ECC Decision (01)03

ECO Frequency Information System (EFIS)[1]

Approved 15 November 2001

Amended 17 June 2016

Annex 1 amended May 2016

Annex 2 amended May 2016

Annexes 4 and 5 amended March 2015

Annex 5 amended February 2016

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[1] 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.

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), now ECO Frequency Information System 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 ECO when entering data into EFIS.

ECC DECISION OF 15 NOVEMBER 2001 ON ECO FREQUENCY INFORMATION SYSTEM (EFIS) (ECC/DEC/(01)03) AMENDED ON 17 JUNE 2016

"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, and the RE Directive (2014/53/EU), the Decision 676/2002/EC of the European Parliament and Council on a regulatory framework for radio spectrum policy in the EC, the ECC/DEC/(03)05 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/RE interface information).

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

5. ECO 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. ECO shall[1] administer EFIS and execute further developments of EFIS according to agreements reached in the ECC and the ECO 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 without the need for Public Consultation. ECO shall[2] 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 ECO.

9. that this Decision shall enter into force on 15 May 2012;

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 documentation database http://www.ecodocdb.dk for the up to date position on the implementation of this and other ECC Decisions.

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[2] Subject to approval by the ECO 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.

Table 1: Layer 1 to 3 structure in EFIS in the allocations

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	Aeronautical Mobile (R) Aeronautical Mobile (OR)
	Land Mobile	
	Maritime Mobile	Maritime Mobile (distress and safety)
		Maritime Mobile (distress and calling)
		Maritime Mobile (distress, safety and calling)
		Maritime Mobile (distress and calling via DSC)
	Mobile (distress and safety)	
	Mobile (distress and calling)	
	Mobile (distress, safety and calling)	
	Mobile except aeronautical mobile	
	Mobile except aeronautical mobile (R)	
Mobile-Satellite	**Aeronautical Mobile-Satellite**	**Aeronautical Mobile-Satellite (R)** **Aeronautical Mobile-Satellite (OR)**

Layer 1	Layer 2	Layer 3
	Land Mobile-Satellite **Maritime Mobile-Satellite** **Mobile-satellite except aeronautical mobile-satellite** **Mobile-satellite except aeronautical mobile-satellite (R)**	
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		

Note:

For bolded services it is possible to give additions/attributes (space-to-Earth, Earth-to-space, space-to-space). An alphabetical list of services with all additions as used in the EFIS database, and existing combinations of additions/attributes for allocations is provided below.

LIST OF ALL RADIOCOMMUNICATION SERVICES WITH ADDITIONS, USED IN THE EFIS Database

Radiocommunication service:	Addition:
Aeronautical mobile	(R)
Aeronautical mobile	(OR)
Amateur-satellite	(Earth-to-space)
Amateur-satellite	(space-to-Earth)
Earth exploration-satellite	(Earth-to-space)
Earth exploration-satellite	(space-to-Earth)
Earth exploration-satellite	(Earth-to-space) (space-to-space)
Earth exploration-satellite	(space-to-Earth) (space-to-space)
Earth exploration-satellite	(active)
Earth exploration-satellite	(passive)
Fixed-satellite	(Earth-to-space)
Fixed-satellite	(space-to-Earth)
Fixed-satellite	(Earth-to-space) (space-to-Earth)
Fixed-satellite	(space-to-Earth) (Earth-to-space)
Maritime mobile	(distress and calling via DSC)
Maritime mobile	(distress and calling)
Maritime mobile-satellite	(Earth-to-space)
Maritime mobile-satellite	(space-to-Earth)
Maritime radionavigation	(radiobeacons)
Meteorological-satellite	(Earth-to-space)
Meteorological-satellite	(space-to-Earth)
Mobile	except aeronautical mobile
Mobile	except aeronautical mobile (R)
Mobile	(distress and calling)
Mobile-satellite	(Earth-to-space)
Mobile-satellite	(space-to-Earth)
Mobile-satellite	except aeronautical mobile-satellite (Earth-to-space)
Radiodetermination-satellite	(Earth-to-space)
Radiodetermination-satellite	(space-to-Earth)
Radiolocation-satellite	(Earth-to-space)
Radionavigation-satellite	(Earth-to-space)
Radionavigation-satellite	(space-to-Earth) (space-to-space)
Space operation	(satellite identification)
Space operation	(Earth-to-space)
Space operation	(space-to-Earth)
Space operation	(Earth-to-space) (space-to-space)
Space operation	(space-to-Earth) (space-to-space)
Space research	(Earth-to-space)
Space research	(space-to-Earth)
Space research	(space-to-space)
Space research	(deep space)
Space research	(Earth-to-space) (space-to-space)
Space research	(space-to-Earth) (space-to-space)
Space research	(deep space) (Earth-to-space)
Space research	(deep space) (space-to-Earth)
Space research	(active)
Space research	(passive)
Standard frequency and time signal	(20 kHz)
Standard frequency and time signal	(2 500 kHz)

