Report 1 – Country Comparative Report

Supply of services in monitoring of South East Europe - telecommunications services sector and related aspects

August 29, 2005

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I. INTRODUCTION

The significance of the telecommunications sector is being increasingly recognised among economists. It is not only an important service industry in its own right, but it is also a critical support element for other service industries and the enabling infrastructure for the information society.

This explains why telecommunications policies have occupied a central position in the economic development of nations. There is broad international agreement that these policies should be based on a fair competitive environment and that this can best be achieved by having a regulatory function that is separated from telecommunications operations. There is also a strong trend toward privatisation because state ownership is no longer deemed necessary for the achievement of national communications objectives and because such ownership may interfere with fair competition. In addition, privatisation represents a welcome source of revenue for the state.

Within the European Union, the regulatory environment for the telecommunications sector, or the electronic communications[1] sector as it is called now, has gone through a continuous development for more than fifteen years, starting with the publication of the famous "Green Paper" in 1987. This development is characterised by three major phases:

1. The first step was enabled by the Services Directive[2] from 1990, which opened the sector to limited competition in the early nineties. Essentially, this first framework opened data communications, value added services and closed user group services to competitive provision, while public telephony services were permitted to remain under special or exclusive rights. This framework was silent on the subject of infrastructure, but did not specifically provide for competitive networks.

2. The second step is normally referred to as the "1998 acquis" because the provisions became effective at the national level in that year[3]. This step is also often referred to as "full liberalisation" because it totally eliminated any special or exclusive right. The framework was characterised by:

    - its authorisation regime, which permitted the use of individual authorisations for public telephony services as well as all establishment of infrastructure, whether terrestrial or radio based;

    - asymmetric regulations with special conditions for operators with significant market power (SMP). These were based on a rather simplistic criterion of having 25% market share or more in a few broadly defined areas of activity, such as

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[1] The sector is now referred to as the electronic communications sector because, due to technology convergence, the current framework also applies to broadcasting networks. In this report, the term electronic communications is used when describing aspects that relate specifically to the new regulatory framework. Otherwise, the term telecommunications is used to describe general aspects that do not relate to a specific regulatory framework.

[2] EUROPEAN COMMISSION DIRECTIVE (90/388/EEC) of June 28, 1990 on competition in the markets for telecommunications services

[3] Specifically, all enabling measures should have been adopted by December 31, 1997.

public fixed telephony networks and services. If deemed to have SMP, a number of pre-defined requirements would automatically apply.

3. The third step will be referred to in this report as the "2003 acquis"[4]. The main changes from the "1998 acquis" are:

   - extensive use of general authorisations whereby telecommunications activities can be started without prior permission from the regulator. Only activities that require access to limited resources may be subject to individual authorisations;
   - the designation of SMP can only be decided for fairly narrowly defined markets after rigorous analysis based on competition law principles. Where an operator is found to have SMP, the regulator has a choice of remedies in the form of special obligations to address specific exposures to fair competition in the market concerned;
   - the inclusion of broadcasting networks in the same framework in recognition of technological convergence between all forms of electronic communications.

This development, which has taken place over fifteen years, has been compressed into a much shorter period for the ten new Member States. They negotiated their membership based on the 1998 acquis. However, while these negotiations took place, the EU was already in the process of adopting the 2003 acquis and the new Member States had to transpose these directives before they entered the EU on May 1, 2004.

The EU is now entering into the fourth step with preparations for the next regulatory review in 2006. If appropriate, this review may lead to further adjustments in the regulatory framework and possibly a new acquis around 2010.

These regulatory developments are largely supported by in-depth monitoring of the developments in the national markets, which are subject to continuous scrutiny in the form of annual implementation reports. The last (10^{th}) report was released in December 2004.

The reports examine major developments in the market, analyse the implementation of the key regulatory principles covered by the regulatory framework and draw conclusions intended to contribute to ensuring compliance with the European regulatory framework as well as providing a knowledge base for further regulatory developments

South East Europe is a region that includes countries that are (potential) candidates for membership in the European Union, some in the shorter term and other countries in a more long-term perspective. As part of the preparation for EU enlargement, monitoring of their telecommunication markets, as significant drivers of economic growth, is being performed. The resulting report, similar to those for the EU Member States, will be prepared every 9 months in the period from 2005 to 2007. The project, called "Monitoring of South East Europe -

[4] This framework is also often referred to as the "2002 acquis". The directives that define this regime were adopted in 2002 and became effective at the national level in 2003. Because the "1998 acquis" is a widely accepted term and it refers to the year when the regulations became effective at the national level, it is more logical to use the term "2003 acquis".

telecommunications services sector and related aspects", is funded by the EC Directorate-General Information Society and Media and performed by Cullen International.

The reports cover the following countries:

- Albania;
- Bosnia and Herzegovina. This country includes two administrative divisions, the Federation of Bosnia and Herzegovina and Republika Srpska in addition to the district of Brčko. The country is included in the report as one entity because there is common legislation and a common regulatory authority;
- Bulgaria;
- Croatia;
- Romania;
- Serbia and Montenegro. This country is a federation of two republics: Montenegro and Serbia. In addition, Serbia and Montenegro includes the territory of Kosovo, which has a separate status. All these three entities have different legislation and separate regulatory authorities and are therefore dealt with separately in this report.
    - Montenegro
    - Serbia
        - *Kosovo*
- The former Yugoslav Republic of Macedonia.
- Turkey.

All these countries and geographic units are in the process of adopting and/or implementing the EU's regulatory framework for electronic communications. Their position on the regulatory development ladder varies from the advanced status of Romania, which has adopted the 2003 acquis and is well into its implementation, to countries that are still grappling with the tasks of establishing the initial conditions for a competitive telecommunications sector.

This is the first of a series of four reports that will monitor their progress in regulatory developments as well as the effects to be observed in the markets.

II. OBJECTIVES AND METHODOLOGY

The overall objective of the project is to assist the EC and the representatives of the countries in monitoring the progress made by each country towards compliance with the EU standards for telecommunication services.

