/ERC Decisions.

[1] Subject to approval by the ERO Council

ANNEX 1

LIST OF RADIO SERVICES IN THE ITU RADIO REGULATIONS (RR)

This is the list of services, which have an allocation in Article 5 of the RR.

For the purpose of this decision the List of Radio Services in the ITU RR is divided into three layers of detail in accordance with the definitions given in the RR. When searching for and comparing information EFIS makes use of these layers. For example, a search for a specific term in layer 2 will automatically start a search for all terms in layer 3 under that specific term. If nothing is found in either layer 2 or 3, EFIS also checks layer 1 and informs the user if there is a hit.

Layer 1	Layer 2	Layer 3
Amateur		
Amateur-Satellite		
Broadcasting		
Broadcasting-Satellite		
Earth Exploration-Satellite	Earth Exploration-Satellite (active) Earth Exploration-Satellite (passive) **Meteorological-Satellite**	
Fixed		
Fixed-Satellite		
Inter-Satellite		
Mobile	Aeronautical Mobile Land Mobile Maritime Mobile Mobile (distress and safety) Mobile (distress and calling) Mobile (distress, safety and calling) Mobile except aeronautical mobile Mobile except aeronautical mobile (R)	Aeronautical Mobile (R) Aeronautical Mobile (OR) Maritime Mobile (distress and safety) Maritime Mobile (distress and calling) Maritime Mobile (distress, safety and calling) Maritime Mobile (distress and calling via DSC)
Mobile-Satellite	**Aeronautical Mobile-Satellite** **Land Mobile-Satellite** **Maritime Mobile-Satellite** **Mobile-satellite except aeronautical mobile-satellite** **Mobile-satellite except aeronautical mobile-satellite (R)**	**Aeronautical Mobile-Satellite (R)** **Aeronautical Mobile-Satellite (OR)**

Layer 1	Layer 2	Layer 3
Meteorological Aids		
Radio Astronomy		
Radiodetermination	Radionavigation Radiolocation	Aeronautical Radionavigation Maritime Radionavigation Maritime Radionavigation (radiobeacons)
Radiodetermination-Satellite	**Radionavigation-Satellite** **Radiolocation-Satellite**	**Aeronautical Radionavigation-Satellite** **Maritime Radionavigation-Satellite**
Space Operation		Space Operation (satellite identification)
Space Research	Space Research (active) **Space Research (deep space)** Space Research (passive)	
Standard Frequency and Time Signal		
Standard Frequency and Time Signal-Satellite		

N.B.:

For all **bolded** services it is possible to give them none, one or more of the following 3 attributes:
(space-to-Earth)
(Earth-to-space)
(space-to-space)

For example:
Fixed-Satellite (space-to-Earth) (Earth-to-space)
Space Operation (Earth-to-space) (space-to-space)

ANNEX 2

LIST OF SEARCHABLE APPLICATIONS

Explanatory Note

The list of Searchable Applications has been developed in order to allow an efficient and meaningful search for frequency information within Europe. It is based on the following principles:

1. The list should facilitate an efficient and meaningful search and not a legally binding description of the Application terms used.

2. The list should only use unambiguous terms, which give clear guidance for data entry and retrieval.

3. The List of Searchable Applications is complementary to the List of Radio Services in the ITU RR and it is meant to describe the actual utilisation of the frequency bands. In other words, the List of Radio Services in the ITU RR gives the regulatory framework and the List of Searchable Applications gives the actual use.

4. The List of Searchable Applications should allow administrations to associate the terms used on a national level with the terms used in the list.

The List of Searchable Applications is divided into three layers of detail. This allows each administration to choose the level of detail it would like to indicate within a certain frequency band. When searching for and comparing information EFIS makes use of these layers. For example, a search for a specific term in layer 2 will automatically start a search for all terms in layer 3 under that specific term. If nothing is found in either layer 2 or 3, EFIS also checks layer 1 and informs the user if there is a hit. This functionality allows for an efficient and meaningful comparison, even though each administration has the flexibility to choose the level of detail it would like to indicate in a specific band.