Radiocommunication service:	Addition:
Standard frequency and time signal	(5 000 kHz)
Standard frequency and time signal	(10 000 kHz)
Standard frequency and time signal	(15 000 kHz)
Standard frequency and time signal	(20 000 kHz)
Standard frequency and time signal	(25 000 kHz)
Standard frequency and time signal-satellite	(400.1 MHz)
Standard frequency and time signal-satellite	(Earth-to-space)
Standard frequency and time signal-satellite	(space-to-Earth)

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 layer 1 term TRA-ECS is to be used under certain conditions; i.e. notably for EU Member States to be in line with common EU regulatory approaches or by CEPT administrations for frequency bands for which they find the term applicable. In such case and when more detailed information is available, administrations are urged to fill in information in layers 2 and 3 corresponding to the applications currently in use as listed for the layer 1 applications: e.g. Aeronautical, Broadcasting, Fixed, Land Mobile, and Maritime.

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

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

Layer 1	Layer 2	Layer 3
		Talkback
Defence systems	Aeronautical military systems	AGA communications (military) IFF JTIDS/MIDS TACAN-DME
	Land military systems	Fixed radio relay (military) Tactical mobile Tactical radio relay
	Maritime military systems	Sonobuoy
	Meteorological aids (military)	
	Radiolocation (military)	Air-defence radar Tactical radar
	Satellite systems (military)	Earth exploration-satellite (military) GLONASS GPS Satellite communications (military)
	Telemetry/Telecommand (military)	Telemetry (military) Telecommand (military)
Fixed	BWA	BFWA
	MFCN	IMT
	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
Land mobile	BWA	
	Cordless telephones	CT0 CT1 CT1+ CT2 DECT
	D-GPS	
	Digital cellular	AES DA2GC GSM GSM-R IMT MCA MCV
	Inland waterway communications	

Layer 1	Layer 2	Layer 3
	ITS	
	MFCN	IMT
	Paging	NP2M On-site paging POCSAG Talkback pocket unit Wide area paging
	PMR/PAMR	PAMR PMR PMR 446 TETRA TETRAPOL
	PMSE	Cordless cameras In-ear monitor systems Radio microphones SAP/SAB and ENG/OB SAP/SAB airborne video links SAP/SAB engineering links SAP/SAB portable audio links SAP/SAB portable video links SAP/SAB P to P audio links SAP/SAB P to P video links SAP/SAB remote control SAP/SAB telecommand SAP/SAB vehicular audio links SAP/SAB vehicular video links Talkback
	PPDR	BBDR LAES PLB
	Telemetry/Telecommand (civil)	Scanning telemetry Telemetry (civil)
Maritime	GMDSS	DSC EPIRBs INMARSAT C MSI NAVTEX SAR (communications) SAR (navigation)
	Maritime communications	AIS Inland waterway communications INMARSAT On-board communications
	Maritime navigation	Beacons (maritime) Inland waterway radar Loran C Maritime radar RTE SAR (navigation)
Layer 1	**Layer 2**	**Layer 3**

Layer 1	Layer 2	Layer 3
	Satellite navigation systems	GALILEO GLONASS GPS
Meteorology	Lightning detection systems	
	Oceanographic buoys	
	Sondes	
	Weather radar	
	Weather satellites	
	Wind profilers	
Other	Amateur	
	CB radio	DSB/SSB AM CB / CEPT PR 27
	GNSS Pseudolites	
	GNSS Repeater	
	HAPS	
	ISM	
	Land radionavigation	
	Meteor scatter communications	
	Radiolocation (civil)	
	Standard frequency and time signal	
	Tracking systems	
Radio astronomy	Continuum measurements	
	Spectral line observations	
	VLBI observations	
Radiolocation (civil)	Aeronautical radar	Airborne weather radar Primary radar
	Maritime radar	Inland waterway radar RTE
	Weather radar	Airborne weather radar
Satellite systems (civil)	Aeronautical satcoms	INMARSAT
	Amateur-satellite	
	Broadcasting (satellite)	Satellite radio Satellite TV SIT/SUT

