



Electronic Communications Committee (ECC)
within the European Conference of Postal and Telecommunications Administrations (CEPT)

**ANALYSIS OF RESPONSES ON FEES FOR BROADCASTING
AND
FEES FOR NON-COMMERCIAL AND PASSIVE SERVICES**

Copenhagen, May 2006

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Analysis of responses on fees for broadcasting and fees for non-commercial and passive services

1 INTRODUCTION

1.1 Aim and scope of the work

The overall aim of this investigation is to find out how frequency management activities and spectrum use are financed for broadcasting bands on the one hand and for non-commercial / passive services on the other, as opposed to other frequency bands.

The rationale for this is that CEPT administrations pay more and more attention to what various spectrum users are charged for and strive towards fair fees and charges. In fact there is a general perception that broadcast frequency bands as well as non-commercial and passive frequency bands are often not treated in the same way as other frequencies. It was therefore considered interesting to investigate whether fees and charges for broadcasting, passive and non-commercial services differ in CEPT administrations from those applying to commercial use in the field of electronic communications, and what grounds those differences – if any- are based on.

In this context, the work should be of benefit for administrations who wish to compare what is being done in this area in other CEPT countries or who are considering modifications to their current charging models.

It should be noted that regarding broadcasting the investigation focuses on terrestrial and satellite broadcast and does not address issues like broadcasting over internet, cable or spectrum dividend, nor does it address content issues.

1.2 Collection of information

A questionnaire was sent to CEPT administrations in early September 2005 and responses were collected until end November 2005. The following 20 administrations provided an input:

Austria, Bulgaria, Czech Republic, Cyprus, Estonia, Finland, France, Germany, Greece (excluding broadcasting), Hungary, Ireland, Iceland, Lithuania, Malta, Netherlands, Norway, Portugal, Sweden, Switzerland and the United Kingdom

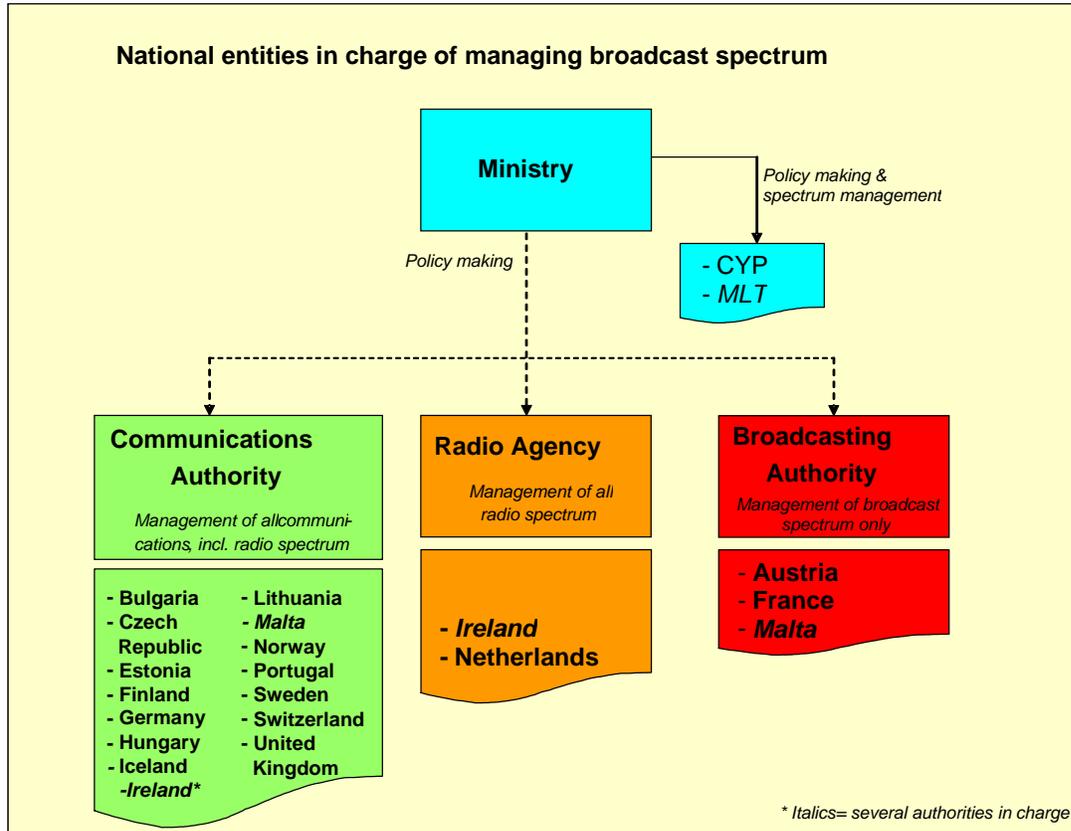
1.3 Structure of the report

- **Section 1** is an introduction.
- **Section 2** deals with administrative charges, to cover the costs of spectrum management activities, and spectrum fees, invoiced to public and private broadcasters...
- **Section 3** addresses administrative charges and spectrum fees for non-commercial and passive services such as emergency services, Defence, or Radio Astronomy.
- **Section 4** presents conclusions.

2 BROADCASTING SPECTRUM

2.1 National entities in charge of broadcast spectrum

Overview



In a majority of administrations that responded to the questionnaire (13 out of 19 administrations) broadcast radio spectrum is managed exclusively by the Communications Authority, i.e. the National Regulatory Authority in charge of electronic communications, which includes the management of radio spectrum alongside other electronic communications issues. This does not preclude the existence of separate entities that may deal with other aspects of broadcasting such as content issues, which are not the object of this report.

