



European Radiocommunications Committee (ERC)  
within the European Conference of Postal and Telecommunications Administrations (CEPT)

**INVESTIGATION OF THE POSSIBILITIES OF HARMONISING  
(LICENSING AND FEES FOR)  
THE PMR SERVICE WITHIN CEPT ADMINISTRATIONS**

**Eger, April 2000**



## INDEX TABLE

1	EXECUTIVE SUMMARY .....	1
2	INTRODUCTION .....	1
3	CURRENT PRACTICES AND PROCEDURES .....	2
3.1	Definition .....	2
3.2	ERO Report.....	2
3.3	Results of the study's questionnaire .....	3
4	ANALYSIS OF FEE POLICIES .....	4
4.1	Factors .....	4
4.2	Analysis.....	5
5	LICENSING PRACTICES AND PROCEDURES.....	5
5.1	Licence Application forms .....	5
5.2	Generic Licence.....	5
5.3	Licence Issue Times .....	5
5.4	Licence Duration.....	6
5.5	Licence Conditions.....	6
5.6	PMR Definition .....	6
5.7	PMR Sectors Classification.....	6
5.8	Phasing.....	7
6	CONCLUSIONS AND PROPOSALS.....	7
7	REFERENCES.....	7
	Annex 1 Current Licensing practices and procedures.....	8
	Annex 1 (b) Graphical representation of PMR fees.....	17
	Annex 2 PMR sectors classification .....	22
	Annex 3 Generic structure of application form.....	25
	Annex 4 Generic structure for Licence documentation.....	26



## 1 EXECUTIVE SUMMARY

- The following gives an overview of what is contained within the Report on Professional Mobile Radio (PMR):
- The widespread use of PMR across Europe was recognised.
- Wide disparities exist regarding the practices and procedures associated with licensing and fees for PMR within CEPT Administrations.
- A harmonised generic structure for Licence application forms and licence documentation was produced, based on the inclusion of components commonly used by different Administrations.
- Fee setting policies should be transparent and relate to the item for which they are charged.
- CEPT Administrations should adopt the following PMR definition: self provided, self used or closed user group mobile radio systems - i.e. Professional Mobile Radio<sup>1</sup>.
- CEPT Administrations should note common classifications for PMR and are encouraged, when in future adapting their computerised licensing systems, to work in the direction indicated in this Report.
- CEPT Administrations adopt a minimum PMR licence duration of five years.
- A Recommendation on a generic licence application form and generic licence documentation was formulated.
- That the average processing time, excluding co-ordination, of two weeks for smaller systems, and six weeks for larger systems<sup>2</sup> should be adopted by CEPT Administrations.
- PMR licences are legal documents authorising licensees to operate PMR systems. The study found that even with the small differences in the conditions attached to PMR licences by various Administrations, there is a strong degree of commonality. The study concluded that licence conditions have little effect on overall PMR penetration, hence there was little reason to propose changes to the current arrangements.
- Industry support the work and the findings of this Report.

## 2 INTRODUCTION

The purpose of this Report is to present the findings on PMR regarding the potential for the harmonisation of regulatory requirements relating to the use of PMR.

This Report examines the scope for harmonised regulatory requirements relating to the use of PMR services. This was as a result of concerns, expressed by the industry, that there are currently many wide ranging variations in the areas of licensing, and fees policies and procedures which affects the penetration of PMR.

The terms of reference of the study were:

- *Define the PMR service and list the different applications;*
- *Consider current licensing practices and procedures - to include licence conditions, licence duration, and target times for issuing licences;*
- *Prepare model licence application forms;*
- *Prepare model licence documentation;*
- *Consider ways in which licence fee policies for PMR might be harmonised by investigating what fees are used for by Administrations and what they consist of;*
- *Prepare draft ERC instruments to implement the model licence application forms and documentation, and fees policies.*

As part of the study a detailed questionnaire regarding current licensing practices and procedures was circulated to all CEPT Administrations. Responses were received from twenty one Administrations. A copy of the questionnaire and interpretation of responses received can be found in Annex 1.

---

<sup>1</sup> It should be noted though that not all administrations require PMR to be used for professional use only.

<sup>2</sup> In case of co-ordination with neighbouring countries this time period could be longer but should not be longer than 4 months.

### 3 CURRENT PRACTICES AND PROCEDURES

#### 3.1 Definition

The study had a need to distinguish between public and private when defining PMR. It was decided that for the purpose of this Report PMR would be taken to mean self provided, self used or closed user group mobile radio systems - i.e. Professional Mobile Radio<sup>3</sup>. PMR is part of the land mobile service based on the use of simplex, half and possibly full duplex at the terminal level in order to provide closed user group communications. PMR products follow specific standards such as ETS 300 086, ETS 300 113 and equivalents. Citizens Band –CB (e.g. PR 27) is not part of PMR.

PMR, provides professional users with immediate access to two way tailored networks, customised features and specific coverage for voice and/or data, using appropriate signalling and protocols through owned or shared infrastructures with easily controllable costs even when connected to Public Switched Telephone Networks (PSTN), for which other standards may apply.

A major characteristic of PMR is the very wide range of users, from small users sharing spectrum through to large users using national exclusive spectrum. A fuller more comprehensive, but not exhaustive, list of examples is given in Annex 2.

The following matrix puts into context PMR against other services;

<b>Service:</b>	<b>Type of User:</b>
Cellular	Generally available to all (Public Network)
PAMR	Third party provided to a number of unrelated user groups
PMR	Self-provided and closed user groups.

#### 3.2 ERO Report

The ERO report, PMR & PAMR Licensing (July 1997), identified differences in some countries. These are;

- The validity of licences issued, licence fees and the time taken to issue a licence;
- General procedures for issuing licences are too complicated and time consuming, as well as varying between different Administrations;
- Users claim that the handling of applications and the procedures that are needed to obtain a licence, including frequency assignment, are too complicated and time consuming.

This study is part of the follow up on the proposals and recommendations mentioned in the 1997 ERO report on PMR & PAMR licensing.

---

<sup>3</sup> See footnote 1, page 3.