The report presents factual information. It is not the intention to pass judgment on the relative merits of the policies pursued or to evaluate progress made toward policy objectives. Each reader may make his or her own assessment based on the many indicators provided in the report.

At the request of the European Commission, the scope and methodology for this report closely follows the previous reports on "Monitoring of EU Candidate Countries – Telecommunication Services Sector", performed by IBM Business Consulting Services. These reports have been used as models for this report with appropriate changes.

In the data collection process, we have relied heavily on the support of the local national regulatory authorities and/or Ministry representatives. The information collection process has consisted of four information packages, each with its own reference date:

1. Organisational information. This package included information of an institutional and organisational nature. The reference date was January 1, 2005.

2. Price information. This package included a range of wholesale and retail prices. The reference date was April 1, 2005.

3. Regulatory information. This package included indicators of a regulatory nature, such as competitive safeguards, numbers of licences issued, etc. The reference date was April 1, 2005.

4. Market information. This package included various forms of statistics from the telecommunications market. The reference date was January 1, 2005.

Cullen International has contracts with independent telecommunications experts in each country. They have provided additional advice and guidance on the national level. The majority of information presented in this report has been provided by the national regulatory authorities and/or the ministries in the geographic units, but in some cases, the information has been supplemented and/or corrected with other, and sometimes more recent, sources.

III. GENERAL OVERVIEW

The report contains many indicators reflecting the state of development of the national telecommunications markets.

The information collected suggests that there are great variances between the individual countries in terms of relative size, per capita, penetration, pricing, regulatory regime and data availability.

A. Introduction and general background information

1. Countries and geographic units

This report covers ten geographic units with different status. Most of them are internationally recognised as countries, but some of them are federal states within a country, and, in the case of Kosovo, a territory under international administration.

The choice of geographic units has been made according to their situation for telecommunications regulations. For example, the country of Serbia and Montenegro is represented by three geographic units, Montenegro, Serbia and Kosovo, because each unit has different legislation, ministry and regulator for electronic communications. On the other hand, the country of Bosnia and Herzegovina is presented as a single geographic unit because its constituent parts have common legislation and a common regulator. Nevertheless, Bosnia and Herzegovina has three incumbent operators.

Table 1 provides the basic information on the geographic units, with some additional information when necessary to explain their status. It also introduces the short two or three letter country codes that will be used as identification in graphs elsewhere in the report. The two letter codes are the international ISO codes where they exist. However, there are no ISO codes for regional units within a country. Instead, special three letter codes have been created for this purpose. In addition, each incumbent operator in Bosnia & Herzegovina has been allocated its own code, which is used in certain graphs.

The countries and geographic units are presented in the alphabetical order by the name of the country. Member States within a country, such as Serbia and Montenegro, are presented in alphabetical order under the name of the country. Therefore, Montenegro is located before Serbia. Special territories within a country are presented after the Member States. Consequently, Kosovo is presented after Serbia within the country of Serbia and Montenegro.

This sequence of countries and geographic units are maintained throughout this report, even if the full context of the alphabetical order is not always displayed.

Country	ISO country code / special code	Comments
Albania	AL	
Bosnia and Herzegovina	BA	Bosnia and Herzegovina includes two administrative divisions: 1. The Federation of Bosnia and Herzegovina 2. Republika Srpska In addition, there is a district, Brčko, which is under international administration There are three incumbent operators in the different regions. 1. *BH Telecom d.d Sarajevo (referred to as BA-bh in graphs). The operator is active in the Federation of Bosnia and Herzegovina. It is the only operator in some cantons and shares the market with HT Mostar in other cantons.* 2. *Telekom Srpske a.d. Banja Luka (referred to as BA-ts in graphs) is the incumbent operator in Republika Srpska.* 3. *Hrvatske Telekomunikacije d.o.o. Mostar (referred to as BA-ht in graphs) is active in the Federation of Bosnia and Herzegovina. It is the only operator in some cantons and shares the market with BH Telecom in other cantons.* Fixed telephony services in the District of Brčko (not identical to the pre-war Brčko Municipality) are provided by Telekom Srpska. Mobile services are provided by all three mobile operators.
Bulgaria	BG	
Croatia	HR	
Romania	RO	
Serbia and Montenegro	CS	Serbia and Montenegro is a federation of two republics: Serbia and Montenegro
Montenegro	Mon	Montenegro is a Member State within the federation of Serbia and Montenegro
Serbia	Ser	Serbia is a Member State within the federation of Serbia and Montenegro.
• Kosovo	Kos	Kosovo is a territory under interim international administration and has its own telecommunications ministry and regulations. Under UN resolution UNSCR 1244, the actual administration of Kosovo is carried out by the UN without the involvement of the government of Serbia. For that reason, it is reported separately from Serbia in this report.
The former Yugoslav Republic of Macedonia	MK	The constitutional name of the country is "Republic of Macedonia". However, the country is not recognised under this name by parts of the international community. The EU refers to the country by the provisional reference under which it was admitted to the UN: "the former Yugoslav Republic of Macedonia". The country code "MK" is used by ISO and some other organisations, but this does not prejudge the outcome of the negotiations on the name of the country that are taking place at the United Nations.
Turkey	TR	

Table 1 - List of participating countries and their country codes

Note:
The two-letter country codes are the international two-letter ISO codes. They are also used for Internet

domain names as provided by IANA (Internet Assigned Numbers Authority). These codes provide a well-defined and widely understood two-letter code for the different countries. The Member States and territories within Serbia and Montenegro do not have separate two-letter codes within this structure. For the purposes of this study, we have assigned three-letter codes with one capital letter and two small letters. This should provide an easy means of identification and at the same time avoid confusion with the widely used two-letter codes.

2. Currencies, exchange rates and value added tax

All prices and values that are shown in this report and relating to 2004 have been converted to euro using the average exchange rate for 2004 as presented in **Table 2** below. The average exchange rate for 2003 is used in some tables that present information relating to 2003. Value added tax has been included in all consumer related prices, such as residential tariffs. Value added tax has not been included in business tariffs.