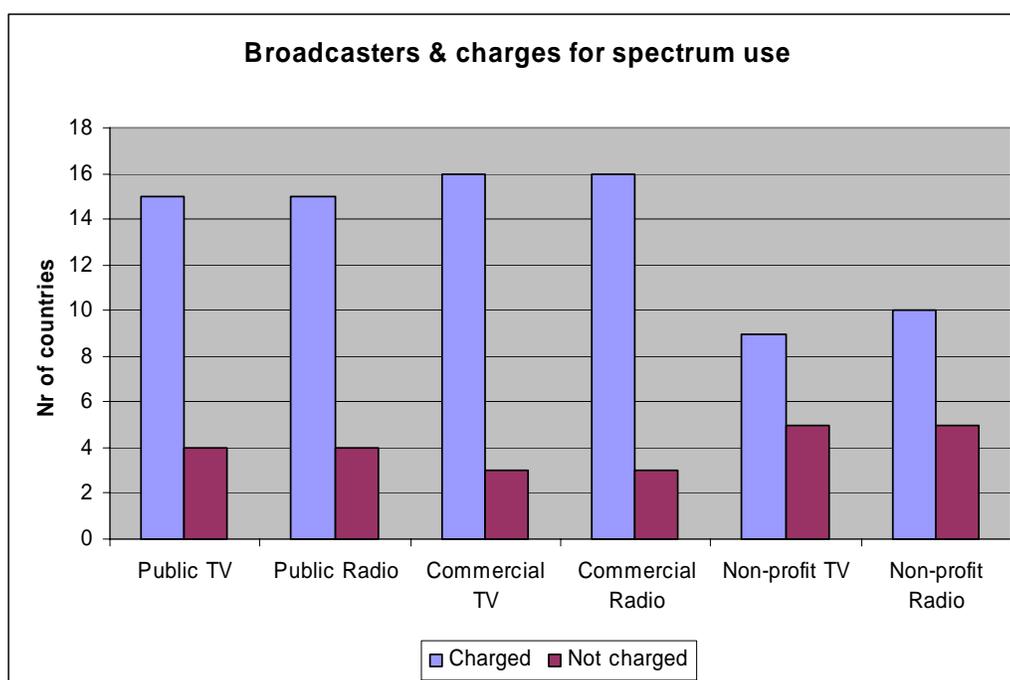
In one administration (**the Netherlands**), a separate Radio Agency is in charge of managing the whole spectrum, including broadcast frequencies.

In another five administrations the situation is as follows:

- In **Austria**, the Austrian Regulatory Authority for Broadcasting and Telecommunications (RTR-GmbH) was established as the operative arm of KommAustria as well as the Telekom Control Commission to create a "convergence regulator". Within this structure, the body in charge of leading the administration of regulatory activities in broadcasting is KommAustria.
- For **Cyprus**, it is the Department of Electronic Communications within the Ministry of Communications and Works that deals with spectrum management including broadcast spectrum.

- In **France**, an independent Authority (CSA) separate from the Radio Agency (ANFR) and the regulator in charge of electronic communications (ARCEP) is responsible for the management of broadcast spectrum.
- In **Ireland** two entities are in charge of broadcast spectrum: the Communications Authority and a Radio Agency.
- As to **Malta**, while spectrum management is carried out by the Malta Communications Authority, the following scenarios apply to broadcast spectrum:
 - Licensing of *spectrum to the public broadcaster* is carried out by the Ministry;
 - Licensing of *analogue broadcasting spectrum* is carried out by the Malta Broadcasting Authority. The Broadcasting Authority will also be responsible for the licensing of digital broadcasting frequencies to broadcasters meeting the requirements of ‘general interest objectives’; and
 - Licensing of *digital broadcasting spectrum to network operators* is carried out by the Malta Communications Authority.

2.2 Charging for the use of frequencies as regards broadcasters



The above chart shows the number of countries that charge for the use of frequencies, for each type of broadcaster. The costs may be charged via administrative charges or spectrum fees, which is addressed in more detail in the next subsections.

• Public TV and public radio broadcasters

Public TV and radio broadcasters pay for the use of broadcast spectrum in 15 out of 19 cases (*Bulgaria, Czech Republic, Estonia, Finland, Germany, Hungary, Iceland, Ireland, Lithuania, The Netherlands, Norway, Portugal, Sweden, Switzerland, United Kingdom*).

In *Austria, Cyprus, France and Malta* public broadcasters are not charged for the use of spectrum.

- **Commercial TV and commercial radio broadcasters**

With the exception of **Malta** which charges commercial but not public TV and radio broadcasters, the situation looks very similar to that of public broadcasters: 16 out of 19 administrations charge commercial TV and commercial radio broadcasters for the use of frequencies.

In *Austria, Cyprus, France and Malta* commercial broadcasters are not charged for the use of spectrum.

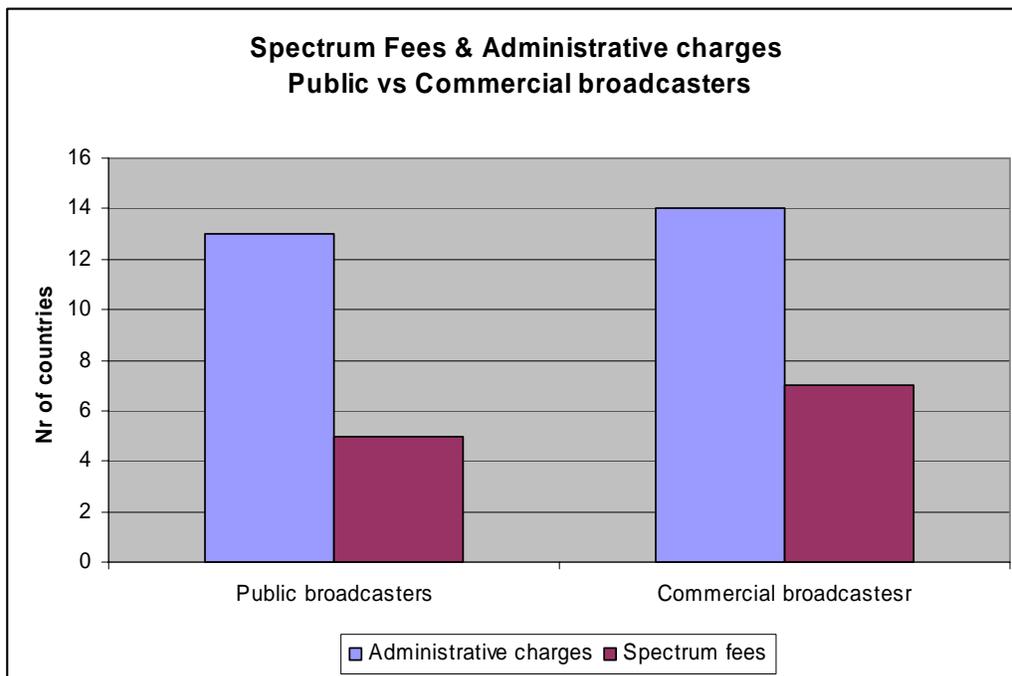
- **Non-profit TV and non-profit radio broadcasters**

Ten administrations charge non-profit TV and non-profit radio broadcasters (*Estonia, Finland, Germany, Iceland, Ireland, Lithuania, Norway, Sweden, Switzerland, United Kingdom*).