Wherever possible administrations should use the highest detail possible (layer 3) when entering data into EFIS. In general, layer 3 only represents a few more specific expressions that do not necessarily cover all possible applications of the relevant term in layer 2. Those applications that are not covered by these more specific expressions are to be associated with the more general term in layer 2 or even in Layer 1, if necessary.

Due to the fact that some detailed applications can belong to 2 or even more general applications, e.g. the detailed application GPS can be regarded as an aeronautical, maritime or military application, they may show up several times in the list when presented in hierarchical mode. In alphabetical presentation mode each term in the list is only mentioned once.

The abbreviations used in the list are described at the end of this annex.

Layer 1	Layer 2	Layer 3
Aeronautical	Aeronautical communications	AGA communications (civil) Aeronautical satcoms SAR (communications) TFTS
	Aeronautical navigation	Beacons (aeronautical) Airborne weather radar Airborne doppler navigation aids Altimeters ASDE DME ILS Loran C MLS SAR (navigation) VOR
	Aeronautical surveillance	ADS ASDE Primary radar SSR
	Aeronautical emergency	ELT
	Aeronautical telemetry	
	Aeronautical telecommand	
	Aeronautical telemetry/telecommand	
	Satellite navigation systems	GALILEO GPS GLONASS
Broadcasting	Broadcasting (terrestrial)	AM sound analogue DRM FM sound analogue MWS TV analogue (terrestrial) T-DAB DVB-T
	Broadcasting-satellite receivers	Satellite radio Satellite TV SIT/SUT
	SAP/SAB and ENG/OB	In-ear monitor systems Cordless cameras Radio microphones SAP/SAB portable audio links SAP/SAB portable video links SAP/SAB airborne video links SAP/SAB engineering links SAP/SAB remote control SAP/SAB telecommand SAP/SAB P to P audio links SAP/SAB P to P video links SAP/SAB vehicular audio links SAP/SAB vehicular video links Talkback

Layer 1	Layer 2	Layer 3
Fixed links	Point-to-Multipoint	MWS Scanning telemetry Subscriber access excluding MWS Unplanned, uncoordinated fixed links
	Point-to-Point	Private fixed networks Public fixed networks SAP/SAB P to P audio links SAP/SAB P to P video links Unplanned, uncoordinated fixed links
	Multipoint-to-Multipoint (Mesh)	
	BWA	BFWA
Defence systems	Aeronautical military systems	AGA communications (military) Beacons (tactical) IFF JTIDS/MIDS RSBN TACAN-DME
	Land military systems	Fixed radio relay (military) Tactical radio relay Tactical mobile
	Maritime military systems	Sonobuoy
	Meteorological aids (military)	
	Radiolocation (military)	Tactical radar Air-defence radar
	Satellite systems (military)	Earth exploration-satellite (military) GPS GLONASS Satellite communications (military)
	Telemetry (military)	
	Telecommand (military)	
	Telemetry/Telecommand (military)	
Land mobile	Digital cellular	GSM GSM-R MCA IMT AES
	BWA	
	ITS	
	Analogue cellular	NMT TACS
	Cordless telephones	DECT CT0 CT1 CT1+ CT2