Country	Currency	Average exchange rate for year 2003	Average exchange rate for year 2004	Exchange rate as of 31.12.2004	Value added tax
Albania	Albanian lek	137.50	127.67	125.72	20%
Bosnia & Herzegovina	Bosnian mark	1.96	1.96	1.96	10%
Bulgaria	Bulgarian lev	1.96	1.96	1.96	20%
Croatia	Croatian kuna	7.56	7.67	7.65	22%
Romania	Romanian lei	37,555.00	40,532.11	39,663.00	19%
Serbia & Montenegro - *Montenegro*	euro	1.00	1.00	1.00	17%
Serbia & Montenegro - *Serbia*	Serbian dinar	68.31	72.58	-	18%
Serbia & Montenegro - · *Kosovo*	euro	1.00	1.00	1.00	15%
The former Yugoslav Republic of Macedonia	Macedonian denar	61.26	61.34	61.29	18%
Turkey	New Turkish lira	1.68	1.77	1.83	18%

Table 2 - Basic currency and exchange rate information

Notes:
The information has been provided by the NRAs. Specifically, the sources are:
Albania: 2003: Ministry of Finance of Albania (Fiscal Statistics of Government) 2004:Bank of Albania. Ref. date March 29, 2005
Bulgaria: Fixed exchange rate BGN/€ on April 1, 2005, Source: Bulgarian National Bank.
Croatia: Middle rate of Croatian National Bank
Montenegro uses euro as its official currency.
Serbia: The exchange rate for 2003 is the rate on December 31, 2003.
Kosovo uses euro as its official currency.
The former Yugoslav Republic of Macedonia: State Statistical Office, estimate
Turkey: The population information taken from the Government Statistical Institute and household number shows the 2001 data, 2004 data is not available.

It was also the intention for this report to analyse the national currencies in terms of their purchasing power parities (PPPs). Eurostat, which is the main source of PPP indicators for Europe publish data for many European countries including Bulgaria, Croatia, Romania and Turkey. Eurostat is also engaged in a West Balkan PPP project that will eventually make indicators available for the remaining countries and geographic units except Kosovo.

Unfortunately, these indicators were not yet published at the time when this report was finalised. Consequently, all values in this report have to be based on the nominal value of the national currency using the average exchange rate in 2004 as explained above.

3. Population and households

This table provides basic information on population and households. It is based on data received from the national authorities and should therefore be the most reliable information available for the status on January 1, 2005. However, a word of warning may be appropriate. For many countries, the information is based on a census that may be some years old. This is particularly true for the number of households. In addition, population figures may be based on an old census with growth projections to provide an estimate for January 1, 2005.

For some of the Balkan territories there is a significant problem with refugees that create uncertainty about the population count.

Country	Inhabitants year end 2003	Inhabitants year end 2004	Percentage of EU population as of year end 2004	Households year end 2004
Albania	3,111,163	3,127,263	0.69	744,038
Bosnia & Herzegovina	3,832,301	3,871,000	0.85	1,200,790
Bulgaria	7,081,273	7,761,049	1.70	2,921,887
Croatia	4,441,500	4,440,500	0.97	1,477,377
Romania	21,734,000	21,673,000	4.75	7,320,202
Serbia & Montenegro - *Montenegro*	616,258	620,145	0.14	191,047
Serbia & Montenegro - *Serbia*	7,498,001	7,498,001	1.64	2,521,190
Serbia & Montenegro - · *Kosovo*	1,932,000	1,965,000	0.43	311,100
The former Yugoslav Republic of Macedonia	2,029,892	2,035,000	0.45	567,785
Turkey	70,712,000	71,789,000	15.73	16,744,492
EU25	456,448,500	458,490,171		

Table 3 – Population

Notes:
The national information has been provided by the NRAs. Specifically, the sources are:
Albania: National Statistical Office of Albania;
Bosnia and Herzegovina: B&H Statistics Agency; There has not been a census since 1991 and the population estimates vary from 3.8 to 4.1 million depending on the source.
Bulgaria: National Statistical Institute
Romania: National Institute of Statistics for population on July 1 of the respective year.
Serbia: Serbia Statistical Office
Montenegro: MonStat
The former Yugoslav Republic of Macedonia: State Statistical Office
Turkey: Population: Eurostat. Households: Turkey's Statistical Yearbook, 2004, table 24.1, published by the State Institute of Statistics.
The information is based on census data or estimates as follows:

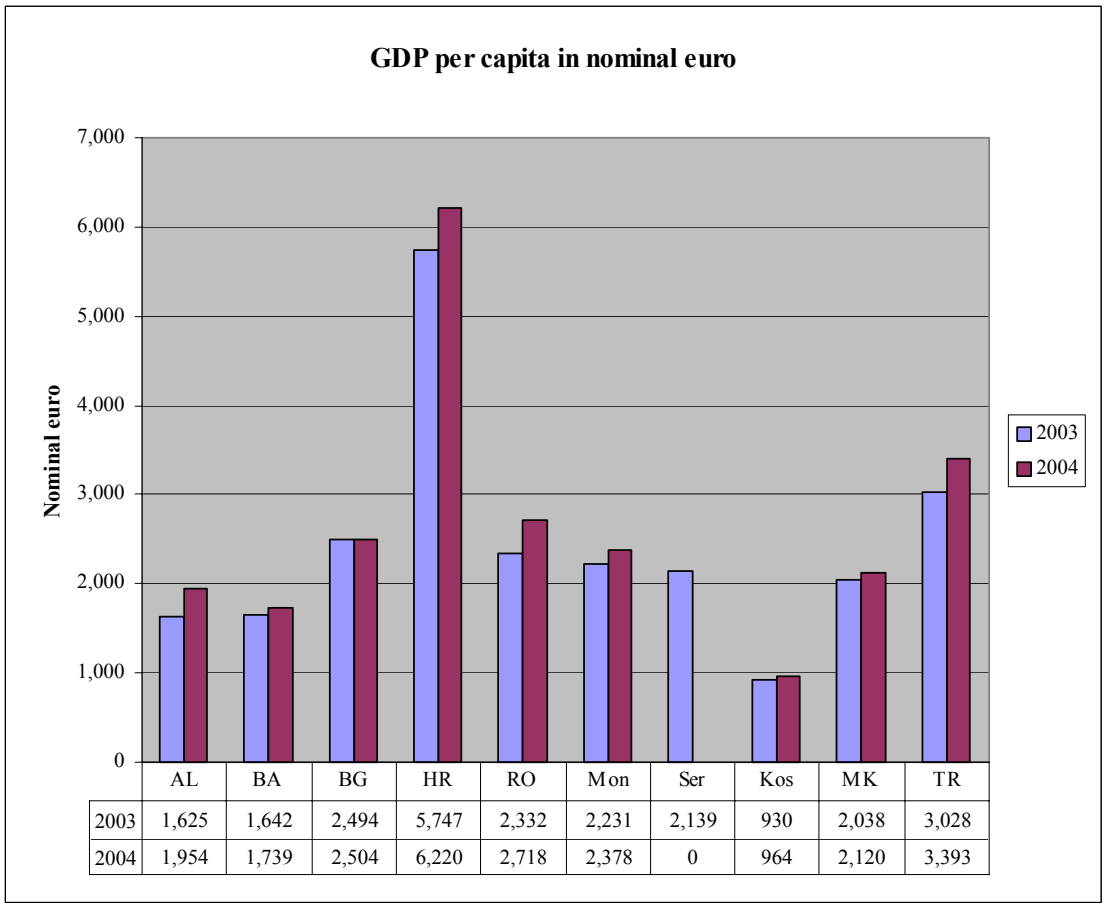
Bulgaria: Number of households based on the most recent data available from 2001;
Croatia: The latest census was made in 2001. After that date, estimates have been developed of net natural growth and of immigration and emigration. Accordingly, the Croatian Statistics Office estimates that the population in the middle of 2003 was 4.441.800. The information in the table represents extrapolations to year-end in 2003 and 2004. The information on households is from 2001;
Montenegro: Census of population, households and dwellings in the Republic of Montenegro in 2003. The figure for year end 2004 is based on estimated growth;
Serbia: The latest official population estimate was carried out in 2002. This estimate is used for 2003 and 2004.
The former Yugoslav Republic of Macedonia: Estimation of inhabitants on Dec. 2004
Estimation of households according to the same ratio as 2002
Romania: Census of population and dwellings from March, 2002.
Turkey: Source: State Planning Organization, Economic and Social Indicators 1950-2003, Table 8.1. Households is a projection based on the census of 2000.
The EU population has been taken from Eurostat's population projection database

4. National economy

The countries and geographic units in this report belong to the least developed regions in Europe. However, they are demonstrating strong economic growth with an average growth rate of 13% from 2003 to 2004, measured in nominal euros.

In terms of GDP per capita, Croatia is in a category by itself with an average that is almost twice that of Turkey, which is in second place on this list. Croatia's GDP per capita is above €6,000, while the other countries range between €900 and €3,400.

On the other hand, in absolute terms, the Turkish economy outweighs all the others by far. The Turkish GDP, with 244 billion euro is more than twice all the other countries and geographic units combined. The information is expressed in nominal euro.



	AL	BA	BG	HR	RO	Mon	Ser	Kos	MK	TR
2003	1,625	1,642	2,494	5,747	2,332	2,231	2,139	930	2,038	3,028
2004	1,954	1,739	2,504	6,220	2,718	2,378	0	964	2,120	3,393

Figure 1 – GDP per capita in nominal euro for 2003 and 2004

Note:
Kosovo. Estimates of GDP for Kosovo vary widely depending on the source. The values presented here have been provided by the Ministry of Economy and Finance and were developed for an IMF mission in Kosovo in May 2005. The 2003 value represents an estimate, while the 2004 value is a projection.

Country	GDP Nominal euro (billion)		Per capita nominal euro	
	GDP 2003	GDP 2004	GDP 2003	GDP 2004
Albania	5.06	6.11	1,625	1,954
Bosnia & Herzegovina	6.36	6.73	1,642	1,739
Bulgaria	17.66	19.43	2,494	2,504
Croatia	25.53	27.63	5,747	6,220
Romania	50.68	58.91	2,332	2,718
Serbia & Montenegro - *Montenegro*	1.38	1.48	2,231	2,378
Serbia & Montenegro - *Serbia*	16.04	na	2,139	not available
Serbia & Montenegro - · *Kosovo*	1.79	1.85	930	964
The former Yugoslav Republic of Macedonia	4.14	4.31	2,038	2,120
Turkey	214.14	243.60	3,028	3,393
EU25	9,811.81	10,266.47	21,496	22,392

Table 4 - GDP in the territories and EU expressed in billion nominal euro

Note:
The information has been provided by the NRAs in most cases. Specifically, the sources are:
Albania: Ministry of Finance of Albania (Fiscal Statistics of Government);
Bosnia and Herzegovina: : "*Staff Report", International Monetary Fund, 2005;* Bulgaria: National Statistical Institute;
Croatia: Croatian National Bank;
Romania: National Institute of Statistics;
Serbia: Statistics Institution of the Republic of Serbia;
Kosovo: Banking and payments authority of Kosovo Annual report 2004. The annual report for 2003 has a significantly lower estimate of GDP for 2003 than that provided in the report for 2004. The latest information is used in this report.;
The former Yugoslav Republic of Macedonia: Preliminary information on 2003 GDP from the State statistical office;
Turkey: State Statistics Institute (GDP measured for production).
The EU25 GDP value has been taken from Eurostat's database for national accounts represented in current prices.