### 3.3 Results of the study's questionnaire

A questionnaire was distributed to all CEPT Administrations to ascertain the current regulatory position within CEPT. Responses were received from Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, the Netherlands, Norway, Poland, Portugal, Romania, Sweden, Switzerland, Turkey and the UK. Information about Italy, Liechtenstein and Spain was received from other sources. The questions asked were as follows:

- I. Who can be licensed?
- II. What is the purpose of a licence?
- III. How long does it take to process a licence application?  
At what point does an applicant have to pay?
- IV. Does anyone else have to be involved in or sign the licence application? If so who?
- V. How long is a PMR licence valid for?  
Do they have a pre-determined end date?  
Notice period before re-farming.
- VI. Reasons for the ultimate rejection of a licence application
- VII. What percentage of revenue of fees collected for spectrum use is contributed by PMR?
- VIII. Example PMR fees in EUROS

The responses to the questionnaire highlighted the wide variety of circumstances within CEPT Administrations:

- **licensees must be legal entities and can range from individuals to large organisations.**
- **the purpose of a licence varies from no particular restriction on use, to only professional business or security use.**
- **the time taken to process a licence application ranges from 1 week to 36 weeks.**
- **the licence validity period ranges from one year to an unlimited amount of time, subject to payment of fees.**
- **PMR fees for 5 handportables operating over an area of approximately 1 km radius using a non-exclusive PMR channel, range from 16 EUROS to 1185 EUROS.**

Details of replies to the questionnaire can be found in Annex 1.

## 4 ANALYSIS OF FEE POLICIES

### 4.1 Factors

The study looked into some possible reasons for the wide range of fees charged which it grouped under the following headings: Political, Economic, Social, Geographical and Technological factors. These are each discussed below:

#### Political

Spectrum fees reflect differing spectrum management objectives which might include any or all of the following components;

- I. Administration costs for spectrum management, licensing process and spectrum control.
- II. Spectrum negotiation with other users at national, European (CEPT groups and direct agreement between Administrations) and world-wide levels (World Radio Conferences in particular).
- III. Re-farming: Spectrum re-allocation decided at any level including re-farming procedures and new equipment costs for displaced users.
- IV. The introduction of new radio technologies have to be assessed for their spectrum implications and compatibility with other technologies.
- V. Incentive and dis-incentive measures: Lower fees or increased fees can be an effective tool to accelerate user moves, for example introduction of a new technology or move to a higher frequency band.

Fees levied on PMR users are designed to cover or to contribute to these spectrum related expenses. The present fees on PMR clearly show that in many countries PMR users bear an excessive part of these expenses. The very wide variety of PMR fees may form a barrier to European harmonisation.

#### Economic

- I. Wide diversity exists in the amount of spectrum allocated to PMR by different Administrations. Some Administrations use price differentials to reflect spectrum scarcity.
- II. Administrations can differ in the number and description of users, the total user base of all administrations is listed in Annex 2, PMR Sectors Classification. Consequently this can result in differing Administrations fees according to spectrum available from each to support requested services.

#### Social

Consumers in different countries have varying requirements which affect the services provided and influence the fees charged.

#### Geographical

Geographical factors can create a barrier to wide area PMR coverage, resulting in consumers possibly opting for alternative services which can attract different fees.

#### Technological

- I. In some Administrations the availability of alternative services can influence the cost of a PMR licence.
- II. The use of spectrum may be reflected in the fees charged.

## 4.2 Analysis

The terms of reference for the study suggested considering ways in which licence fee policies for PMR might be harmonised, this does not mean that all Administrations should charge the same fee, but that there should be commonalities in the way fees are calculated. In CEPT Administrations the basis for calculating fees ranges from arbitrary fees which are not intended to cover costs through to full cost-recovery.

Licence fees are governed by many different policies across Europe and it is therefore difficult to draw up a means of harmonising them. (The wide diversity in fees is demonstrated in Annex 1) However to take account of spectrum management requirements; fees should at least in some way be based on bandwidth and the geographical coverage area obtained.

An equally important part of fee charges is to recover the costs of Administrations in carrying out their statutory functions and even here there are some differences between Administrations. For example, geographic location will affect how much international co-ordination is required. Legislative structures may also affect the way in which fees are set and recovered.<sup>4</sup>

**For these, and many other reasons it is clear that any harmonisation measures in this area will require further effort. It is equally important that fee setting policies should be transparent and relate to the item for which they are charged.**

**Further work on this subject of PMR fees is being carried out within CEPT**

## 5 LICENSING PRACTICES AND PROCEDURES

### 5.1 Licence Application forms

In order to assist in the harmonisation process, it would help if the same format for licence application forms was used throughout Europe. Therefore, in an effort to standardise the format of the application forms used by the various CEPT Administrations, a generic application form has been drawn up based on the inclusion of common components. Administrations may add to this generic structure to meet specific national requirements and, by following this common sectioned format, their application forms should be more user friendly. National requirements need to be transparent and should be able to be justified on grounds of effective spectrum management. Annex 3 shows the generic framework for an application form. This will be the subject of an ERC Recommendation.

The Report recognises the increasing use of electronic means for processing applications and it is envisaged that the generic structure form may assist in taking forward this process.

### 5.2 Generic Licence

The study felt that the same principle as with licence application forms should be applied to licence documentation, although it was noted that this document needed to reflect individual Administrations legal systems and requirements. It was considered that there was less of a need for it to be a generic model since it is not completed by licensees. Greater emphasis was placed on the licence application which users have to complete. Annex 4 shows the general framework for licence documentation. This will be included in the ERC Recommendation mentioned in the previous section.

### 5.3 Licence Issue Times

Having noted wide variation in the time taken to process a licence application the study proposes that the average processing time, excluding co-ordination, of two weeks for smaller systems, and six weeks for larger systems should be adopted by CEPT Administrations. However it should also be noted that, EU Administrations need to comply with the EU Licensing Directive (97/13/EC) which states that all licence applications need to be granted within a six week period, but

---

<sup>4</sup> It should be noted that the UK has begun to alter the way fees are charged for PMR licences, with the introduction of Spectrum Pricing. Previously, the cost of a licence was based solely on cost-recovery, that is the cost of a licence was based entirely on recovering the overall administration cost. Spectrum pricing however takes account of spectrum availability and present and future demand, as well as providing incentives for spectrum efficiency. Fees therefore provide an important tool to manage the spectrum more effectively and efficiently; within the framework of overall spectrum management objectives.

that a longer time is permitted when co-ordination has to be undertaken. The time scale for the latter is not open-ended, therefore the majority of licences issued by EU Member States should be granted in six weeks.

The ERO report PMR & PAMR Licensing (July 1997), proposed to change some procedures in the Vienna agreement to speed up international co-ordination. It was concluded that this subject might be feasible for the Harmonised Calculation Method group (HCM). It was also noted that other ERC working groups would deal with frequency co-ordination problems. Additionally Recommendation T/R25-08, which is widely used by Administrations and is closely related to the Vienna Agreement may also need to be updated. The chairman of the Vienna agreement is informed about the proposals to shorten the time for co-ordination and is asked to take these up.