Non-profit TV and non-profit radio may not be a common concept in all CEPT administrations, which is why some administrations did not provide any information on this item.

Austria, Cyprus and France do not charge any broadcasters for the use of frequencies which is why those countries are not taken into account in the next sections 2.3 to 2.5.

2.3 General overview of administrative charges and spectrum fees



Administrative charges are used more widely to recover costs from both public and commercial broadcasters than spectrum fees: spectrum fees are used only in five countries for public broadcasters and in seven countries for commercial broadcasters, while 13 to 14 administrations apply administrative charges for public and commercial broadcasters, respectively. The above chart seems to indicate that public and commercial broadcasters may not be treated as differently as expected in a number of administrations.

2.4 Administrative charges

2.4.1 Current status

Administrative charges are understood in the sense of the Authorisation Directive, i.e. charges intended solely to cover the costs of administrating the authorisation regime.

Malta does not invoice any administrative charges to public broadcasters but does so to commercial broadcasters.

The remaining 14 administrations (*Bulgaria, Czech Republic, Estonia, Finland, Germany, Hungary, Iceland, Ireland, Lithuania, The Netherlands, Norway, Sweden, Switzerland, United Kingdom*) apply administrative charges both to public and commercial broadcasters.

All administrations apply administrative charges on an equal basis to public or commercial broadcasters.

In **Switzerland**, the overall cost for the management of broadcast spectrum is deducted from the TV licence fee collected from citizens for viewing TV or listening to radio. The situation could be interpreted as the cost of spectrum used by all broadcasters is financed by the TV/radio consumers.

Hungary applies special administrative charges at this moment, which does not cover the full costs of administrating the authorisation regime. Based on the cost-recovery method, the review of the current charging system is in progress taking into account the Authorisation Directive.

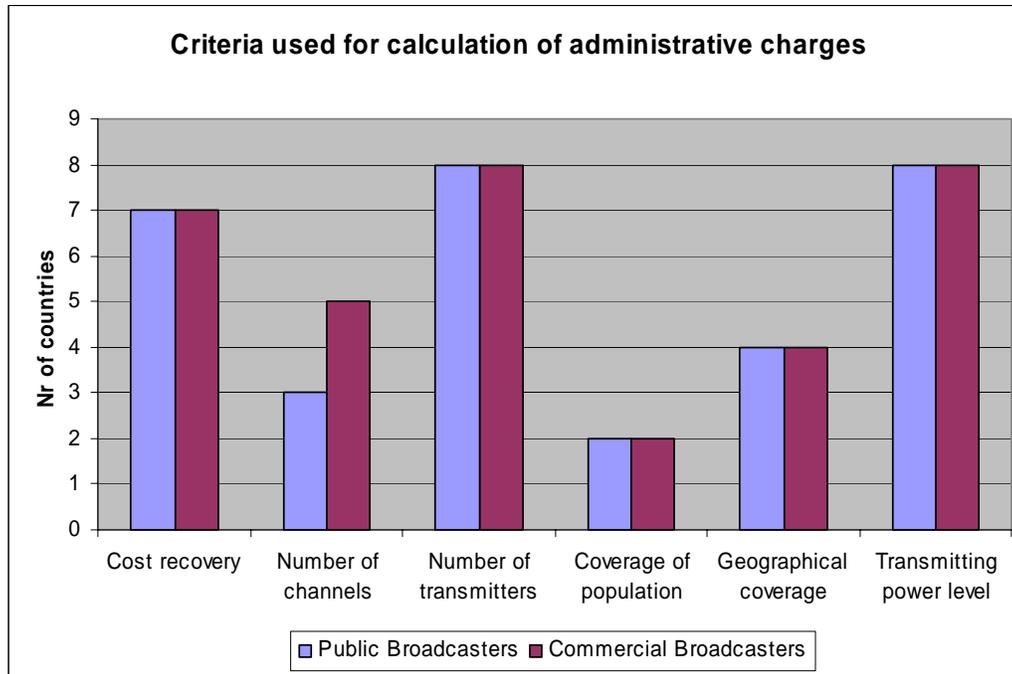
Furthermore although **Portugal** does not apply administrative charges at present, a review underway may lead to the introduction of administrative charges, taking account of the Authorisation Directive.

The **Netherlands** underlined that administrative charges apply to public and commercial broadcasters equally, to cover the costs of ensuring interference-free reception, interference-free use and monitoring costs.

In the **United Kingdom**, Ofcom administers licences both for use of spectrum and for broadcasting content. The award of content licences is partly contingent on the availability of spectrum. Ofcom continues to levy the administrative charges set some years ago by the previous spectrum authority, the Radiocommunications Agency, but there are plans for these charges to be updated as Broadcasting content licence fees have recently been. No charges are currently applied for spectrum used for digital services, but Ofcom proposes to revisit this policy, following switchover. This is a very complex area and readers are recommended to follow Ofcom's detailed consultations on these issues.

2.4.2 Criteria used for calculation of administrative charges

Administrative charges are used to cover the costs of the administration. The total costs for managing broadcast spectrum are divided among broadcasters according to different criteria, as shown in the following chart.



Cost-recovery was only mentioned by 7 respondents out of 15 that indicated applying administrative charges. However, as per definition cost recovery is eventually the goal of an administrative charge, this might explain why it was not mentioned separately more often. In addition one administration was planning to introduce administrative charges based on cost-recovery principles.

Cost-recovery is one method used by administrations to ensure that all costs incurred by spectrum users are charged for. Cost-recovery is often applied per product group as it is difficult to allocate costs to individual licensees.

Within cost-recovery principles, criteria such as the number of channels or geographical coverage may be used to divide the costs between licensees. As shown in the above chart, “number of transmitters” and “transmitting power level” have been mentioned most as criteria used for charging.