5. Telecommunications market

The table below shows the estimated size of the telecommunications markets in 2004. Information on the Internet market and the market for data and leased lines is not available for all geographic units. The size of the market is therefore somewhat underestimated for these units. Revenues from Cable TV operations are not included in the report.

Turkey has by far the largest telecommunications market and represents 2/3 of the total market being presented in this report. Turkey's market, which is valued at €8.5 billion, represents more than 3% of the total EU market.

At the other end of the scale is Kosovo, with a market of about €160 million.

Markets may be somewhat underestimated in Albania and Montenegro because information on data transmission and leased lines is not available. Similarly, information on the size of the Internet market is not available for the former Yugoslav Republic of Macedonia.

Country	Market estimate 2004 Million euro	GDP Billion euro	Percent of GDP
Albania	286	6.11	4.68
Bosnia & Herzegovina	566	6.73	8.41
Bulgaria	1,217	19.43	6.26
Croatia	1,417	27.63	5.13
Romania	1,790	58.91	3.04
Serbia & Montenegro - *Montenegro*	170	1.48	11.54
Serbia & Montenegro - *Serbia*	634	16.04	3.95
Serbia & Montenegro - · *Kosovo*	162	1.85	8.78
The former Yugoslav Republic of Macedonia	358	4.31	8.31
Turkey	8,570	243.60	3.52
EU25	277,000	10,266	2.70

Table 5 - Market value overview

Notes:
Albania: The information is based on the present method of collecting statistical data from the Public Telecommunications Operators. The revenue from fixed Internet is included in the segment for fixed telephony for the incumbent operator. Other private ISPs use fixed lines for Internet services, but their revenues are not reported.
Bosnia and Herzegovina: Information provided by the incumbent operators.
Bulgaria: The revenue from fixed Internet is included in the segment for fixed telephony. Revenue from cable TV networks, satellite services and some others are not shown. Their value amounts to around 70 million euro. Fixed Internet includes revenues from Internet access provided by the incumbent, including dial-up and "always on" access and also access via other telecommunications operators through the incumbent's network (numbers of the type 13AX, 13AXY, 13 AXYZ).
Croatia: The information is based on reports from the operators. The figure for fixed telephony does not include net revenue from carrier services and miscellaneous net revenues.
Romania: The information is based on reports by the operators. Revenues from data services are included in the segment for fixed Internet services. Revenues from cable TV networks, and some others are not shown, their value amounting to around 326 million euro.
Montenegro: Source: Annual report of the Agency for telecommunication of the Republic of Montenegro for 2004.
Serbia: Source: Balance sheets of operators. Revenue includes all types of revenues including sales of handsets, roaming and interconnection. Internet connectivity is reported under fixed Internet.
Kosovo: The Internet revenue is based on an estimate prepared on request by Deloitte & Touche at the request of Kujtesa, the largest national ISP. Kujtesa has also provided the estimate of the market for leased lines and switched data services.
Turkey: Dial-up Internet revenues have been reported as Fixed Internet revenue.
The EU25 estimate of market value is taken from the 10th Implementation Report of the European Commission. This market estimate is based on a different definition and includes revenue from Cable TV operators.