#### 5.4 Licence Duration

As required under its Terms of Reference the study noted differences in licence duration. However, there seems to be some evidence to suggest that there is some convergence on this and it is proposed to allow this process to continue.

Whilst licence duration is not currently seen as a major stumbling block the study considered 5 years as a reasonable minimum period, except where notice of band re-planning has been given.

#### 5.5 Licence Conditions

All PMR licences are legal documents which authorise a licensee to operate a PMR system within the terms and conditions defined in the licence document. The study examined the terms and conditions contained within licences from a number of CEPT Administrations and concluded that with few exceptions, the operational permissions and constraints were very similar and tended to fall into two parts – the technical and the non-technical parameters.

The technical parameters originate from the assignment process which is directly related to spectrum management.

The non-technical parameters relate to the way the PMR system may be operated, and typically include: - use not causing interference to others, the purpose of the transmissions, who may use the system, connections to other systems (e.g. PSTN – the subject of ERC Decision (98)10), and reasons why the licence may be suspended or revoked.

The study found that, even with the small differences in the conditions attached to PMR licences by various Administrations, there is a strong degree of commonality.

The study concluded that licence conditions have little effect on overall PMR penetration, hence there was little reason to propose changes to the current arrangements.

#### 5.6 PMR Definition

It is proposed that CEPT formally adopt the PMR definition developed by the study, **i.e self-used, self provided, or closed user group mobile radio systems.**

#### 5.7 PMR Sectors Classification

The classification of PMR sectors in Annex 2 is based on classifications used by a number of CEPT Administrations.

The objectives of such classification are:

- To precisely define the application domain of PMR systems.
- To have a common classification in Europe to better assess the PMR situation. This classification could be finally correlated with the EUROSTAT<sup>5</sup> classification.
- To proceed towards a common statistical analysis of PMR across Europe: presently statistics gathered by Administrations are difficult to compare since they do not follow the same classification. To provide a tool to help the spectrum allocation and to promote the development of PMR through specific actions.

The classification has a hierarchical structure in two levels except the Service sector organised in three levels. This allows:

- Fine classifications to be used by each Administration while keeping a global view by major sectors.
- An open classification ready to host further subdivisions

---

<sup>5</sup> Eurostat is the statistical office of the European Union (EU) and has as a mission to provide the EU with high-quality statistical information see also <http://europa.eu.int/eurostat-html>

Obviously some sub sectors belong to several categories (e.g. ambulances could be listed under transport, health or emergency).

- Having regard to the requirements of industry and to facilitate wider comparison of statistics, the study proposes that Administrations take note of the common classifications for PMR and are encouraged, when in future adapting their computerised licensing systems, to work in the direction indicated when preparing statistics.

It is hoped that in the long term Administrations can move towards adopting the above classification system through an evolutionary approach.

The Report recognises the increasing use of electronic means for processing applications and it is envisaged that a common classification may assist in taking forward this process.

### **5.8 Phasing**

The study clearly recognises that not all the proposals could be implemented quickly, or for some Administrations at all, and it therefore suggests the following phased implementation:

First phase:                      Application form and Licence Documentation proposals.  
Second phase:                    Process time proposals

The study urges CEPT to consider the PMR fees issue urgently and recommends that industry should be included.

## **6 CONCLUSIONS AND PROPOSALS**

The study produced the following:

- an ERC Recommendation
  - Regarding licence application forms and licence documentation.
- an ERC Recommendation covering:
  - PMR definition
  - Processing time
  - PMR licence duration

## **7 REFERENCES**

- i. ERO report: PMR & PAMR Licensing (July 1997)
- ii. ERO report: PMR Market and Spectrum Requirements (December 1998)
- iii. ERO report: Licensing and Charging for Radio Equipment (December 1998)
- iv. ERO report: PMR in Europe: A General Overview (December 1998)

## Annex 1 Current Licensing practices and procedures

### 1. Who can be licensed?

<b>Administration</b>	<b>Response</b>
Austria	Individuals (adults) or legal entities
Belgium	Companies, organisations and legal entities
<i>Croatia</i>	<i>Companies, organisations and legal entities. Noted specifically NOT for hobby purposes.</i>
Cyprus	Individuals and companies.
Czech Republic	No particular limitations.
Denmark	No particular limitations..
<i>Estonia</i>	<i>Companies, organisations and legal entities.</i>
Finland	No particular limitations
France	In the case of private network: the private individual or corporate entity who established it. In the case of shared network: several private individual or corporate entities who are members of one or more closed user groups in order to exchange internal communications within the same group.
Germany	Companies, organisations and legal entities.
Hungary	Companies, organisations and legal entities.
Ireland	Legal entities - individuals and registered companies.
Italy	Companies, organisations and legal entities.
Liechtenstein	No particular Limitations.
Luxembourg	Professionals and private persons
Netherlands	Companies, organisations and legal entities.
Norway	No particular limitations
<i>Poland</i>	<i>No particular limitations</i>
Portugal	No particular limitations
Romania	Only Romanian legal person.
Spain	Any legal entity can apply
Sweden	No particular limitations
Switzerland	No particular limitations
Turkey	Government organizations and institutions, real and corporate bodies.(Studies are being conducted to exempt PMR 446 from licensing.)
UK	Companies, organisations and legal entities.

Source: PMR & PAMR Licensing (ERO) - Annex IV

2. What is the purpose of a licence?

<b>Administration</b>	<b>Response</b>
Austria	Professional, business or security use.
Belgium	Professional, business or security use.
Bulgaria	<i>Only professional, business or security use. Noted specifically NOT for hobby purposes.</i>
Croatia	<i>Professional, business or security use. Noted specifically NOT for hobby purposes.</i>
Cyprus	Professional (mainly) and security use.
Czech Republic	No particular restrictions on use.
Denmark	No particular restriction on use
Estonia	<i>Professional, business or security use. Noted specifically NOT for hobby purposes.</i>
Finland	Professional, business, hobbyetc depending on assignments.
France	Professional, business or social use.
Germany	Professional, business or security use.
Hungary	Professional, business or security use.
Ireland	Business use mainly, but some personal use. Short range business radio on 446 MHz, which is licence exempt, may be used for non business purposes.
Italy	Professional, business or security use.
Liechtenstein	Professional, business or security use.
Luxembourg	Control of spectrum use/ensuring efficient spectrum use/avoiding interference/ transparency
Netherlands	Only professional, business or security use.
Norway	No particular restriction on use.
Poland	<i>No particular restriction on use.</i>
Portugal	Professional, business or security use.
Romania	Professional and business use.
Spain	Business use only
Sweden	<i>No particular restriction on use.</i>
Switzerland	Professional, business or security use.
UK	Professional, business or security use.