Layer 1	Layer 2	Layer 3
	Earth exploration-satellite	Active sensors (satellite) Passive sensors (satellite) Synthetic aperture radar Weather satellites
	Feeder links	
	FSS Earth stations	AES ESV GSO ESOMPs HEST LEST NGSO ESOMPs SIT/SUT SNG VSAT
	Inter-satellite links	
	Meteorological satcoms	INMARSAT IRIDIUM
	MSS Earth stations	CGC INMARSAT IMT-2000 satellite component S-PCS
	Satellite navigation systems	GALILEO GLONASS GPS
	Space operations	
	Space research	Active sensors (satellite) Deep space (satellite) Passive sensors (satellite)
	Standard frequency and time signal-satellite	
	Weather satellites	
Short Range Devices	Active medical implants	LP-AMI Medical implants Medical telemetry ULP-AID ULP-AMI ULP-MMI
	Alarms	Social alarms
	Inductive applications	
	Model control	Flying model control
	Non-specific SRDs	Emergency detection
	Radiodetermination applications	BMA Detection of movement and alert GBSAR

Layer 1	Layer 2	Layer 3
		GPR/WPR LPR Material Sensing TLPR
	Radio microphones and ALD	Aids for hearing impaired Consumer radio microphones Personal hearing aids Public hearing aids Radio microphones
	Railway applications	Eurobalise Euroloop
	RFID	
	Tracking, tracing and data acquisition	Animal tracking Asset tracking and tracing Emergency detection LAES LT2 MBANS Meter reading WIA
	TTT	Automotive radar Automotive SRR SRR Vehicle and infrastructure radar
	UWB applications	Automotive SRR BMA Communication applications GPR/WPR LAES LT2 Material Sensing SRR
	Wideband data transmission systems	DECT Radio LANs
	Wireless audio/multimedia	Baby monitoring Band II LPD Cordless headphones and loudspeakers Narrow band analogue voice devices
TRA-ECS		

LIST OF SEARCHABLE APPLICATIONS IN ALPHABETIC ORDER

List of searchable applications:	Layer	Comment: (in case of addition of new term, term deleted, indicating reason for change of term etc., example deliverable where used)
Active medical implants	2	ERC/DEC/(01)17
Active sensors (satellite)	3	ECA Table
ADS	3	ECA Table
Aeronautical	1	ECA Table
Aeronautical communications	2	ECA Table
Aeronautical emergency	2	ECA Table
Aeronautical military systems	2	ECA Table
Aeronautical navigation	2	ECA Table
Aeronautical radar	2	ECA Table
Aeronautical satcoms	3(2)	ECA Table
Aeronautical surveillance	2	ECA Table
Aeronautical telecommand	3	ECA Table
Aeronautical telemetry	3	ECA Table
Aeronautical telemetry/telecommand	2	ECA Table
AES	3	ECC/DEC/(05)11
AGA communications (civil)	3	ECC/DEC/(06)05
AGA communications (military)	3	ECC/DEC/(06)05
Aids for hearing impaired	3	The application is also referred to as Assistive Listening Devices (ALDs) as indicated in ERC/REC 70-03.
Airborne doppler navigation aids	3	ECA Table
Airborne weather radar	3	ECA Table
Air-defence radar	3	-
AIS	3	ECA Table
Alarms	2	ERC/REC 70-03
Altimeters	3	ECA Table
AM sound analogue	1	-
Amateur	2	ECA Table
Amateur-satellite	2	ECA Table
Animal tracking	3	-
ASDE	3	ECA Table
Asset tracking and tracing	3	ERC/REC 70-03
Automotive radar	3	The term is used in ERC/REC 70-03 Annex 5
Automotive SRR	3	ERC/REC 70-03; The term is considered redundant (SRR is sufficient) and proposed for deletion in the next update
Baby monitoring	3	ERC/REC 70-03
Band II LPD	3	ERC/REC 70-03
BBDR	3	ECC/REC/(08)04
Beacons (aeronautical)	3	ECA Table
Beacons (maritime)	3	ECA Table
BFWA	3	ECC/REC/(06)04
BMA	3	ECC/DEC/(07)01
Broadcasting	1	ECA Table
Broadcasting (terrestrial)	2	ECA Table
Broadcasting (satellite)	2	ERC/DEC/(00)08
BWA	2	ECC/DEC/(07)02