Layer 1	Layer 2	Layer 3
	Emergency services	PLB PPDR
	Inland waterway communications	
	Paging	ERMES On-site paging Wide area paging Talkback pocket unit
	PMR/PAMR	PMR PAMR PMR 446 TETRA TETRAPOL
	SAP/SAB and ENG/OB	In-ear monitor systems Cordless cameras Radio microphones SAP/SAB portable audio links SAP/SAB portable video links SAP/SAB airborne video links SAP/SAB engineering links SAP/SAB remote control SAP/SAB telecommand SAP/SAB P to P audio links SAP/SAB P to P video links SAP/SAB vehicular audio links SAP/SAB vehicular video links Talkback
	Telemetry (civil)	Scanning telemetry
	Telecommand (civil)	
	Telemetry/Telecommand (civil)	
Maritime	GMDSS	DSC EPIRBs MSI NAVTEX SAR (communications) SAR (navigation)
	Satellite navigation systems	GALILEO GPS GLONASS
	Maritime communications	AIS Inland waterway communications INMARSAT Port operations On-board communications Ship movement
	Maritime navigation	Beacons (maritime) Inland waterway radar Loran C Maritime radar SAR (navigation) RTE

Layer 1	Layer 2	Layer 3
Meteorology	Oceanographic buoys	
	Sondes	
	Weather radar	
	Weather satellites	
	Wind profilers	
Satellite systems (civil)	Aeronautical satcoms	INMARSAT
	Amateur-satellite	
	Broadcasting-satellite receivers	Satellite radio Satellite TV SIT/SUT
	Earth exploration-satellite	Active sensors (satellite) Passive sensors (satellite) Synthetic aperture radar Weather satellites
	Feeder links	
	FSS Earth stations	HEST LEST VSAT SIT/SUT SNG ESV
	Inter-satellite links	
	MSS Earth stations	CGC INMARSAT IMT-2000 satellite component S-PCS
	Satellite navigation systems	GALILEO GPS GLONASS
	Standard frequency and time signal-satellite	
	Space operations	
	Space research	Active sensors (satellite) Deep space (satellite) Passive sensors (satellite)
Radio astronomy	Continuum measurements	
	Spectral line observations	
	VLBI observations	
Short Range Devices	Alarms	Social alarms
	Railway applications	AVI Eurobalise Euroloop

Layer 1	Layer 2	Layer 3
	Tracking, tracing and data acquisition	Detection of avalanche victims Meter reading Asset tracking and tracing Animal tracking
	Radiodetermination applications	Detection of movement and alert TLPR GBSAR
	Inductive applications	
	Wireless applications in healthcare	Medical implants ULP-AMI ULP-AID ULP-MMI Medical telemetry
	Model control	Flying model control
	Non-specific SRDs	
	Radio microphones and ALD	Radio microphones Consumer radio microphones Aids for hearing impaired Personal hearing aids Public hearing aids
	Wideband data transmission systems	Radio LANs DECT
	RFID	
	RTTT	Vehicle and infrastructure radar SRR OBU RSU
	UWB applications	Communication applications BMA GPR/WPR SRR Automotive SRR
	Wireless audio applications	Narrow band analogue voice devices Cordless headphones and loudspeakers Baby monitoring Band II LPD
Other	Amateur	
	CB radio	DSB/SSB AM CB / CEPT PR 27
	D-GPS	
	HAPS	
	ISM	Microwave ovens
	Meteor scatter communications	
	Land radionavigation	
	Radiolocation (civil)	
	Standard frequency and time signal	
	Tracking systems	

LIST OF SEARCHABLE APPLICATIONS IN ALPHABETIC ORDER

List of searchable applications:	**Comment:** *(in case of addition of new term, term deleted, indicating reason for change of term etc...)*
Active sensors (satellite)	
ADS	
Aeronautical	
Aeronautical communications Aeronautical emergency	
Aeronautical military systems	
Aeronautical navigation	
Aeronautical satcoms	
Aeronautical surveillance	
Aeronautical telecommand	
Aeronautical telemetry	
Aeronautical telemetry/telecommand	
AES	
AGA communications (civil)	
AGA communications (military)	
Aids for hearing impaired	
Airborne doppler navigation aids	
Airborne weather radar	
Air-defence radar	
AIS	
Alarms	
Altimeters	
AM sound analogue	
Amateur	
Amateur-satellite	
Analogue cellular	
Animal tracking	
ASDE	
Asset tracking and tracing	
Automotive SRR	
AVI	
Baby monitoring	
Band II LPD	
Beacons (aeronautical)	
Beacons (maritime)	
Beacons (tactical)	
BFWA	
Broadcasting	
Broadcasting (terrestrial)	
Broadcasting-satellite receivers	
BMA	
BWA	
CB radio	