Source: PMR & PAMR Licensing (ERO) - Annex I

## 3. How long does it take to process a licence application?

**At what point does an applicant have to pay?**

<b>Administration</b>	<b>Response (in weeks)</b>	<b>Individual co-ordination required Yes/No</b>	<b>Point of <i>first invoice</i>.</b>
Austria	12 - 24 (depending on time of frequency co-ordination procedure.)	Yes, in border area some pre co-ordinated blocks. (Vienna Agreement)	with granting the licence
Belgium	2 - 3	Yes in border areas some pre co-ordinated blocks.(Vienna Agreement.)	Payment on application.
Bulgaria	4 - 24		
Croatia	4		
Cyprus	2-4	No	with the application
Czech Republic	4-8	Yes, in border areas.(Vienna Agreement)	Within the month following licence issue.
Denmark	2		with the licence.
Estonia	3 - 17		
Finland	2	Yes in border areas.	With the licence.
France	10 days for the first authorisation and 7 days for the technical modification .	Yes in border areas some pre-co-ordinated blocks.	In December for time used.
Germany	4	Yes in border areas some pre-coordinated blocks. (Vienna agreement).	With the licence.
Hungary	8 - 15	Yes	
Ireland	3 weeks	yes, for systems located within 30 miles (45 km) of the Northern Ireland border.	<i>Payment on application.</i>
Italy	12 - 36	Yes in border areas.	With granting the licence.
Liechtenstein	2-4	Yes	Within 30 days.
Luxembourg	2 days to 6 weeks		Annual fee paid at assignment of the frequency.
Netherlands	3 - 14	Yes in border areas some pre co-ordinated blocks.	in month following licence issue for the rest of the year.
Norway	1 - 4	Yes, in border areas.	Years payment due in October.
Portugal	3 - 4	No	
Romania	4		On licence issue.
Spain	12 - 16		When licence is issued.
Sweden	4	Yes	When licence is issued
Switzerland	2 - 4	Yes	within 30 days after licensing
Turkey	3 - 4 weeks	Yes	Payment is made yearly.
UK	1 - 3	No	With application

Source: PMR & PAMR Licensing (ERO) - Annex VI

NOTE: For some administrations the time taken may be longer if co-ordination between administrations is required.

4. Does anyone else have to be involved in or sign the licence application? If so who?

<b>Administration</b>	<b>Yes/No</b>	<b>If yes whom?*</b>
Austria	No	
Belgium	No	
Cyprus	No	
Czech Republic	No	
Denmark	No	
Finland	No	
France	Yes	Approved Installer.
Germany	No	
Hungary	No	
Ireland	Yes	equipment supplier's name must be supplied but not his signature.
Italy	No	
Liechtenstein	No	
Luxembourg	No	
Netherlands	No	
Norway	Yes	Application form has to be signed by dealer or supplier.
Portugal	No	
Romania	Yes	The application shall be signed by the person duly authorized to represent the applicant; the equipment should be type approved.
Spain	Yes, but not compulsory.	Dealer/installer
Switzerland	No	
Turkey	Yes	Dealer's signature is needed.
UK	No	

\* Explanatory note; Examples of others involved in or sign licence application include: equipment supplier or installer.

## 5. PMR Licence validity period.

Administration	How long is a PMR licence valid for?	Do they have a pre-determined end date?	Notice period given before <i>refarming</i> .*.
Austria	10 Years		
Belgium	unlimited		
Croatia	5 years		
Cyprus	1 year	Yes	Yes
Czech Republic	Unlimited (Trunked systems 10 years)	No	Notice period is as long as possible ;1-5 years.
Denmark	5 years	Yes	Yes
Estonia	10 years - renewable each year		
Finland	Typically 5 - 6 years, renewable after this period.	No	Yes
France	5 years renewable for private use and 10 or 15 years for shared use.	Yes	6 months - 1 year. Compensation may be offered.
Germany	unlimited.(trunked system 10 years)	No	Yes
Greece			
Hungary	5 years - renewable	No	2-3 years' notice is to be given in the National Table of Frequency Allocations
Ireland	12 months, re-issued annually.subject to payment of fees.	yes, 12 months from the date of issue.	
Italy	5 years	renewals are made on January of every year.	Yes
Liechtenstein	Licence valid till the end of the year; renewal annually.	Yes.	
Luxembourg	Until revocation	No	Minimum 1 year
Netherlands	5 years PMR (normal) 10 years Public PAMR systems (shared use).	Yes	Yes. (minister can take frequencies not specified.)
Norway	unlimited, renewable annually subject to payment of fees.	<i>NO</i>	
Portugal	5 years		
Romania	5 years, under the observance of the radiocommunication regulations in force and the payment of yearly tariffs in force.		
Russian Federation	3 - 10 years.		
Spain	5 years normal validity, can be extended to 10 additional years.		
Sweden	10 years.	Yes	Licence period to be Determined according to known changes.
Switzerland	Licence valid till the end of the year; renewal annually.	<i>Yes</i>	
Turkey	unlimited.		
UK	licence renewable annually subject to payment of fees.	No	Yes. As much time as possible subject to international/ European obligation.

Source: *Licensing & Charging for Radio Equipment (ERO) - 6.2.1 Duration of Licences*

- Administrations will give as much notice as possible, consistent with meeting international and European decisions.

6. Reasons for the ultimate rejection of a licence application

Responses were received from Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, The Netherlands, Norway, Poland, Portugal, Romania Sweden, Switzerland Turkey and the UK. Other information was taken from ERO reports.

This information suggests that applications will not be rejected provided that:

- the application is for appropriate use of PMR and adequate and efficient use of the spectrum.
- frequencies are available.
- the applicant is suitable to hold a licence.\*
- the equipment performs to the correct technical criteria.
- any necessary co-ordination has been done.
- **(where required) fees have been paid.**
  
- no harmful interference is caused.