List of searchable applications:	Layer	Comment: (in case of addition of new term, term deleted, indicating reason for change of term etc., example deliverable where used)
CB radio	2	ECC/DEC/(11)03
CGC	3	ECC/DEC/(06)09
Communication applications	3	ECC/DEC/(06)04
Consumer radio microphones	3	ERC/REC 70-03
Continuum measurements	2	ECA Table
Cordless cameras	3	ECC/REC/(02)09
Cordless headphones and loudspeakers	3	ERC/REC 70-03
Cordless telephones	2	ERC/DEC/(94)03
CT0	3	-
CT1	3	ECC/DEC/(01)01
CT1+	3	ECC/DEC/(01)01
CT2	3	ECC/DEC/(01)02
DA2GC	3	ECC/DEC/(15)02 and ECC/DEC/(15)03
DECT	3	ERC/DEC/(94)03
Deep space (satellite)	3	ECA Table
Defence systems	1	ECA Table
Detection of movement and alert	3	ERC/REC 70-03
D-GPS	2	ECA Table
Digital cellular	2	ECA Table
DME	3	ECA Table
DRM	3	ECA Table
DSB/SSB AM CB / CEPT PR 27	3	ECC/DEC/(11)03
DSC	3	ECA Table
DVB-T	3	ECA Table
Earth exploration-satellite	2	ECA Table
Earth exploration-satellite (military)	3	ECA Table
ELT	3	ECA Table
Emergency detection	3	ERC/REC 70-03
EPIRBs	3	ECA Table
ESV	3	ECC/DEC/(05)09, ECC/DEC/(05)10
Eurobalise	3	ERC/REC 70-03
Euroloop	3	ERC/REC 70-03
Feeder links	2	ECA Table
Fixed	1	T/R 13-01
Fixed radio relay (military)	3	ECA Table
Flying model control	3	ERC/REC 70-03
FM sound analogue	3	ECA Table
FSS Earth stations	2	ERC/DEC/(00)07
GALILEO	3	ECA Table
GBAS	3	ECA Table
GBSAR	3	ERC/REC 70-03

List of searchable applications:	Layer	Comment: (in case of addition of new term, term deleted, indicating reason for change of term etc., example deliverable where used)
GLONASS	3	ECA Table
GMDSS	2	ECA Table
GNSS Pseudolites	2	ECC/REC/(11)08
GNSS Repeater	2	ECC/REC/(10)02
GPS	3	ECA Table
GPR/WPR	3	ECC/DEC/(06)08
GSM	3	ERC/DEC/(97)02
GSM-R	3	ECC/DEC/(02)05
GSO ESOMPs	3	ECC/DEC/(13)01
HAPS	2	ECA Table
HEST	3	ECC/DEC/(06)03
IFF	3	-
ILS	3	ECA Table
IMT-2000 satellite component	3	ECA Table
IMT	3	ECC/DEC/(06)01, ECC/DEC/(06)13, ECA Table
Inductive applications	2	ERC/REC 70-03
In-ear monitor systems	3	ERC/REC 70-03
Inland waterway communications	2(3)	ECA Table
Inland waterway radar	3	ECA Table
INMARSAT	3	-
INMARSAT C		-
Inter-satellite links	2	ECA Table
IRIDIUM	3	-
ISM	2	ECA Table
ITS	2	ECC/DEC/(08)01
JTIDS/MIDS	3	ECA Table
LAES	3	ECC/REC/(11)10
Land military systems	2	-
Land mobile	1	ECA Table
Land radionavigation	3	-
LEST	3	ECC/DEC/(06)02
Lightning detection systems	2	ECA Table
Loran C	3	-
LP-AMI	3	ERC/REC 70-03
LPR	3	ECC/DEC/(11)02
LT2	3	ECC/REC/(11)09
Maritime	1	ECA Table
Maritime communications	2	ECA Table
Maritime military systems	2	ECA Table
Maritime navigation	2	ECA Table
Maritime radar	2(3)	ECA Table
Material Sensing	3	ECC/DEC/(07)01
MBANS	3	ERC/REC 70-03