Overview of criteria used for charging per country

	Cost recovery	Number of channels	Number of transmitters	Coverage of population	Geographical coverage	Transmitting power level
Bulgaria			P & C	P & C		
Czech Republic						P & C
Estonia		P & C	P & C		P & C	P & C
Finland			P & C			
Germany					P & C	
Hungary	P & C					
Iceland			P & C		P & C	P & C
Ireland			P & C			
Lithuania	P & C	P & C	P & C			P & C
Malta		C				
Netherlands	P & C ¹					P & C
Norway	P & C	P & C	P & C		P & C	P & C
Sweden	P & C		P & C			P & C
Switzerland	P & C					
United Kingdom²	P & C	C		P & C		P & C

P= criteria used for charging Public Broadcasters

C= criteria used for charging Commercial Broadcasters

2.5 Spectrum fees

2.5.1 Current status

Spectrum fees are defined in the meaning of the Authorisation Directive, i.e. spectrum fees may be applied in addition to, or in replacement of, administrative charges, to ensure the optimal use of spectrum.

Spectrum fees are collected from public broadcasters in five of the responding administrations (*Bulgaria, Estonia, Germany, Hungary and Portugal*) and from commercial broadcasters in the same countries, as well as in Malta and in the Netherlands. In other words two administrations, **Malta** and the **Netherlands** request spectrum fees from commercial broadcasters only, while the remaining administrations do not request any spectrum fees at all, and only use administrative charges to recover the costs of spectrum management (*Czech Republic, Finland, Iceland, Ireland, Lithuania, Norway, Sweden, Switzerland, United Kingdom*).

For the five administrations that apply spectrum fees to both public and commercial broadcasters they do so on the same calculation principles (*Bulgaria, Estonia, Germany, Hungary and Portugal*).

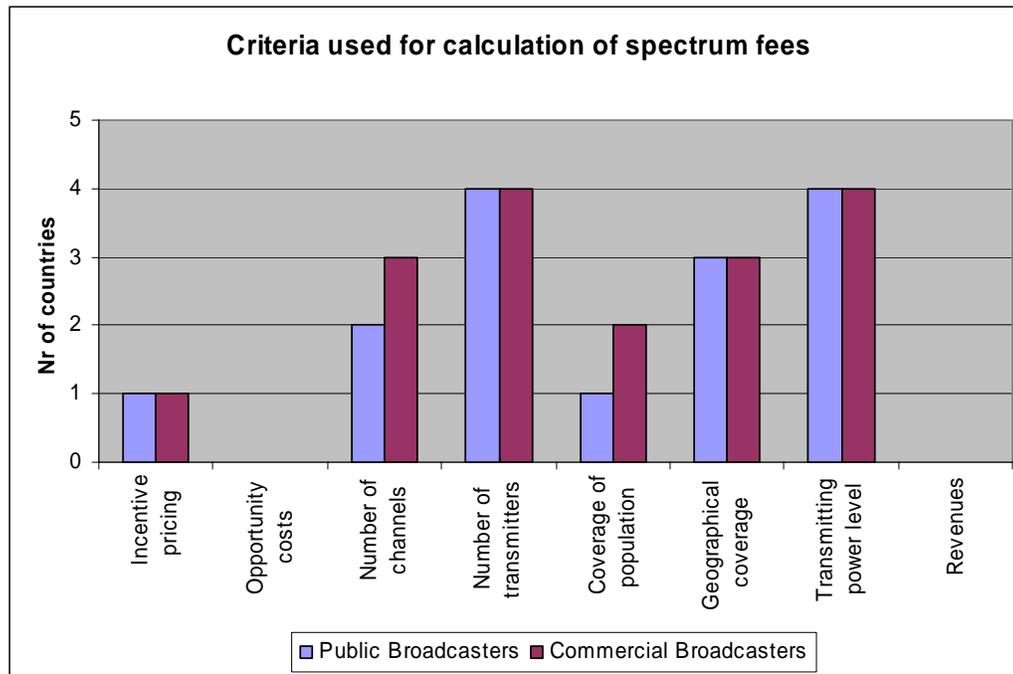
¹ The first principle is cost recovery of the total of the product group, in this case 'broadcasting'. Then within that product group 'transmitting power' is used to divide the costs between the different users within that product group in a fair and transparent way.

² For the UK, charges for (commercial only) restricted radio services only include no of channels, which band (more for VHF rather than MF) and power whilst national and regional licences include any number of transmitters by population bands.

For the **Netherlands**, as noted above, only commercial broadcasters are charged for spectrum fees, i.e. they pay an extra charge above the amount they pay for covering the costs. The reason for this extra spectrum fee is to ensure optimal use of the spectrum. It is a one-off fee they have to pay in the licensing process (beauty contest or auction) *above* the amount of money they bid in the auction or bid in the beauty contest. So, in summary commercial broadcasters pay the following charges:

- Yearly a charge to cover the costs (to the radiocommunications agency)
- Once-off fee to ensure optimal use of the spectrum as part of the licensing process (i.e. extra tax)
- Auction price or (voluntary) bid in the beauty contest

2.5.2 Criteria used for calculation of spectrum fees



Out of seven administrations that charge spectrum fee, four use the number of transmitters and transmit power level to calculate their fees. As for administrative charges, these two criteria are the most mentioned.

Overview of criteria used per country

Countries applying spectrum fees	Incentive pricing	Nr of channels	Nr of transmitters	Coverage of Population	Geographic coverage	Transmitting power level
Bulgaria	P & C		P & C	P & C		P & C
Estonia		P & C	P & C		P & C	P & C
Germany					P & C	
Hungary		P & C	P & C		P & C	P & C
Malta		C				
Netherlands				C ³		
Portugal			P & C			P & C

³ The official criterium is 'coverage of people', because that is a good estimate of the revenues the commercial broadcasters can earn. The higher the coverage (of population), the higher the (possible) advertisement revenues. So, the official criterium is coverage of population, but indirectly (possible) revenues are used to calculate the fee based on that coverage of people. (This applies to the once-off fee to 'ensure the optimal use of the spectrum')