\*this does not apply to Denmark and Sweden

## 7. What percentage of revenue of fees collected for spectrum use is contributed by PMR?

Administration	Response
Austria	80%
Belgium	Approximately 50%
Cyprus	N/A
Czech Republic	68%
Denmark	15.7%
Finland	30%
France	30%
Germany	43%
Hungary	25-30%
Ireland	20%
Italy	N/A
Liechtenstein	83%
Luxembourg	5%
Netherlands	28%
Norway	55%
Portugal	10 -11%
Romania	N/A
Spain	N/A
Sweden	N/A
Switzerland	83 %*
Turkey	10%
UK	30%

Source: PMR & PAMR Licensing (ERO) - Annex XV, updated with new information from administrations

\*Only of the individual licensees; without network-licences. No figures present- the OFCOM collects fees only since one year.

8. Example PMR fees in EUROS (see explanatory notes overleaf.)

Administration		Systems				
		*One	*Two	*Three	*Four	*Five
Austria	<b>First Year Fee</b> <b>Every Year Fee</b>	60 49,05 Euro one off fee (without co-ordination)	288	153 98,1 Euro/month (with co-ordination)	13080 (independent of number of radio stations)	11508  981,10 euro one off fee.
Bulgaria	<b>First Year Fee</b> <b>Every Year Fee</b>	164 70	307 123	409 164	1534 665	3885 1534
Belgium	<b>First Year Fee</b> <b>Every Year Fee</b>	520 466	2001 1894	3429 3322	54683 54576	37987 37880
Cyprus	<b>First Year Fee</b> <b>Every Year Fee</b>	263	578	1628	22732	11550
Czech Republic	<b>First Year Fee</b> <b>Every Year Fee</b>	16	69	240	1964	1309
Denmark	<b>First Year Fee</b> <b>Every Year Fee</b>	42	50	122	769	604
Finland	<b>First Year Fee</b> <b>Every Year Fee</b>	80~	218~	595~	6513~	4370~
France	<b>First Year Fee</b> <b>Every Year Fee</b>	76	1238	5402	20539	68602
Germany	<b>First Year Fee</b> <b>Every Year Fee</b>	199 56	362 124	931 360	10798 3643	6026 2475
Hungary	<b>First Year Fee</b>					
160 MHz Band 400 MHz Band	<b>Every Year Fee</b>	475 475	475 356	807 807	3678	6169
Ireland	<b>First Year Fee</b> <b>Every Year Fee</b>	137	274	754	5079	5028
Italy	<b>First Year Fee</b> <b>Every Year Fee</b>	1185	1831	4383	21206	19298
Netherlands	<b>First Year Fee</b> <b>Every Year Fee</b>	213 82	554 423	1210 750	7833 7309	8905 8445
Norway	<b>First Year Fee</b> <b>Every Year Fee</b>	185	557	1486	5116	3750
Portugal	<b>First Year Fee</b> <b>Every Year Fee</b>	80 uhf 115 vhf	239 uhf 314 vhf	1274 uhf 1624 vhf		
Spain	<b>First Year Fee</b> <b>Every Year Fee</b>	60	60	60		
Sweden		44	82	224		
Switzerland ▲	<b>First Year Fee</b> <b>Every Year Fee</b>	112 79	513 415	1382 1284	47673 47542	N/A
Turkey	There is no kind of classification in fee collection. Payment is being made on the basis of number of channels used.					
UK	<b>First year Fee</b> <b>Every Year Fee</b>	107	200	714	5000	8570

# Nearest equivalent is a trunked system which would have exclusive channels operating in the band 410 - 430 MHz with a range to 20 - 30 Km.

- ▲ normal use are simplex systems in Switzerland(only one frequency) so the fees are lower. 55% of PMR licences are for public authorities, these licensees have to pay less.  
~ PMR - Licence fee 15.8EURO/mobile transmitter and 6.0 EURO/base station transmitter. The fees do neither depend on service area, not the number of channels or nature of channel. (shared/exclusive.)

## Sample Systems for PMR Licence Fee Comparison

### System 1

5 handportables only (no mobiles and no base station) operating over an area of approx. 1 km radius using non-exclusive PMR spectrum;

### System 2

10 mobiles with 1 base station operating over an area of approx. 10 km radius using non-exclusive PMR spectrum;

### System 3

1 base (or control or trigger) station controlling 1 repeater (or remote base or relay) station at 10 km distance with 30 mobiles operating over an area of approx. 15 km radius around the repeater station using non-exclusive PMR spectrum;

### System 4

A trunked PMR system of 3 base stations and 400 mobiles using 3 exclusive PMR channels over an operation area of approx. 10 km;

### System 5

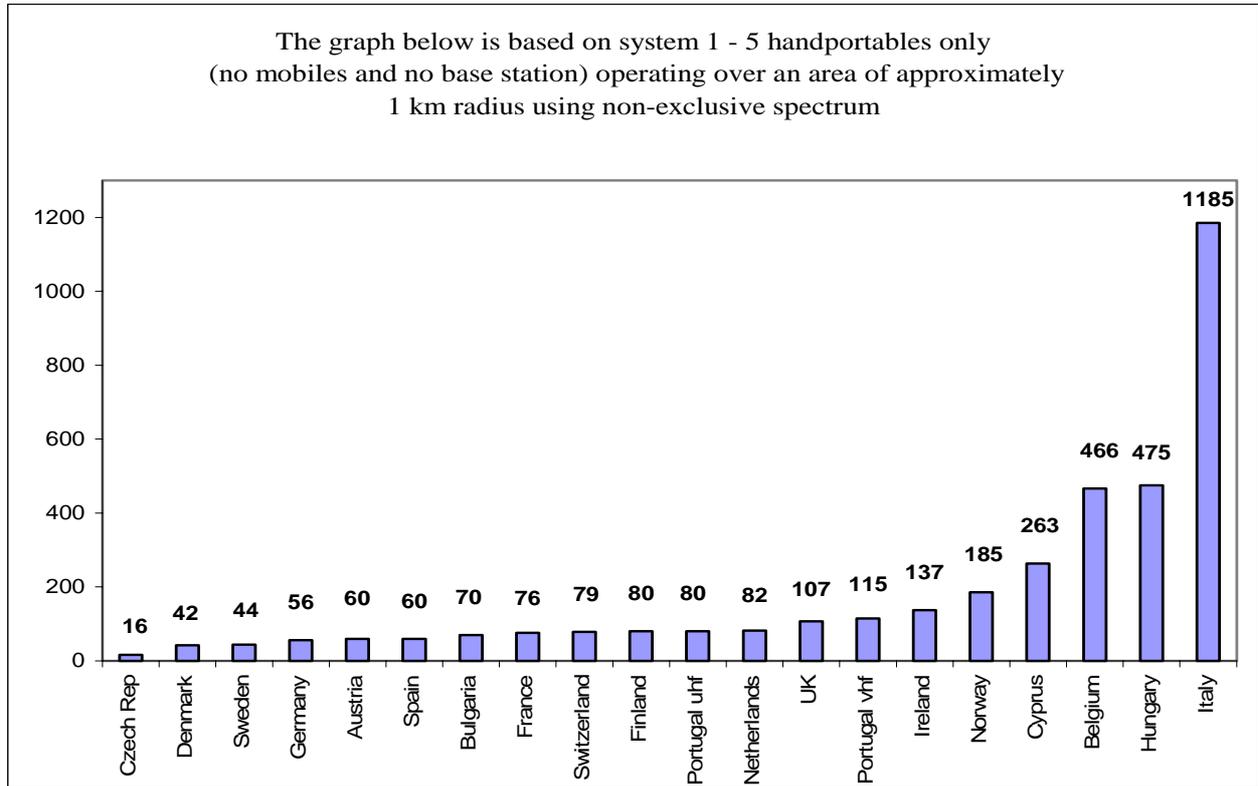
A PMR system using a single national (available nation wide) exclusive PMR channel. For Administrations not making a national exclusive channel available, a 20 base station with 200 mobile system using exclusive PMR spectrum.