List of searchable applications:	Layer	Comment: (in case of addition of new term, term deleted, indicating reason for change of term etc., example deliverable where used)
MCA	3	ECC/DEC/(06)07
MCV	3	ECC/DEC/(08)08
Medical implants	3	ERC/DEC/(01)17
Medical telemetry	3	ERC/REC 70-03
Meteor scatter communications	2	ECA Table
Meteorological aids (military)	2	ECA Table
Meteorology	1	ECA Table
Meteorological satcoms	2	ECA Table
Meter reading	3	ECC/DEC/(05)02, ERC/REC 70-03
MFCN	2	ECC/DEC/(09)03, ECC/DEC/(15)01
MLS	3	ECA Table
Model control	2	ERC/REC 70-03
MSI	3	ECA Table
MSS Earth stations	2	ECC/DEC/(04)09
MWS	3	ERC/DEC/(99)15
Narrow band analogue voice devices	3	ERC/REC 70-03
NAVTEX	3	ECA Table
NGSO ESOMPs	3	ECC/DEC/(15)04
Non-specific SRDs	2	ERC/REC 70-03
NP2M	3	ECA Table and ECC/DEC/(06)06
Oceanographic buoys	2	ECA Table
On-board communications	3	ECA Table
On-site paging	3	ECA Table
Other	1	-
Paging	2	ECC/DEC/(06)06
PAMR	3	ECC/DEC/(06)06
Passive sensors (satellite)	3	ECA Table
Personal hearing aids	3	ERC/REC 70-03
PLB	3	ECA Table
PMR	3	ECC/DEC/(06)06
PMR 446	3	ECC/DEC/(15)05
PMR/PAMR	2	ECC/DEC/(06)06
PMSE	2	ERC/REC 70-03
POCSAG	3	-
Point-to-Multipoint	2	ECA Table
Point-to-Point	2	ECA Table
PPDR	2	ECC/DEC/(08)05 and ECC/DEC/(16)02
Primary radar	3	ECA Table
Private fixed networks	3	-
Public fixed networks	3	-
Public hearing aids	3	ECC/DEC/(05)02, ERC/REC 70-03
Radio astronomy	1	ECA Table
Radio LANs	3	ECC/DEC/(04)08

List of searchable applications:	Layer	Comment: (in case of addition of new term, term deleted, indicating reason for change of term etc., example deliverable where used)
Radio microphones	3	ERC/REC 70-03
Radio microphones and ALD	2	ERC/REC 70-03
Radiodetermination applications	2	ERC/REC 70-03
Radiolocation (civil)	2	ECA Table
Radiolocation (military)	2	ECA Table
Railway applications	2	ERC/REC 70-03
RFID	2	ERC/REC 70-03
RTE	3	ECA Table
SAP/SAB airborne video links	3	ERC/REC 25-10
SAP/SAB and ENG/OB	3	ERC/REC 25-10
SAP/SAB engineering links	3	ERC/REC 25-10
SAP/SAB P to P audio links	3	ERC/REC 25-10
SAP/SAB P to P video links	3	ERC/REC 25-10
SAP/SAB portable audio links	3	ERC/REC 25-10
SAP/SAB portable video links	3	ERC/REC 25-10
SAP/SAB remote control	3	ERC/REC 25-10
SAP/SAB telecommand	3	ERC/REC 25-10
SAP/SAB vehicular audio links	3	ERC/REC 25-10
SAP/SAB vehicular video links	3	ERC/REC 25-10
SAR (communications)	3	ECA Table
SAR (navigation)	3	ECA Table
Satellite communications (military)	3	ECA Table
Satellite navigation systems	2	ECA Table
Satellite radio	3	-
Satellite systems (civil)	1	ECA Table
Satellite systems (military)	2	ECA Table
Satellite TV	3	-
Scanning telemetry	3	-
Short Range Devices	1	ERC/REC 70-03
SIT/SUT	3	ERC/DEC/(00)08
SNG	3	ERC/REC 13-03
Social alarms	3	ERC/REC 70-03
Sondes	2	ECA Table
Sonobuoy	3	ECA Table
Space operations	2	ECA Table
Space research	2	ECA Table
S-PCS	3	ERC/DEC/(99)06
Spectral line observations	2	ECA Table
SRR	3	ECC/DEC/(04)03, ECC/DEC/(04)10
SSR	3	ECA Table
Standard frequency and time signal	2	ERC/REC 70-03