2.6 End-user TV/Radio Licence fees

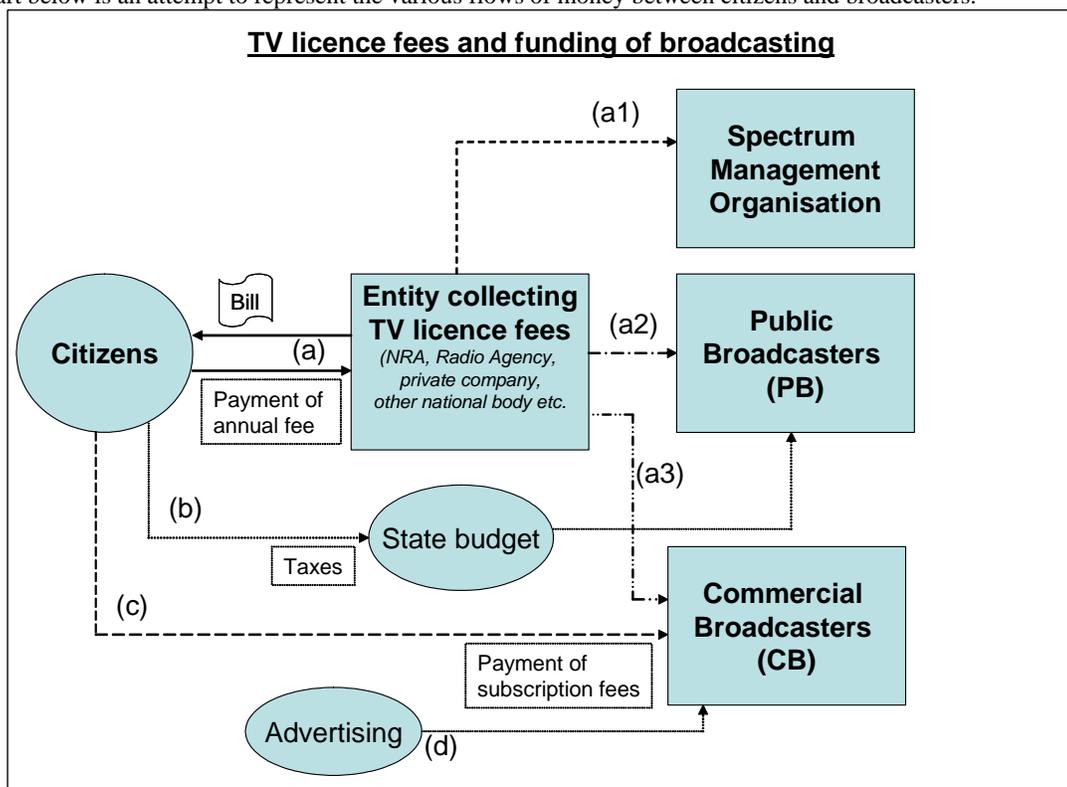
TV or radio licence fees are the fees paid annually by citizens owning a TV set or a radio. This can be considered as a mandatory fee to subsidize the public TV and Radio sector, and as a result, allowing citizens to view TV programmes or listen to the FM/AM radio.

2.6.1 Current status

Generally public broadcasters receive funding from the state budget in order to carry out their public service mission, i.e. providing programmes of quality to citizens. In a number of countries citizens also contribute to the funding of broadcasting via TV licence fees or other taxes.

Commercial broadcasters on the other hand are not subject to public service obligations and draw most of their revenues from advertising. They may also receive money from viewers who subscribe to their services.

The chart below is an attempt to represent the various flows of money between citizens and broadcasters.



Explanatory notes

- (a) Payment by citizens of annual TV licence fees to entity in charge of collecting those fees;
- (a1) Entity collecting TV licence fees transfers money to Spectrum Management organisation to cover spectrum management costs incurred by broadcasters;
- (a2) Entity collecting TV licence fees transfers money to Public Broadcasters (PB);
- (a3) Entity collecting TV licence fees transfers money to Commercial Broadcasters (CB)
- (b) Payment by citizens of general taxes to the State budget, part of which goes to PB;
- (c) Payment by citizens of subscription fees directly to CB for viewing Commercial TV.
- (d) Funding of Commercial Broadcasters by advertising revenues.

Out of 16 administrations recovering costs for the use of broadcast spectrum, **Switzerland** is the only one that responded using the revenues from TV licence fees and radio licence fees to cover the costs of spectrum management activities carried out for broadcasters, as illustrated by (a) and (a1) in the above chart. All other respondents which have TV or radio licence fees do not use those to fund spectrum management costs but pass the money to the public broadcasters (a2). In

Switzerland after spectrum management costs have been withdrawn, the income from TV licence fees is passed on to Public Broadcasters (a2) and to lesser extent to Commercial Broadcasters (a3).

In some administrations like **Hungary, Lithuania** or the **Netherlands**, there is no radio and/or TV licence fee. Public broadcaster are funded by the state budget and not directly by citizens (b). In other words, Public Broadcasters are in this case funded indirectly by the citizens in the form of taxes.

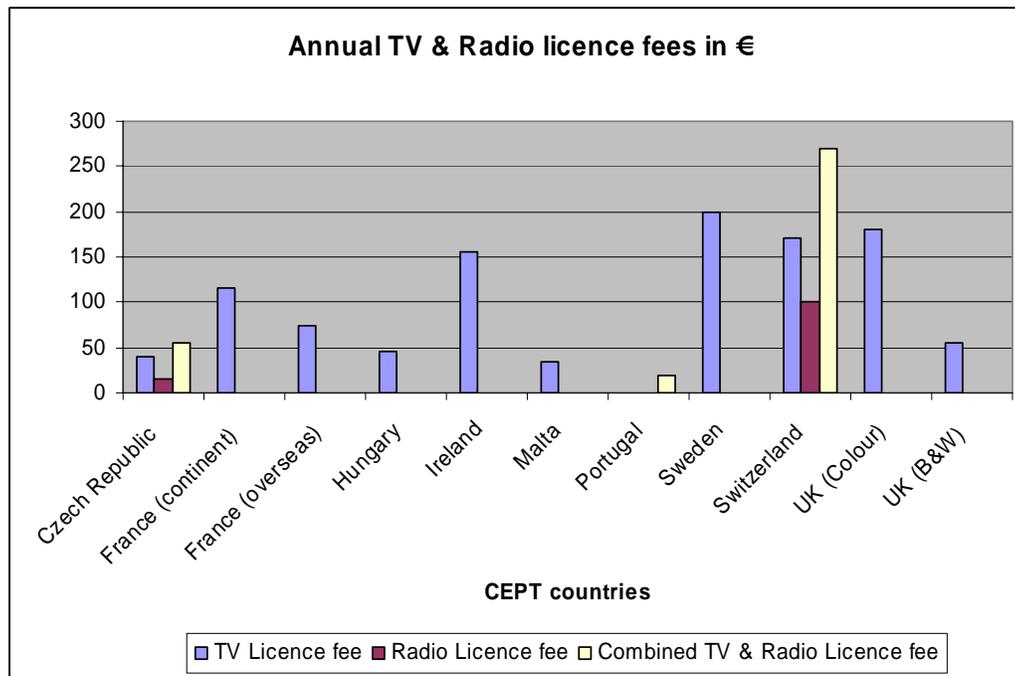
In **the Netherlands** the public broadcasters (TV and Radio) are funded by the general budget. In 2000 the individual contribution of citizens based on the possession of one or more TV (and or) radioset was rescinded. The income tax has been raised slightly to obtain the necessary money to finance the public broadcasters. The reason to abolish the individual contribution was that the operational costs to collect the money and to trace people who did not pay were too high (27,3 million Euro operational costs in 2000). In total 663 million Euros is collected to finance the public broadcasters (numbers of the year 2000), i.e. 86,4 Euro per household (6 million households). For clarity it is stated that these amounts of money are not raised to finance the Radiocommunications agency. This money goes to the public broadcast organisation for their radio and TV programmes production.