## NOTES;

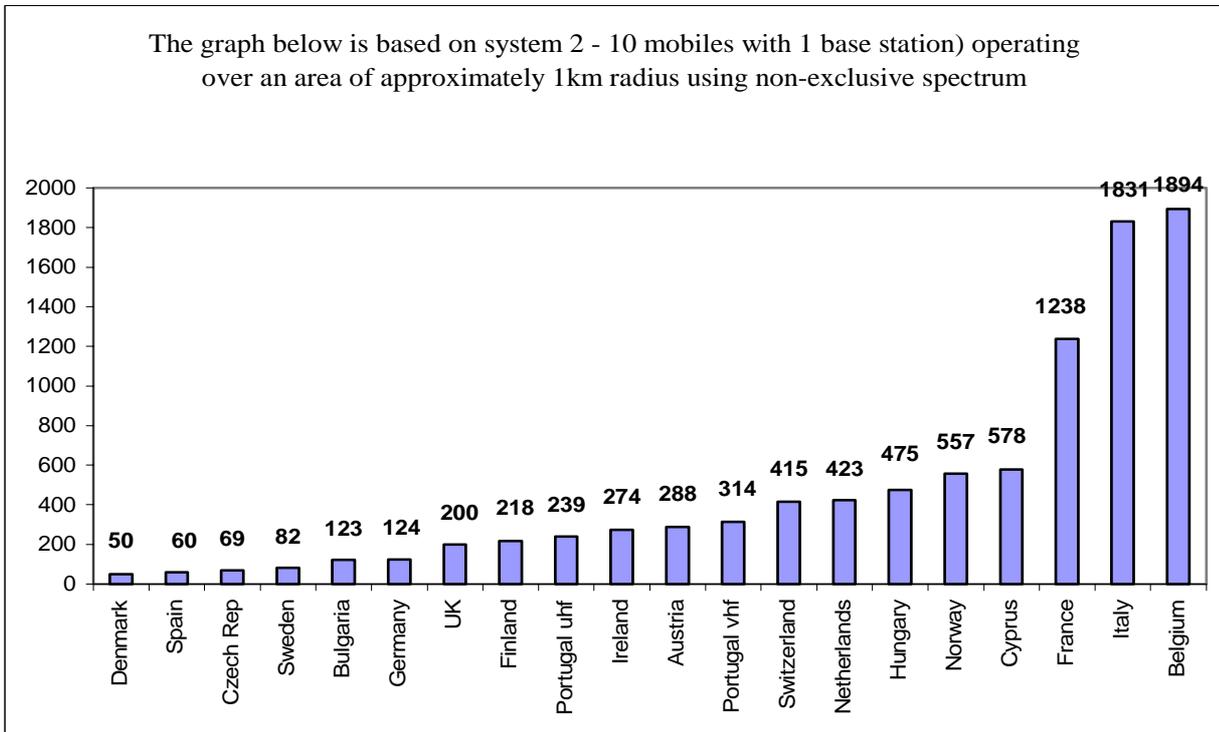
It was agreed that for ease of comparison:-

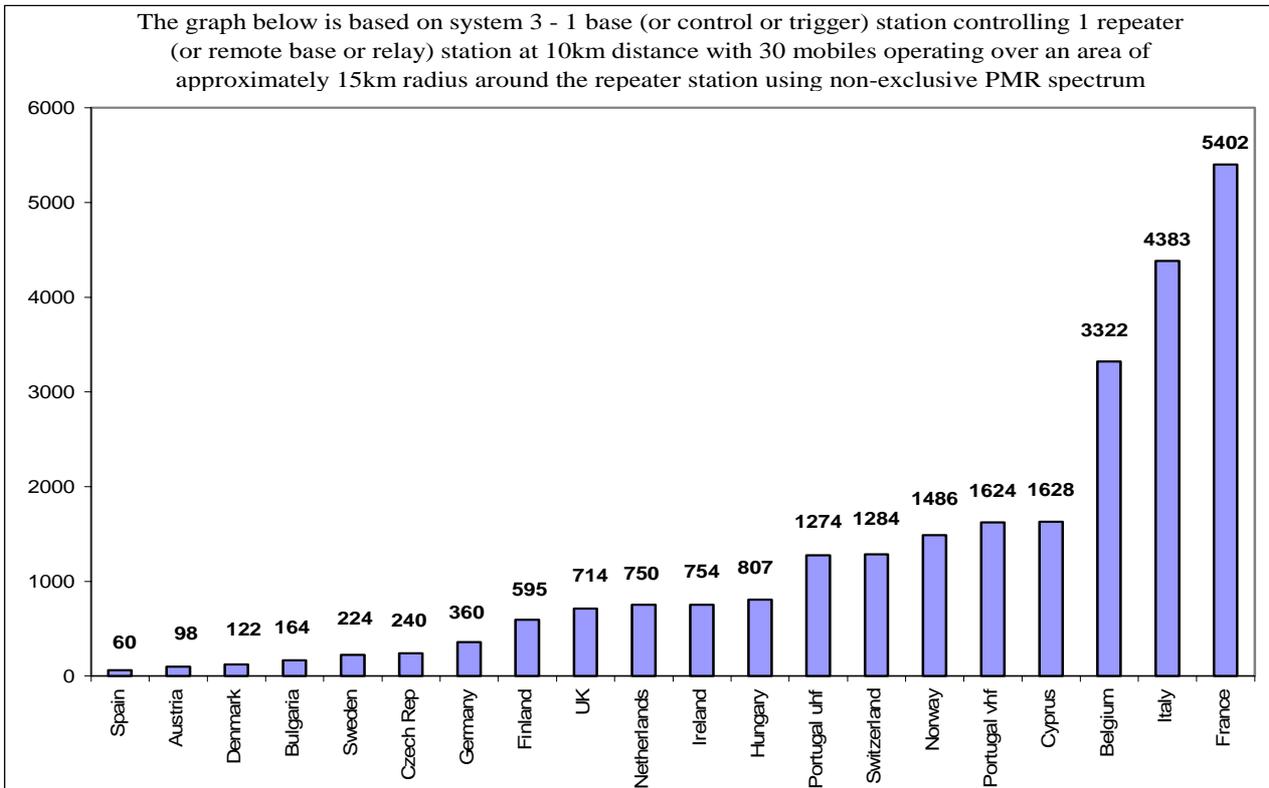
- i) The fee should be the total fee for each complete system (i.e.: not per base or not per mobile)
- ii) All fees should be expressed in EUROS;
- iii) The fee on issue of a new licence and the fee on renewal should be given where they are different.
- iv) It is assumed that all systems are duplex.