CEPT PR 27	
CGC	
Communication applications	
Consumer radio microphones	
Continuum measurements	
Cordless cameras	
Cordless headphones and loudspeakers	
Cordless telephones	
CT0	
CT1	
CT1+	
CT2	
DECT	
Deep space (satellite)	
Defence systems	
Detection of avalanche victims	
Detection of movement and alert	
D-GPS	
Digital cellular	
DME	
DRM	
DSB/SSB AM CB	
DSC	
DVB-T	
Earth exploration-satellite	
Earth exploration-satellite (military)	
ELT	
Emergency services	
EPIRBs	
ERMES	
ESV	
Eurobalise	
Euroloop	
Feeder links	
Fixed links	
Fixed radio relay (military)	
Flying model control	
FM sound analogue	
FSS Earth stations	
GALILEO	
GBSAR	
GLONASS	
GMDSS	
GPS	
GPR/WPR	
GSM	

GSM-R	
HAPS	
HEST	
IFF	
ILS	
IMT-2000 satellite component	
IMT	
Inductive applications	
In-ear monitor systems	
Inland waterway communications	
Inland waterway radar	
INMARSAT	
Inter-satellite links	
ISM	
ITS	
JTIDS/MIDS	
Land military systems	
Land mobile	
Land radionavigation	
LEST	
Loran C	
Maritime	
Maritime communications	
Maritime military systems	
Maritime navigation	
Maritime radar	
MCA	
Medical implants	
Medical telemetry	
Meteor scatter communications	
Meteorological aids (military)	
Meteorology	
Meter reading	
Microwave ovens	
MLS	
Model control	
MSI	
MSS Earth stations	
Multipoint-to-Multipoint (Mesh)	
MWS	
Narrow band analogue voice devices	
NAVTEX	
NMT	
Non-specific SRDs	
OBU	
Oceanographic buoys	
On-board communications	

On-site paging	
Other	
Paging	
PAMR	
Passive sensors (satellite)	
Personal hearing aids	
PLB	
PMR	
PMR 446	
PMR/PAMR	
Point-to-Multipoint	
Point-to-Point	
Port operations	
PPDR	
Primary radar	
Private fixed networks	
Public fixed networks	
Public hearing aids	
Radio astronomy	
Radio LANs	
Radio microphones	
Radio microphones and ALD	
Radiodetermination applications	
Radiolocation (civil)	
Radiolocation (military)	
Railway applications	
RFID	
RSBN	
RSU	
RTE	
RTTT	
SAP/SAB airborne video links	
SAP/SAB and ENG/OB	
SAP/SAB engineering links	
SAP/SAB P to P audio links	
SAP/SAB P to P video links	
SAP/SAB portable audio links	
SAP/SAB portable video links	
SAP/SAB remote control	
SAP/SAB telecommand	
SAP/SAB vehicular audio links	
SAP/SAB vehicular video links	
SAR (communications)	
SAR (navigation)	
Satellite communications (military)	
Satellite navigation systems	
Satellite radio	

Satellite systems (civil)	
Satellite systems (military)	
Satellite TV	
Scanning telemetry	
Ship movement	
Short Range Devices	
SIT/SUT	
SIT/SUT	
SIT/SUT	
SNG	
Social alarms	
Sondes	
Sonobuoy	
Space operations	
Space research	
S-PCS	
Spectral line observations	
SRR	
Standard frequency and time signal	
Standard frequency and time signal-satellite	
Subscriber access excluding MWS	
Synthetic aperture radar	
TACAN-DME	
TACS	
Tactical mobile	
Tactical radar	
Tactical radio relay	
Talkback	
Talkback pocket unit	
T-DAB	
Telecommand (civil)	
Telecommand (military)	
Telemetry (civil)	
Telemetry (military)	
Telemetry/Telecommand (civil)	
Telemetry/Telecommand (military)	
TETRA	
TETRAPOL	
TFTS	
TLPR	
Tracking systems	
Tracking, tracing and data acquisition	
TV analogue (terrestrial)	
ULP-AID	
ULP-AMI	
ULP-MMI	
Unplanned, uncoordinated fixed links	