In **Hungary** a TV licence fee exists, however it is paid by the state budget at present, instead of citizens.

In **Lithuania** where no TV or radio licence fees exist, citizens pay a subscription fee directly to commercial broadcasters in the case of MMDS and Cable TV as illustrated in (c).

There is therefore no direct relationship in all but one of the administrations (Switzerland) which participated in the investigation between TV licence fees and coverage of costs of spectrum management.

2.6.2 Level of yearly TV and radio licence fees



	TV Licence fee	Radio Licence fee	Combined TV/Radio licence fee
Czech Republic	€40	€15	€55
France	€116 (Continent) €74 (Overseas)	free	n/a
Hungary	€45.6	n/a	
Ireland	€155	n/a	n/a
Malta	€34.4	n/a	n/a
Portugal	-	-	€19.56
Sweden	€200	free	n/a
Switzerland	€170	€100	€270
United Kingdom	€180 (colour) €55 (B&W)	n/a	n/a

Out of nine administrations that provided information on their TV or radio licence fee level, following can be noted:

- TV licence fees are applied more widely than radio licence fees which are charged only in two of the above administrations
- Where TV and licence fee apply, a combined fee is not cheaper than the sum of the two fees
- The TV licence fee amounts vary greatly, from €35 per year in Malta to €200 in Sweden.
- One administration does not make any distinction and applies a combined TV/Radio licence fee only

2.7 Foreseen changes to broadcast fees and charges

2.7.1 Plans in the near future

Only two administrations have concrete plans for changes in the near future.

- The **United Kingdom** reported planning the introduction of administrative charges and spectrum fees for both public and commercial broadcasters. Ofcom is currently investigating and considering how fees may better provide incentive for efficient usage of spectrum and updated administrative cost where this is not appropriate. A number of statements were made about timing (particularly with regards to also encouraging TV digital switchover) in the Government's response to the Independent Review of Radio Spectrum Management (by Professor Cave) in 2003.
- **Finland** is planning the introduction in the near future of spectrum fees for public and commercial broadcasters, to replace administrative charges based on the number of transmitters.

The **United Kingdom** noted that continuing growth in demand, proliferation of platforms, convergence between broadcasting and communications makes it increasingly necessary to treat all users equally when it comes to conditions of access to spectrum, including spectrum pricing, to ensure that competition is not distorted.

2.7.2 Other developments

Further administrations do not have concrete plans but anticipate possible changes, in particular with regard to digital TV:

- possible introduction of spectrum fees in connection with the award by competitive procedures of digital broadcast spectrum (*Cyprus*)
- after the end of the transition period (full analogue switch off) and stabilisation of the MUXes providers, in conjunction with requests from political and public life actors in the country as well as developments in the area of TV products (programmes) prices, changes to the current fees system may be required and the traditional distinction in Europe between public and commercial "RTV" may lose its relevance. (*Czech Republic*)

Estonia reported that a new Broadcasting Act is under development and that the need for the new regulation is caused by the forthcoming transition to the digital broadcasting.

Further administrations provided insight into their regime or further views on the issue of broadcasting fees and charges.

2.7.3 *No changes anticipated*

In **Austria**, where there are no actual plans to change the present fee policy, the existing regulations regarding fees for the use of broadcasting spectrum may be summarized as follows:

- 2/3 of the administrative costs for managing of the broadcast spectrum are collected from holders of licences for provision of broadcasting services (TV and radio) on the basis of a percentage of the annual turnover of broadcasting service providers.
- 1/3 of the administrative costs for managing of the broadcast spectrum are covered by the government (from the general budget).

France commented that broadcasters are subjected to significant obligations relating to production and broadcasting of European and national works. If spectrum fees applied to broadcasters, these obligations could not be kept at the same level.

For **Lithuania**, broadcasters which use digital broadcasting systems have 30% discount for spectrum fee compared with those which use analogue broadcasting frequencies. According to the Law on Electronic Communications the NRA is not allowed to charge more than it is necessary to cover administrative costs. Market or technology changes will not impact significantly spectrum management activities in the broadcast area, in terms of broadcasting fees, as the main goal is to cover administrative costs

Sweden is currently revising its charging model. However for legal reasons broadcast frequency band are not included in the scope of this work.

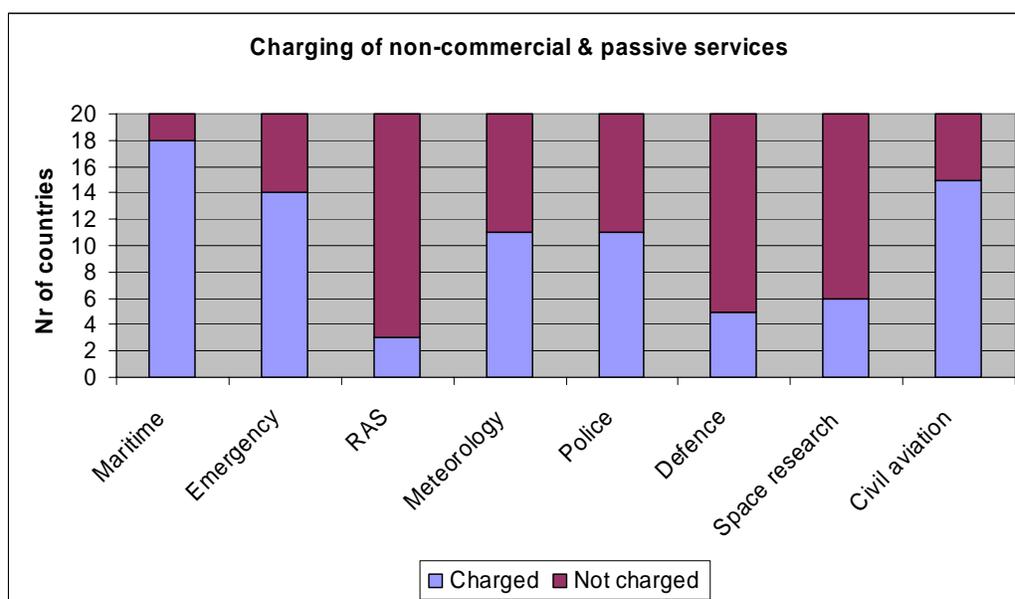
For the **Netherlands**, analogue broadcasting frequencies are now converted to digital broadcasting systems (DVT-T and T-DAB). The total of costs of this operation will be charged to the broadcasters (both public and commercial). That also goes, in future, for their yearly charge to ensure interference free reception and all the effort that is needed to ensure it (monitoring, enforcement, international work, etc)