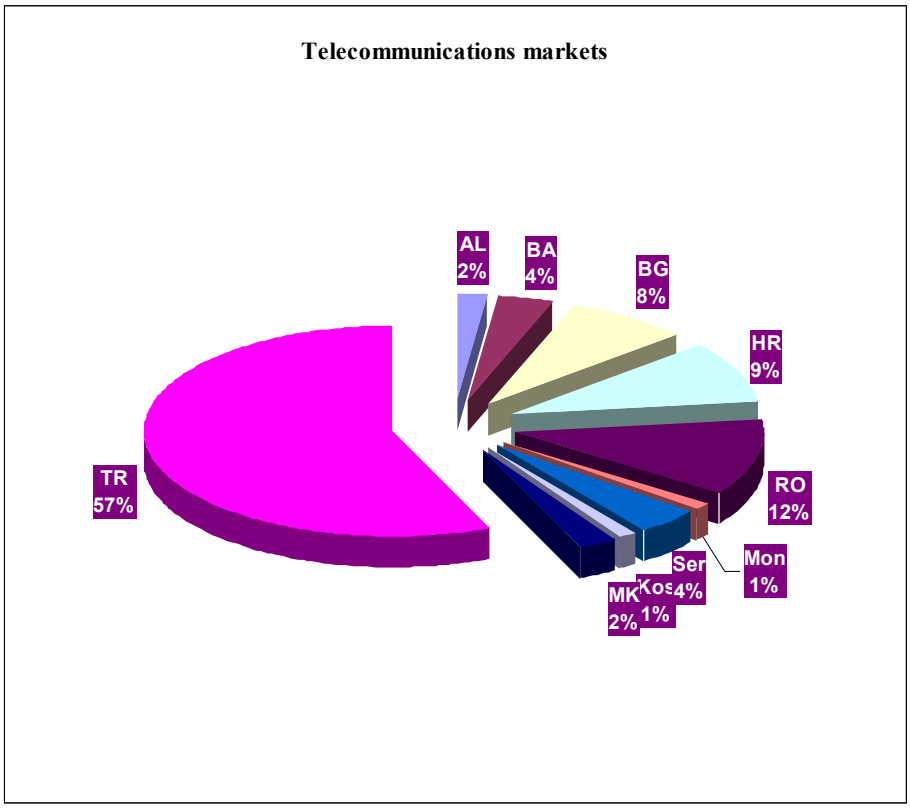


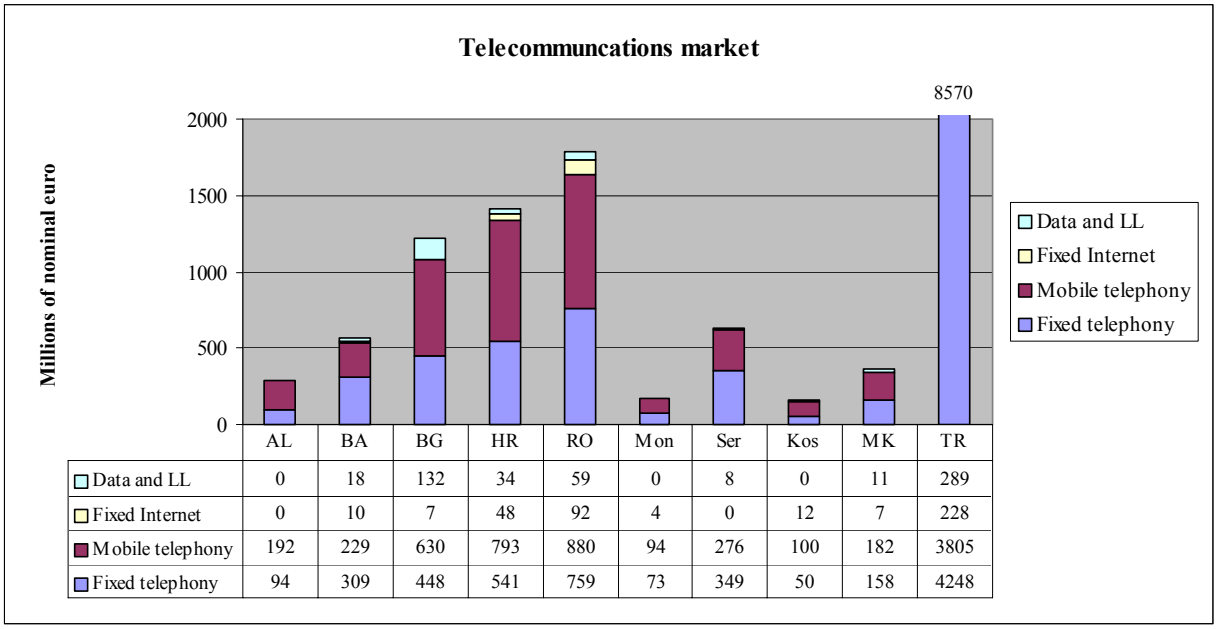
Figure 2 – Relative size of the telecommunications markets

In Figure 3 below, the total telecommunications market is broken down into four categories:

- fixed telephony services;
- mobile services;
- fixed Internet services;
- data and leased lines.

These categories do not fully match the categories now being used in the European Commission's implementation reports. In particular, they do not account for revenues from cable TV operators.

The information is derived from the existing national procedures for collecting information from the operators. These procedures have not been co-ordinated among all the countries and geographic units in order to produce comparable information according to a common specification. The information presented in this report should therefore be seen as indicative rather than providing the definitive picture.



	AL	BA	BG	HR	RO	Mon	Ser	Kos	MK	TR
Data and LL	0	18	132	34	59	0	8	0	11	289
Fixed Internet	0	10	7	48	92	4	0	12	7	228
Mobile telephony	192	229	630	793	880	94	276	100	182	3805
Fixed telephony	94	309	448	541	759	73	349	50	158	4248

Figure 3 - Market value breakdown

NB. Turkey's telecommunications market is about five times larger than that of Romania, which has the second largest market. In the graph, the total value for Turkey is outside the scale.

Note:
See notes under Table 5.

It is also useful to see the size of the telecommunications market in relation to the population. Figure 4 below shows that Croatia and Montenegro have the highest spending on telecommunications with around €300 per capita per year, clearly driven by their mobile telephony markets. Only in Serbia, which has an annual spending on telecommunications slightly around €80 euro is the fixed network market significantly larger than the market for mobile networks.

The corresponding spending per capita in the EU25 countries is €574 when cable TV revenues are excluded[5]. When cable TV revenues are included, the spending per capita in the EU25 countries is €604.

[5] Based upon market revenues from the 10th Implementation Report by the European Commission, December 2004.

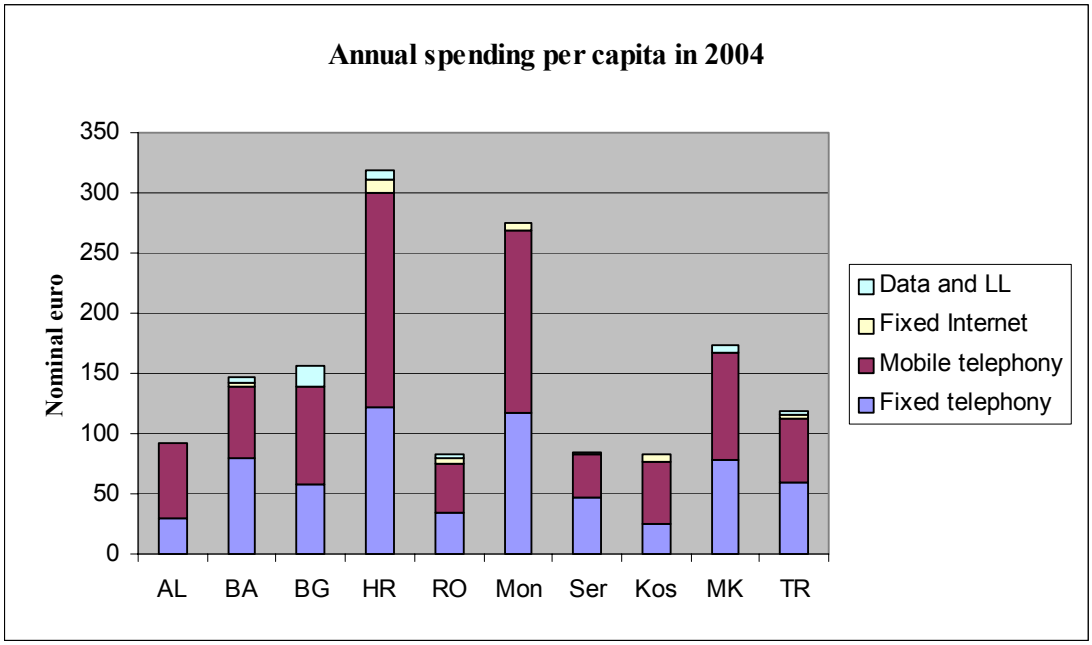


Figure 4 – Telecommunications markets per capita in nominal euro

Note:
The average spending per capita in the EU25 countries is €604 based on the information presented above.