UWB applications	
Vehicle and infrastructure radar	
VLBI observations	
VOR	
VSAT	
Weather radar	
Weather satellites	
Wide area paging	
Wideband data transmission systems	
Wind profilers	
Wireless applications in healthcare	
Wireless audio applications	

ABBREVIATIONS

ADS	Automatic Dependant Surveillance (Aeronautical)
AES	Aircraft Earth Station
AGA	Air-Ground-Air
AIS	Universal Shipborne Automatic Identification System
AM	Amplitude Modulation
ALD	Assistive Listening Devices
ASDE	Airport Surface Detection Equipment
AVI	Automatic Vehicle Identification
BFWA	Broadband Fixed Wireless Access
BWA	Broadband Wireless Access
CB	Citizen's Band
CGC	Complementary Ground Component
CT	Cordless Telephone
DECT	Digital Enhanced Cordless Telecommunications
D-GPS	Differential Global Positioning System
DME	Distance Measuring Equipment
DRM	Digital Radio Mondiale
DSC	Digital Selective Calling
DVB-T	Digital Video Broadcasting - Terrestrial
EAS	Electronic Article Surveillance
ELT	Emergency locator transmitter
ENG/OB	Electronic News Gathering / Outside Broadcasting
EPIRBs	Emergency Position Indicating Radio Beacons
ERMES	Enhanced Radio Messaging System
ESV	Earth Stations on-board Vessels
FM	Frequency Modulation
FSS	Fixed-Satellite Service
GALILEO	European Global Navigation Satellite System
GBSAR	Ground Based Synthetic Aperture Radar
GLONASS	Globalnaya Navigatsionnaya Sputnikovaya Sistema
GMDSS	Global Maritime Distress and Safety System
GPS	Global Positioning System
GPR	Ground Probing Radar
GSM	Global System for Mobile Communications
GSM-R	Global System for Mobile Communications on Railways
HAPS	High Altitude Platform Station
HEST	High e.i.r.p. Satellite Terminal
IFF	Identification Friend or Foe
ILS	Instrument Landing System

IMT-2000	International Mobile Telecommunications-2000
ISM	Industrial, Scientific and Medical Applications
ITS	Intelligent Transport Systems
JTIDS	Joint Tactical Information Distribution System
LANs	Local Area Networks
LEST	Low e.i.r.p. Satellite Terminal
LPD	Low Power Device
MCA	Mobile Communications on Board Aircraft
MIDS	Multifunctional Information Distribution System
MLS	Microwave Landing System
MSI	Maritime Safety Information
MSS	Mobile-Satellite Service
MWS	Multimedia Wireless System
NAVTEX	Narrow-band direct-printing telegraphy system for transmission of navigational and meteorological warnings and urgent information to ships
NMT	Nordic Mobile Telephone
OBU	On-Board Units
PAMR	Public Access Mobile Radio
PLB	Personal Locator Beacon
PMR	Private (Professional) Mobile Radio
PPDR	Public Protection & Disaster Relief
RFID	Radio Frequency Identification
RSBN	Radiolocation System for Short Range Navigation (Abbreviation stands for the Russian term)
RSU	Road Side Units
RTE	Radar Target Enhancer
RTTT	Road Transport and Traffic Telematics
SAB	Service Ancillary to Broadcasting
SAP	Service Ancillary to Programme making
SAR	Search and Rescue
SIT/SUT	Satellite Interactive Terminal / Satellite User Terminal
SNG	Satellite News Gathering
S-PCS	Satellite - Personal Communications System
SRDs	Short Range Devices
SRR	Short Range Radars
SSR	Secondary Surveillance Radar
TACAN	Tactical Air Navigation