The above comments indicate that immediate changes are not to be expected in most administrations. However, the advent of convergence and the completion of the transition to digital TV may trigger some modifications to the charging system of some administrations in the longer run.

3 NON-COMMERCIAL AND PASSIVE SERVICES

3.1 Overview per service

The following chart shows the number of countries in which non-commercial or passive services are charged for the use of spectrum:



Maritime, Emergency services, Meteorology, Police, Defence and Civil Aviation can be considered non-commercial services while passive services are services that only receive signals but do not transmit such as Space research and Radio Astronomy (RAS).

The above chart shows that RAS is only subject to fees and charges for the use of frequencies in 3 out of 20 CEPT administrations. Space research spectrum is charged for in 6 of the responding administrations. Passive services are therefore mostly not subject to fees and charges.

For non-commercial services, the situation looks as follows:

- **Defence** is least subject to charges with only 5 of the responding administrations charging for the use of Defence spectrum.
- **Meteorology** comes next with 11 administrations charging;
- **Police** frequencies are also charged for in 11 administrations out of 20 administrations.
- Frequencies for **Emergency services** are charged for in 14 administrations
- Frequencies for **Civil Aviation** and **Maritime** services are charged in respectively 15 and 18 administrations.

Not surprisingly, administrations that charge for RAS also charge for all or nearly all other services investigated. In particular in the **United Kingdom or Norway**, all mentioned services are subject to fees and/or charges. In **Switzerland** the only frequencies exempted from fees and charges are those used by Defence.

The following table provide further details on a country-by country basis:

	Maritime	Emergency	Radio Astronomy	Meteorology	Police	Defence	Space Research	Civil Aviation	Other
Austria	x	x		x	x		x	x	
Bulgaria	x	x						x	x ⁴
Czech Republic	x	x			x			x	
Cyprus	x								
Estonia	x	x			x		x	x	x ⁵
Finland	x	x		x	x	x		x	
France		x							
Germany	x			x			x	x	
Greece									x ⁶
Hungary	x							x	
Iceland	x	x		x	x			x	
Ireland	x	x		x	x			x	x ⁵
Lithuania	x			x				x	
Malta									
Netherlands	x	x			x	x		x	x ⁷
Norway	x	x	(x) ⁸	(x) ⁸	x	x	x	x	x ⁹
Portugal	x	x		x				x	
Sweden	x	x		x	x	x		x	
Switzerland	x	x	x	x	x		x	x	
United Kingdom	x	x	x	x	x	x	x	x	x ¹⁰

In a number of administrations, some or all of the above services are either subject to specific regulations which exempt them from fees and charges for the use of spectrum (e.g. *Hungary, Lithuania*), or are simply excluded from the scope of the telecommunications law (e.g. *Bulgaria*).

- **Passive services**

Some administrations indicated that Radio Astronomy Services (RAS) are not charged for on grounds that the charging system is based solely on transmitters (*Austria, Finland*) or because it is a receive only (*Germany*), which boils down to the same thing. However in case protection is required, charges may be applied as is the case in **Finland**. The **Netherlands** are also considering recovering costs of RAS as the Radio Agency carries out some work in order to keep the RAS frequencies clean. **Portugal** is also reviewing the situation both with regard to RAS and Space Research.

- **Defence**

In some countries, Defence may have their own rights over the spectrum and carry out assignments themselves or if co-ordination issues arise, in cooperation with the spectrum management organisation.

Decisions not to apply fees or charges to the use of Defence spectrum are often of political nature.

⁴ Non-commercial Mobile and Fixed Services

⁵ Amateur

⁶ Certain public sector networks, mostly from local authorities in mobile

⁷ Shore radar stations

⁸ Norway charges all spectrum use including by Radio Astronomy and Meteorology services, however there are no activities and therefore no licensees at this point in time.

⁹ Sport, Fishing/Hunting, Railway, Communes, Education, Offshore

¹⁰ Technology development

In **Estonia**, it should be noted that spectrum fees are applicable to the Defence Forces if they use frequency bands which are not designated for the Defence Forces in the Radio Frequency Allocation Plan.

• **Further specificities of non-commercial or passive services**

In some administrations some of the services investigated do not appear to be charged for simply because there are no companies active in those sectors (e.g. *Ireland, Norway*)

Two administrations mentioned applying lower fees for some services, **Sweden** charging a low fixed amount for the whole radio use of Police and Defence, and **Portugal** applying a discount of 30% on applicable fees for emergency services

One administration has implemented a general authorisation regime which exempts all above non-commercial and passive services from fees and charges. (*Czech Republic*)

In some cases the law of telecom does not apply to the area of Defence and Interior affairs.

3.2 Principles upon which non-commercial and passive services are charged

Out of 20 respondents, 18 administrations reported applying administrative charges, and 12 administrations reported having spectrum fees/incentive pricing (i.e. some administrations use both administrative charges and spectrum fees).

Out of these **Austria** specified that spectrum fees apply with the exception of emergency services and the police.