List of searchable applications:	Layer	Comment: (in case of addition of new term, term deleted, indicating reason for change of term etc., example deliverable where used)
Standard frequency and time signal-satellite	2	ERC/REC 70-03
Subscriber access excluding MWS	3	-
Synthetic aperture radar	3	ECA Table
TACAN-DME	3	ECA Table
Tactical mobile	3	ECA Table
Tactical radar	3	ECA Table
Tactical radio relay	3	ECA Table
Talkback	3	-
Talkback pocket unit	3	-
T-DAB	3	ECA Table
Telecommand (military)	3	ECA Table
Telemetry (civil)	3	ECA Table
Telemetry (military)	3	ECA Table
Telemetry/Telecommand (civil)	2	ECA Table
Telemetry/Telecommand (military)	2	ECA Table
TETRA	3	-
TETRAPOL	3	-
TLPR	3	ERC/REC 70-03
Tracking systems	2	-
Tracking, tracing and data acquisition	2	ERC/REC 70-03
TRA-ECS	1	ECA Table
TTT	2	ERC/REC 70-03, ECC/DEC/(16)01
TV analogue (terrestrial)	3	-
ULP-AID	3	ERC/REC 70-03
ULP-AMI	3	ERC/DEC/(01)17
ULP-MMI	3	ERC/REC 70-03
Unplanned, uncoordinated fixed links	3	-
UWB applications	2	ECC/DEC/(06)04
Vehicle and infrastructure radar	3	ERC/REC 70-03
VLBI observations	2	ECA Table
VOR	3	ECA Table
VSAT	3	ERC/REC 13-03
WAIC	3	ECA Table
Weather radar	2	ECA Table
Weather satellites	2	ECA Table
WIA	3	ERC/REC 70-03 Annex 2
Wide area paging	3	ECC/DEC/(06)06
Wideband data transmission systems	2	ERC/REC 70-03
Wind profilers	2	ECA Table
Wireless audio/multimedia	2	ERC/REC 70-03

ABBREVIATIONS

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
BBDR	Broad Band Disaster Relief
BFWA	Broadband Fixed Wireless Access
BWA	Broadband Wireless Access
CB	Citizen's Band
CGC	Complementary Ground Component
CT	Cordless Telephone
DA2GC	Direct Air-to-Ground Communications
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
ELT	Emergency locator transmitter
ENG/OB	Electronic News Gathering / Outside Broadcasting
EPIRBs	Emergency Position Indicating Radio Beacons
ESOMPs	Earth Stations On Mobile Platforms
ESV	Earth Stations on-board Vessels
FM	Frequency Modulation
FSS	Fixed-Satellite Service
GALILEO	European Global Navigation Satellite System
GBAS	Ground Based Augmentation System
GBSAR	Ground Based Synthetic Aperture Radar
GLONASS	Globalnaya Navigatsionnaya Sputnikovaya Sistema
GMDSS	Global Maritime Distress and Safety System
GNSS	Global Navigation Satellite System
GNSS	Global Navigation Satellite System Pseudolites

Abbreviations	
Pseudolites	
GPR	Ground Probing Radar
GPS	Global Positioning System
GSM	Global System for Mobile Communications
GSM-R	Global System for Mobile Communications on Railways
GSO	GeoStationary Orbit
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
IMT-Advanced	Systems beyond IMT-2000
IMT	International Mobile Telecommunications (includes IMT-2000 and IMT-Advanced
ISM	Industrial, Scientific and Medical Applications
ITS	Intelligent Transport Systems
JTIDS	Joint Tactical Information Distribution System
LAES	Location Application for Emergency Services
LANs	Local Area Networks
LEST	Low e.i.r.p. Satellite Terminal
LP-AMI	Low Power Active Medical Implants
LPD	Low Power Device
LPR	Level Probing Radar
LT2	Location Tracking Type 2
MBANS	Medical Body Area Network System
MCA	Mobile Communications on Board Aircraft
MCV	Mobile Communication Services on Board Vessels
MFCN	Mobile/Fixed Communications Networks
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
NGSO	Non-GeoStationary Orbit
NP2M	Narrowband Point to Multipoint system