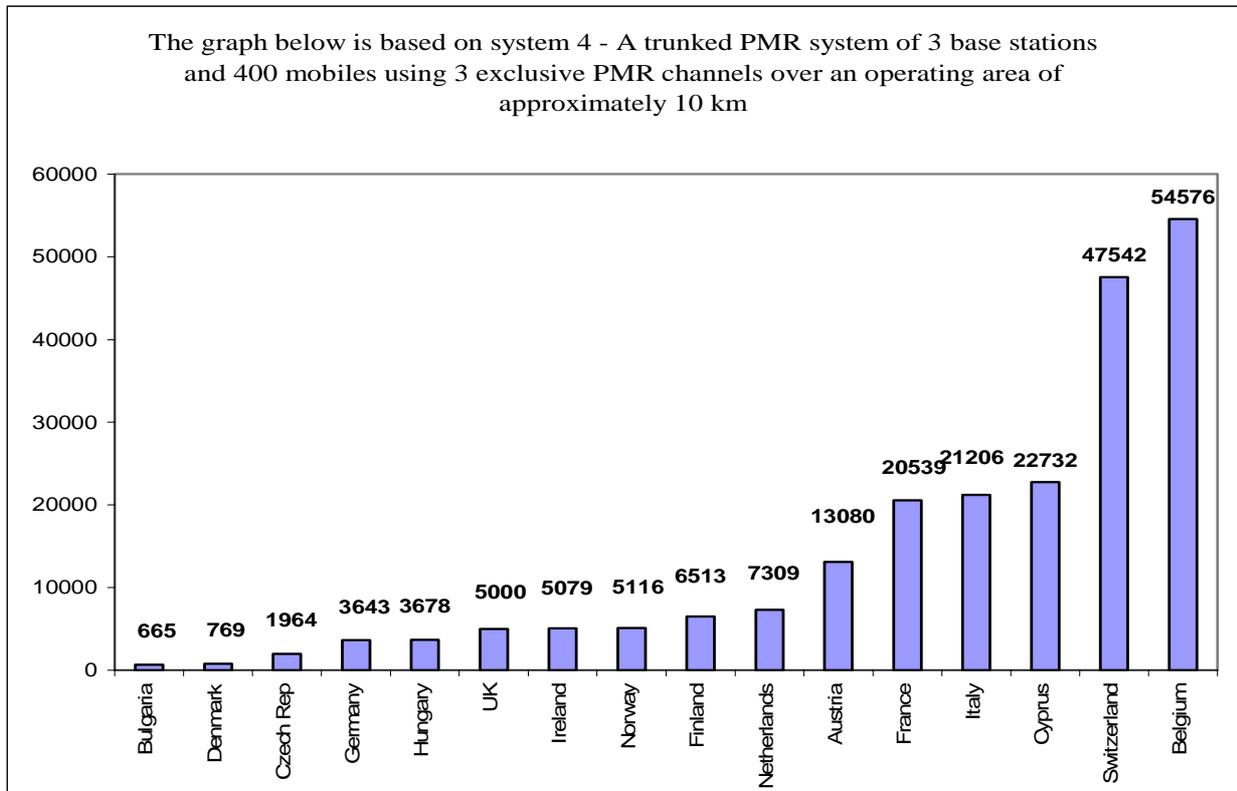
Annex 1 (b) Graphical representation of PMR fees



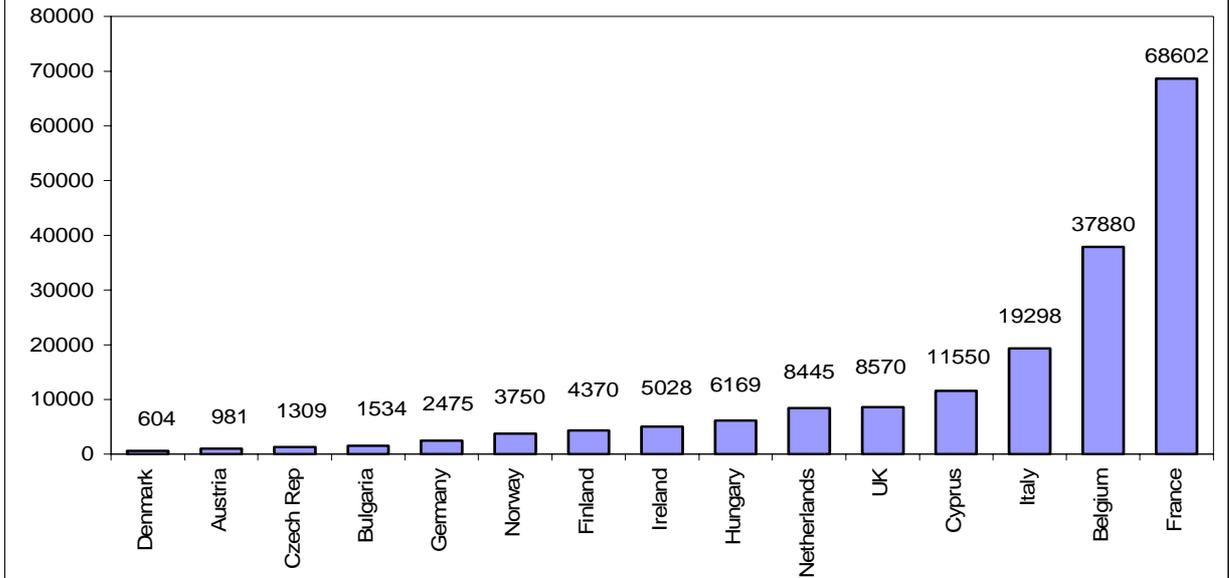
The graph below is based on system 2 - 10 mobiles with 1 base station) operating over an area of approximately 1km radius using non-exclusive spectrum