Reasons given for applying administrative charges and spectrum fees to non commercial and/or passive services include:

- Charges and fees apply to any radio transmitter and exception are based on political decisions (Austria)
- Frequencies used by maritime (Czech Republic, Cyprus) and aeronautical services (Cyprus) are subject to licence/general authorisation or registration which is why charges apply
- No distinction is made between type of users, so passive and non-commercial services are treated the same as commercial services (Finland, Ireland, Iceland, Norway)
- Non-commercial and passive services use frequencies and therefore should be charged for (Estonia)
- Administrative charges and spectrum fees as defined in the law are applied (Germany)
- Maritime and civil aviation are considered commercial services in national legislation and are therefore subject to fees and charges (Hungary)
- Administrative charges apply to maritime and meteorology services only to cover coordination and monitoring costs (Lithuania)
- All users pay for the regulator's effort to manage spectrum properly, including non-commercial services, military, emergency services, but only charges apply to cover the costs, no spectrum fees applies. Radio astronomy services are an exception based on the fact that they have no licence (Netherlands), although this might change in the future. Also a mandatory plan must be delivered every three years from now on, to prove the need of the frequencies used, or occupied by passive and non commercial users.
- Administrative charges are collected from licensees as a main source of income for the administration, cost recovery principles apply regardless of whether a service is commercial or not. (Switzerland, Sweden)
- Administrative charges and spectrum fees are not really distinguishable and all users are encouraged to use spectrum optimally (UK)

3.3 Criteria used to calculate administrative charges and spectrum charges

Most administrations apply administrative charges to the services considered based on cost recovery principles. In addition some administrations specified criteria used for defining those charges and allocate costs according to e.g. the number of transmitters, the number of channels or the type of frequency.

As to spectrum fees they are applied to non-commercial and passive services in 9 out of the 20 responding administrations.

Criteria used for allocating costs include:

- Bandwidth (7 respondents)
- Type of frequency (5)
- Output power (5)
- Number of transmitters/channels (4)
- Type of service (3)
- Coverage of population (2)
- Geographical coverage (2)

3.4 Principles used for calculation in comparison to commercial services

The principles for calculating fees and charges for non-commercial or passive services are the same as for fees and charges applied to commercial services in the following 14 administrations:

- Austria, Cyprus, Czech Republic, Estonia, Finland, Germany, Hungary, Ireland, Lithuania, Netherlands, Norway, Sweden, Switzerland and UK.

In some administrations differences exist as follows:

- In **Bulgaria**, commercial services are charged a percentage of their gross revenues which does not apply to passive or non-commercial services.
- In the **Czech Republic** even though the same principles apply there may be some differences in the coefficient used in the calculations
- In **Cyprus** the same principles apply except for the maritime services, they are subject to registration for which administrative charges apply
- In France, some of the services considered in this report are not subject to administrative charges as opposed to commercial services
- In **Greece**, some discount apply to non-commercial services

3.5 Foreseen changes with regard to non-commercial and passive services

Only a few administrations foresee some changes in this area, with the introduction of spectrum fees for **Iceland** and a reassessment of the charging policy due to the late implementation of the EU Directives in **Greece**.

Furthermore **Estonia** is currently preparing a public tender for nationwide Emergency Communications Network whereby it is not clear at this stage whether any discount or exemption will apply as opposed to commercial services.

In the **Netherlands** a mandatory frequency plan will be introduced to be delivered by all non-commercial and passive users 'to prove' their need of frequencies. Such a plan must be delivered every three years.

The **United Kingdom** continues to roll out incentive pricing wherever appropriate and updating cost pricing where not.

For other administrations no changes are anticipated.

4 CONCLUSIONS

On broadcasting

- Although the organisation of spectrum management for broadcast frequencies differs from country to country, the use of broadcast spectrum is funded directly via fees and/or charges or indirectly via the state budget or other means.
- In some administrations, there is a clear and direct relationship between licence holders (broadcasters) and the spectrum management organisation, where costs are invoiced to the users. When such a clear relationship does not exist, the funding of spectrum management for broadcasting is less easy to account for.
- If administrations do not charge for commercial broadcast spectrum, the use of these frequencies can then be considered as subsidised, which may have a political, cultural or historical background.
- The above situation can become cumbersome in the near future, where as a result of proliferation of platforms, of the convergence between broadcasters and communications, and of the continuing growth in spectrum demand, it is necessary to treat all users equally in terms of access to spectrum and spectrum pricing, as well as to ensure that competition is not distorted.
- In general, it seems desirable to treat all licensees equally to recover the costs incurred, which gives incentive for licence holders to use spectrum efficiently. Further it contributes to greater transparency and gives more accountability towards license holders.

- Contrary to general perceptions, broadcasters pay administrative charges in a majority of administrations which contributed to the investigation, and public and commercial broadcasters are charged under the same principles (i.e. there is no special treatment)
- Spectrum fees (i.e. incentive pricing) apply to a lesser extent than administrative charges, and where spectrum fees apply, they apply to a lesser extent to public broadcasters than to commercial ones.
- There are no plans in most administrations to introduce spectrum fees (i.e. incentive pricing) in the near future but there are indications that the transition to digital TV may trigger some changes at that level in the longer term.
- Last but not least, TV licence fees are generally not used to fund spectrum management costs; on the other hand revenues from TV Licence fees may indirectly contribute to covering those costs via the payment of fees and charges by broadcasters to the spectrum management organisation.

On non-commercial and passive services

In conclusion, the following can be noted:

- Passive services and Defence are seldom being charged for. Radio Astronomy Services in particular are least charged for on grounds that these services do not transmit. However some work may still be carried out by the spectrum management organisation e.g. in order to protect from interference which could justify charging.
- Passive services are not charged for as opposed to active services rather than as opposed to non-commercial services, as the key element for not charging is the absence of transmission, or “activity” rather than the type of service in itself.
- Space research is charged slightly more often than RAS
- Defence, police or emergency are not charged to the same extent in responding administrations, although all these types of services could be considered more or less as similar, as they all serve national safety or security purposes.
- From a spectrum point of view though, Defence manage their own spectrum while the police and emergency services do not which may account for the difference in treatment. Such difference could also be the result of traditions.
- Some administrations have introduced fees for Defence spectrum rather recently, to take account of opportunity costs and introduce an incentive for Defence to use spectrum more efficiently.
- The commercial vs. non-commercial distinction is not truly relevant in a number administrations which charge e.g. per transmitter irrespective of the type of use.
- However only two administrations treat all the services investigated equally which shows that in most administrations some passive and/or non-commercial services benefit from special rules as regards to fees and charges.