Furthermore, it is meaningful to examine the total telecommunications markets measured in relation to the national GDP. This indicator is presented in the figure below.

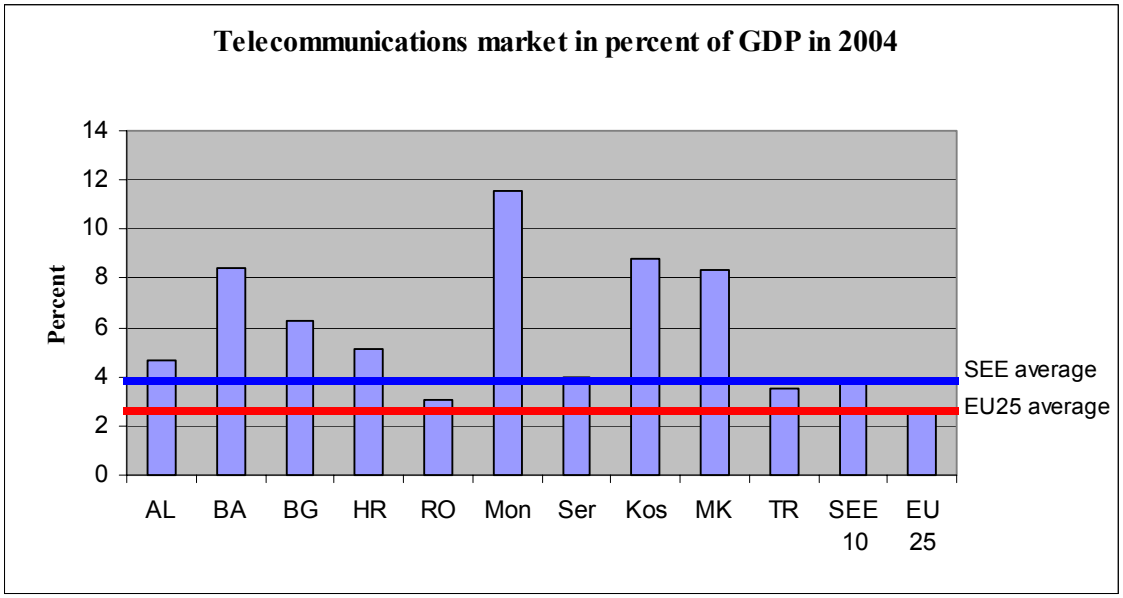


Figure 5 – Telecommunications market in percent of GDP in 2004

Note:
Serbia. Information on GDP for 2004 was not available when this report was written. Instead, the telecommunications market for 2004 has been measured against the GDP for 2003.
The EU 25 average has been calculated on the basis of the market value presented for mobile telephony services, fixed telephony services and data services in the 10th Implementation report from the European Commission from December, 2004. The market value of cable TV services are not included as this revenue is not included for the SEE countries. The GDP value for the EU has been provided by Eurostat.

It will be seen that the average spending on telecommunications in the SEE countries of around 4% of GDP is significantly higher than in the EU, where the average is around 2.7% when cable TV revenues are included. This is of course a reflection of the fact that the SEE countries have lower GDP per capita than the EU 25. However, it is also indicative of the important role of the telecommunications sector in these countries, which should provide a platform for further growth of the national economies.

B. The National Regulatory Authority

The information in this chapter is intended to reflect the situation as it existed on January 1, 2005.

The establishment of an independent regulator is a corner stone of the EU regulations for telecommunications. The basic requirement is set out in the Framework Directive[6], which requires certain regulatory tasks, such as the granting of individual authorisations, to be carried out by bodies that are legally distinct and functionally independent from activities that are associated with ownership or control of services and networks.

This requirement does not rule out that regulatory tasks may be shared among two or more regulatory bodies, as long as the sharing arrangement is clearly defined and published. Neither is there any direct provision against declaring a ministry as having certain regulatory powers. However, it is common practice across the EU to establish a regulatory authority that is also independent of the ministry. The reasons for this are:

- to create some distance between policy creation and policy execution. The ministry is responsible for policy and primary legislation. The NRA is responsible for the day-to-day functioning of the law. The ministry can provide guidance and set objectives, but normally, cannot instruct the NRA in any specific case. It is also normal that the ministry retains the powers to enter into agreements with international organisations that have the character of international treaties. However, that does not exclude participation by the NRA in international organisations, and there are special international organisations created for the NRAs;

- that such separation of powers reduces the likelihood of regulatory decisions being made on the basis of political favours;

- to increase confidence among market participants of a level playing field by insulating the regulatory body against political changes. Changes should be made through the legal system rather than by new political appointments.

- that the Ministry is often involved with the ownership of the incumbent operator. There is no requirement in the EU framework that Member States must privatise. Indeed, the requirement for the NRA to be legally distinct and functionally independent from activities associated with ownership is set out in recognition of the fact that such ownership is legitimate. On the other hand, where the State no longer has ownership of any operator, there is no need to investigate whether the necessary independence has been established.

This section first investigates the involvement of the states in ownership of telecommunications operators. It then presents information on the key factors that must be considered in the context of NRA independence.

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[6] 2002/21/EC - Framework Directive Art. 3

1. State ownership

The next table presents information about the states' involvement in ownership of telecommunications operators. Further information about the structure of ownership of incumbent operators is presented below in Table 43

The presentation shows that all countries and geographic units have some involvement in ownership. Bulgaria is the example of a country that has completed its privatisation process, but has retained a golden share that permits the government to veto decisions by the board of the incumbent operator.

Most of the countries and geographic units have retained majority ownership of the incumbent operator. However, in Croatia, Romania, and the former Yugoslav Republic of Macedonia the State only holds a minority share as the control has been taken over by a strategic partner.