TACS	Total Access Communications System
T-DAB	Terrestrial Digital Audio Broadcasting
TETRA	Terrestrial Trunked Radio
TETRAPOL	Digital PMR technology
TFTS	Terrestrial Flight Telecommunication System
TLPR	Tank Level Probing Radar
TV	Television
ULP-AID	Ultra Low Power Animal Implant Devices
ULP-AMI	Ultra Low Power Active Medical Implants
ULP-MMI	Ultra Low Power Medical Membrane Implants
UMTS	Universal Mobile Telecommunications System
VLBI	Very Long Baseline Interferometry
VOR	VHF Omnidirectional Radio Range
VSAT	Very Small Aperture Terminal
UWB	Ultra Wide Band
WPR	Wall Probing Radar

ANNEX 3

SEARCHABLE RADIO INTERFACE SPECIFICATION

Explanatory Note

The list of parameters for radio interfaces in EFIS is based on the template and the guide developed by TCAM RIG II and adopted by TCAM.

The use of these parameters for entering radio interface information into EFIS allows an efficient and meaningful comparison of interfaces within Europe.

The parameters are divided into normative and an informative parts.

The *normative* part consists of the following parameters:

- Frequency band
- Country
- Application (ref Annex 2 of this Decision)
- Radiocommunication service (Ref Annex 1 of this Decision)
- Channelling
- Modulation/occupied bandwidth
- Transmit power limit
- Channel access and occupation rules
- Direction/separation
- Authorisation regime
- Additional Article 3.3 requirements
- Frequency planning assumptions

The *informative* part consists of the following:

- Planned changes
- Reference
- Remarks
- Notification

ANNEX 4

STANDARD FOR RIGHT OF USE INFORMATION

Explanatory Note

At its 15th meeting (20 April 2006), the EFIS Maintenance Group concluded that providing information on the right of use was important for frequency bands of high economic interest where market mechanisms would apply, and that it was important to define a standard for the information required.

The EFIS MG decided to define the standard for right of use information in EFIS as follows:

- Lower frequency (numeric, EFIS format)
- Upper frequency (numeric, EFIS format)

- License holder name and contact details (free text format)

- Expiry date / duration of the license

- Information on location
  - National (tick box) or
  - Regional or local (free text field, link to national details) or
  - One transmitter (free text field, link to national details)

- Spectrum trading Yes/No (tick box)

ANNEX 5

EFIS
HARMONISED INTERFACE

The EFIS Harmonised Interface can be used for uploading or downloading data related to spectrum allocations and spectrum applications only. No other data is included from the start. However, if EFIS is developed further other types of data (e.g. radio interface parameters) might be added at a later stage.

The following Harmonised Interface shall be used:

1. The interface shall be an XML file;

2. The XML file has a defined structure, called the EFIS XML Format, which is defined by the Document Type Definition (DTD) given below;

3. The terms used for allocations and applications shall be taken from the List of Radio Services in the ITU RR (see Annex 1) and the List of Searchable Applications (see Annex 2);