The graph below is based on system 5 - A single national exclusive PMR channel.  
For administrations not making a national exclusive channel available, a 20 base  
station with 200 mobile system using exclusive PMR spectrum



## Annex 2 PMR sectors classification

### PMR SECTORS

### CLASSIFICATION

#### 1. Agriculture and forestry

- 1.1. Farming
- 1.2. Estate survey
- 1.3. Forestry
- 1.4. Nature Reserve
- 1.5. Hunting and shooting associations

#### 2. Building and public works

- 2.1. Building construction
- 2.2. Road Construction
- 2.3. Cranes
- 2.4. Architects
- 2.5. Ready-mix concrete companies

#### 3. Industry

- 3.1. Manufacturing
- 3.2. Chemical plants
- 3.3. Staff communications

#### 4. Health

- 4.1. Hospitals
- 4.2. Ambulances
- 4.3. Doctors
- 4.4. Nurses and midwives
- 4.5. Veterinary
- 4.6. Other medical

#### 5. Emergency

- 5.1. Police
- 5.2. Fire brigades
- 5.3. Mountain rescue
- 5.4. Car rescue
- 5.5. Traffic control
- 5.6. Others (e.g. coast guards)

#### 6. Transport

- 6.1. Trains
- 6.2. Buses
- 6.3. Trucks
- 6.4. Underground
- 6.5. Taxis and car hire
- 6.6. Aeronautical
- 6.7. Ports
- 6.8. Motorways
- 6.9. Cable cars
- 6.10. Fuel
- 6.11. Food

- 6.12. Funeral
- 6.13. Dangerous substances
- 6.14. Pharmacy products
- 6.15. Other transports

## **7. Administrations**

- 7.1. Central
- 7.2. Regional
- 7.3. Local
- 7.4. Refuse collection
- 7.5. Street cleaning
- 7.6. Land survey
- 7.7. Penal institutions and court staff
- 7.8. Customs
- 7.9. Employment offices
- 7.10. Other administrations

## **8. Utilities and Energy**

- 8.1. Water
- 8.2. Gas
- 8.3. Electricity
- 8.4. Oil
- 8.5. Mines
- 8.6. Pipelines
- 8.7. Electric cables

## **9. Services**

- 9.1. Security
  - 9.1.1. *Surveillance*
  - 9.1.2. *Alarm*
  - 9.1.3. *Help*
  - 9.1.4. *Keys and locks services*
  - 9.1.5. *Detective agencies*
- 9.2. Entertainment/ Religion/Culture
  - 9.2.1. *Sporting events/clubs*
  - 9.2.2. *Exhibition sites*
  - 9.2.3. *Ski areas*
  - 9.2.4. *Sport arenas*
  - 9.2.5. *Religious events*
- 9.3. Banking and insurance
  - 9.3.1. *Banks*
  - 9.3.2. *Insurances*
  - 9.3.3. *Money transfer*
- 9.4. Installation, Maintenance and repair
  - 9.4.1. *Lifts*
  - 9.4.2. *Cleaning*
  - 9.4.3. *Heating*
  - 9.4.4. *Information Technology*
  - 9.4.5. *Public gardens*

9.5. Education

9.5.1. *Schools*

9.5.2. *Universities*

9.5.3. *Driving schools*

9.5.4. *Other*

9.6. Tourism

9.6.1. *Hotels and Restaurants*

9.6.2. *Tour operators*

9.7. Commercial stores and retail

9.8. Media/Advertising

9.8.1. *Broadcasters*

9.8.2. *Private programme makers*

9.8.3. *Advertising companies*

9.9. Telecommunications

9.9.1. *Operators*

9.9.2. *Manufacturers*

9.9.3. *Installers*

9.9.4. *Service providers*

9.10. Dispatch and delivery

9.10.1. *Courier service*

9.11. Other services

**Annex 3      Generic structure of application form**

<b>Section</b>	<b>Possible Contents</b>
<b>1</b> Applicant details	<u><i>Epecially</i></u> - Applicant: name, address - Contact person: Name, telephone number - Concerning: New licence or change of an existing licence - Number of existing licence
<b>2</b> Purpose of use	<u><i>Epecially</i></u> - Explanation
<b>3</b> Base station technical details	<u><i>Epecially</i></u> - Precise location of the base station and the antenna - Height of top of the base antenna above ground-level/sea level - Transmit power - Antenna gain, direction - Request for connection with PSTN
<b>4</b> Other technical details	<u><i>Epecially</i></u> - Requested frequency band/frequencies - Traffic: simplex, duplex, semiduplex. - Type of transmission: voice, data - Number of mobiles - Area of use - Conformity assessment requirements (Interface Regulations/Type Approval)
<b>5</b> Equipment details	<u><i>Epecially</i></u> - Number of base stations - Number of mobile stations
<b>6</b> Applicants Signature	<u><i>Epecially</i></u> - Date and sign - Place and date of application

**Annex 4      Generic structure for Licence documentation**

<b>Section</b>	<b>Possible Contents</b>
<b>1</b> Applicant details	<u><i>Epecially</i></u> - Holder of frequency assignment - Name - Address - Date of issue - Number of licence/frequency assignment
<b>2</b> Purpose of use	<u><i>Epecially</i></u> - Explanation
<b>3</b> Non technical conditions	<u><i>Epecially</i></u> - Licence validity - Area of use (coverage)
<b>4</b> Base station conditions	<u><i>Epecially</i></u> - Precise location of the base station and the antenna - Height of top of the base antenna above ground level and sea-level - Transmit power - Antenna: gain, direction - Connection with PSTN
<b>5</b> Other technical conditions	<u><i>Epecially</i></u> - Frequency/frequencies - Channel separation - Number of mobile stations - Traffic: simplex, duplex, semiduplex - Type of transmission: voice, data - Conformity assessment requirements (Interface Regulations/Type Approval)
<b>6</b> Administrations signature	<u><i>Epecially</i></u> - Seal - Date, - Sign