Abbreviations	
PAMR	Public Access Mobile Radio
PLB	Personal Locator Beacon
PMR	Private (Professional) Mobile Radio
PMSE	Programme Making and Special Events
POCSAG	Post Office Code Standards Advisory Group
PPDR	Public Protection & Disaster Relief
RFID	Radio Frequency Identification
RTE	Radar Target Enhancer
SAB	Service Ancillary to Broadcasting
SAP	Service Ancillary to Programme making
SAR	Search and Rescue
SATCOM	Satellite Communication
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
T-DAB	Terrestrial Digital Audio Broadcasting
TETRA	Terrestrial Trunked Radio
TETRAPOL	Digital PMR technology
TLPR	Tank Level Probing Radar
TRA-ECS	Terrestrial radio applications capable of providing electronic communications services
TTT	Transport and Traffic Telematics
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
VLBI	Very Long Baseline Interferometry
VOR	VHF Omnidirectional Radio Range
VSAT	Very Small Aperture Terminal
UWB	Ultra Wide Band
WAIC	Wireless Avionics Intra-Communications systems
WIA	Wireless Industrial Applications

Abbreviations	
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. At its 35th meeting (15-16 January 2015), the EFIS Maintenance Group concluded on a revision of this annex in line with the additions made in the EFIS database in the recent years.

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)
- Simplex/duplex

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

- Technology in use

- Start and 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)

- Relevance for ECO Report 03 (opt-out flag)

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"?>
<!-- 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) -->
<!ELEMENT frequencyInformation (frequencyTable*)>
<!ELEMENT frequencyTable (footnote | allocation | application | document | radioInterface |
Rightofuseinfo)*>
<!ELEMENT footnote EMPTY>
<!ELEMENT footnoteref EMPTY
<!ELEMENT frequencyFootnote EMPTY>
<!ELEMENT allocation (footnoteref)*>
<!ELEMENT application EMPTY>
<!ELEMENT document EMPTY>
<!ELEMENT radioInterface EMPTY>
<!ELEMENT Rightofuseinfo EMPTY>
>

<!ATTLIST frequencyTable
        name ID #REQUIRED
>

<!ATTLIST footnote
        number CDATA #REQUIRED
        description CDATA #REQUIRED
>

<!ATTLIST frequencyFootnote
        description CDATA #REQUIRED
        number CDATA #REQUIRED
        higherFrequency CDATA #REQUIRED
        lowerFrequency CDATA #REQUIRED
>

<!ATTLIST allocation
        lowerFrequency CDATA #REQUIRED
        higherFrequency CDATA #REQUIRED
        term CDATA #REQUIRED
        status (primary | secondary) #REQUIRED
        shortComments CDATA #IMPLIED
```

```
 >

<!ATTLIST footnoteref
        number CDATA #REQUIRED
>

<!ATTLIST application
        lowerFrequency CDATA #REQUIRED
        higherFrequency CDATA #REQUIRED
        term CDATA #REQUIRED
        shortComments CDATA #IMPLIED
>

<!ATTLIST document
        title CDATA #REQUIRED
        lowerFrequency CDATA # REQUIRED
        higherFrequency CDATA # REQUIRED
        term CDATA #IMPLIED
        comment CDATA #IMPLIED
        type (EC_DECISIONS | ECC_DECS_RECS | ECC_ECO | ETSI_DRAFT | ETSI | EU |
        LICENSING_INFO | NATIONAL | NTFA | OTHER | RIS_MODELS | RTTE |
        RTTE_SUBCLASS) #REQUIRED
        validfrom CDATA #IMPLIED
        expiry CDATA #IMPLIED
        hyperlink CDATA #IMPLIED
>

<!ATTLIST radioInterface
        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
        FrequencyBand_notes  CDATA #IMPLIED
        Allocation_notes  CDATA #IMPLIED
        Application_notes  CDATA #IMPLIED
```

```
>

<!ATTLIST Rightofuseinfo
        Rightofuseinfono CDATA #IMPLIED
        duplex (true | false) #IMPLIED
        LowerFrequency CDATA #IMPLIED
        HigherFrequency CDATA #IMPLIED
        DownlinkLowerFrequency CDATA #IMPLIED
        DownlinkHigherFrequency CDATA #IMPLIED
        UplinkLowerFrequency CDATA #IMPLIED
        UplinkHigherFrequency CDATA #IMPLIED
        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
        StartDate CDATA #IMPLIED
        Expiry CDATA #IMPLIED
        Tradable (true | false) #IMPLIED
        Nationalcoverage (true | false) #IMPLIED
        Localcoverage CDATA #IMPLIED
        LONGITUDE CDATA #IMPLIED
        LATITUDE CDATA #IMPLIED
        shortComments CDATA #IMPLIED
        technology CDATA #IMPLIED
```