4. All frequencies shall be written in Hertz, i.e. not in kHz, MHz or GHz.

DTD defining the EFIS XML Format:

```
<?xml encoding="UTF-8"?>
<!-- Created by CMG for ERO on 1. june 2001, 08:29 -->
<!-- Modified by CIBER for ERO on 3. april 2006, 10:27 -->
<!-- This simple DTD defines the import/export interface for use with the EFIS system -->
<!-- Frequency values are to be specified in Hertz (1 - 999999999999 Hz) -->
<!-- Terms are at most 100 characters -->
<!-- TemporalRestrictions are at most 50 characters -->
<!ELEMENT frequencyInformation (frequencyTable*)>
<!ELEMENT frequencyTable (allocation | application | document | radioInterface | Rightofuseinfo)*>
<!ELEMENT allocation EMPTY>
<!ELEMENT application EMPTY>
<!ELEMENT document EMPTY>
<!ELEMENT radioInterface EMPTY>
<!ELEMENT Rightofuseinfo EMPTY>
<!ATTLIST frequencyTable
        name ID #REQUIRED
>
<!ATTLIST allocation
        lowerFrequency CDATA #REQUIRED
        higherFrequency CDATA #REQUIRED
        term CDATA #REQUIRED
        status (primary | secondary) #REQUIRED
        shortComments CDATA #IMPLIED
>
<!ATTLIST application
        lowerFrequency CDATA #REQUIRED
        higherFrequency CDATA #REQUIRED
        term CDATA #REQUIRED
        shortComments CDATA #IMPLIED
>
<!ATTLIST document
        title CDATA #REQUIRED
        lowerFrequency CDATA #IMPLIED
        higherFrequency CDATA #IMPLIED
        term CDATA #IMPLIED
        type (activity | NTFA | other | R&amp;amp;TTE ) #REQUIRED
        expiry CDATA #REQUIRED
        hyperlink CDATA #REQUIRED
```

```
>
<!ATTLIST radioInterface
        radiointerfaceid CDATA #IMPLIED
        lower_frequency CDATA #REQUIRED
        higher_frequency CDATA #REQUIRED
        Allocation_Term CDATA #IMPLIED
        Application_Term CDATA #IMPLIED
        Channeling CDATA #IMPLIED
        TransmitPowerLimit CDATA #IMPLIED
        ChannelOccupationRules CDATA #IMPLIED
        DuplexDirection CDATA #IMPLIED
        LicensingRegime CDATA #IMPLIED
        Art33Requirements CDATA #IMPLIED
        FrequencyPlanning CDATA #IMPLIED
        Reference CDATA #IMPLIED
        Remarks CDATA #IMPLIED
        NotificationNo CDATA #IMPLIED
  OccupiedBandwidth CDATA #IMPLIED
        PlannedChanges CDATA #IMPLIED
        Channeling_notes CDATA #IMPLIED
        TransmitPowerLimit_notes CDATA #IMPLIED
        ChannelOccupationRules_notes CDATA #IMPLIED
        DuplexDirection_notes CDATA #IMPLIED
        LicensingRegime_notes CDATA #IMPLIED
        Art33Requirements_notes CDATA #IMPLIED
        FrequencyPlanning_notes CDATA #IMPLIED
        Reference_notes CDATA #IMPLIED
        Remarks_notes CDATA #IMPLIED
        NotificationNo_notes CDATA #IMPLIED
  OccupiedBandwidth_notes CDATA #IMPLIED
  PlannedChanges_notes CDATA #IMPLIED
>
<!ATTLIST Rightofuseinfo
        Rightofuseinfono CDATA #IMPLIED
        LowerFrequency CDATA #REQUIRED
        HigherFrequency CDATA #REQUIRED
        Application CDATA #IMPLIED
        Company CDATA #IMPLIED
        Surname CDATA #IMPLIED
        Firstname CDATA #IMPLIED
        town CDATA #IMPLIED
        Address CDATA #IMPLIED
        postalcode CDATA #IMPLIED
        Faxno CDATA #IMPLIED
        Telephoneno CDATA #IMPLIED
        Email CDATA #IMPLIED
        Website CDATA #IMPLIED
        Country CDATA #IMPLIED
        Expiry CDATA #IMPLIED
        Tradable CDATA #IMPLIED
        Nationalcoverage CDATA #IMPLIED
        Localcoverage CDATA #IMPLIED
        Onetransmitter CDATA #IMPLIED
        LONGITUDE CDATA #IMPLIED
        LATITUDE CDATA #IMPLIED
>
```