Country	Ownership by State		
	Name of operator	Percentage ownership by the State	Which government unit is responsible for ownership functions
Albania	Albtelecom sh.a	100%	Ministry of Economy
Bosnia & Herzegovina	1. BH Telecom d.d. Sarajevo; 2. Telekom Srpske a.d. Banja Luka; 3. Hrvatske Telekomunikacije d.o.o. Mostar	1. 90%; 2. 65%; 3. 62.76%	Governments of entity Ministries (in Federation and in Republic of Srpska)
Bulgaria	Bulgarian Telecommunications Company	Golden share. In Jan. 2005, 34.78% of BTC share capital owned by the state was floated at the Bulgarian Stock Exchange	Ministry of Transport and Communications keeps a "golden share", which gives the right to block some decisions of the BTC Board.
Croatia	HT- Hrvatske Telekomunikacije d.d. (Croatian Telecom Inc.)	49%	Government unit responsible for ownership functions is not defined.
Romania	1. S.C. ROMTELECOM S.A. 2. National Radiocommunications Co.	1. 45.99% 2. 100%	Ministry of Communications and Information Technology (MCTI)
Serbia & Montenegro - *Montenegro*	Telecom Montenegro Inc.	51.12% ownership by the state	Ministry of Economy

Country	Ownership by State		
	Name of operator	**Percentage ownership by the State**	**Which government unit is responsible for ownership functions**
Serbia & Montenegro - *Serbia*	1. Telekom Srbija 2. MOBTEL	1. 80% (through the 100% state-owned Public Enterprise of PTT Serbia) 2. 49% (through the 100% state-owned Public Enterprise of PTT Serbia)	1. Ministry of Capital investment 2. Ministry of Capital investment
Serbia & Montenegro - *Kosovo*	PTK (The Post and Telecommunications Enterprise of Kosovo)	100%	UNMIK (through Kosovo Trust Agency)
The former Yugoslav Republic of Macedonia	A.D. Makedonski Telekomunikacii	47.125% plus one golden share	Ministry of Finance
Turkey	1. Turk Telekom 2. Avea İletişim Hizmetleri A.Ş. (GSM Operator)	1. 100% 2. 40% (The share belongs to Turk Telekom).	1. It belongs to the Treasury, but the Ministry of Transportation is responsible for operational activities of Turk Telekom 2. No government unit is responsible for ownership functions.

Table 6 – State ownership

2. Structural separation

Only Serbia and the former Yugoslav Republic of Macedonia did not have an established independent NRA on January 1, 2005. Both countries were working toward this goal.

After having established a regulatory organisation as a separate legal entity, it is normal to consider how its management is appointed. It is normal to make appointments for a specific term of office with some protection against arbitrary dismissal. The appointments are typically made either by Parliament or by the Council of Ministers. The Parliament is normally seen to provide a higher level of independence, because there is better protection against political replacements. This was demonstrated early in 2005, when the President of the Romanian NRA was replaced after a general election caused a change in government.

Table 7 below presents the NRAs own assessment of its independence and provides some of the main criteria that are normally used as indicators of independence.

Several other factors are also important when considering independence:

- Dismissal - The rules of dismissal are also important. Normally, the appointed decision makers stay in office for a defined period of time, typically five or six years, and can only be dismissed in this period under a limited set of well defined circumstances. It is also normal that a dismissal must be performed by the same body that made the appointment. The rules for appointment and dismissal are found in Table 7

- Resources – The NRA must be properly resourced so that it can carry out its tasks. This is addressed below in Table 8

- Financing – It is important that the NRA does not depend on political favours for its financial integrity. This is addressed below in Table 9

- Powers – Independence may be illusory unless the NRA has the necessary powers to carry out its tasks. This is addressed below in Table 10

- Appeals – Independence is also related to appeal procedures. If appeals go to a ministry that is also an owner of a telecommunications operator, the independence may be illusory. This is addressed below in Table 11

Country	Separation of regulatory functions	
	Is there a separate independent NRA?	**If yes, how is independence assured?**
Albania	Yes. Telecommunications Regulations Entity (TRE) of Albania is a separate independent regulatory entity.	The independence of TRE is assured by Law on Telecommunications, No.8618 of June 14, 2000. • Status as independent legal entity • Board nominated by Government and approved by Parliament for 5 years office term. Can not be nominated for more than two additional terms. • Board can only be dismissed by Parliament for reasons defined by law • Board not allowed to own telecoms • Self financed, budget approval by Council of Ministers • Excess revenue goes to state budget
Bosnia & Herzegovina	Yes. Communications Regulatory Agency (RAK)	RAK Council is nominated by government and approved by Parliament. Only Parliament can dismiss the Council. General Director is nominated by Council of RAK and approved by Council of Ministers, for a four-year period. Council of Ministers has exclusive right to dismiss General Director under defined conditions.

Country	Separation of regulatory functions	
	Is there a separate independent NRA?	**If yes, how is independence assured?**
Bulgaria	Yes. Communications Regulation Commission (CRC).	The independence of CRC as NRA is ensured by the Telecommunications Act – Articles. 19, 20, 22, 23, 27-29, 31, 33,38 • Separate legal entity • CRC Council nominated by: National Assembly – 3 members President – 1 member plus Chairman • Chairman appointed and dismissed by Council of Minister • Deputy chairman and two members appointed and dismissed by National Assembly • One member appointed and dismissed by the President of Bulgaria
Croatia	Yes. Croatian Telecommunications Agency	Independence is assured by the Law on Telecommunications. The Council: • Appointment by Parliament • Dismissal can only be decided by Parliament under certain pre-defined circumstances. The Director of the Expert Service: • Appointment by the minister after public recruitment • Dismissal by the minister under certain pre-defined circumstances or on proposal by the Council.
Romania	Yes. ANRC	• Appointment by Prime Minister for a five year term • There are no specific rules or legislation on how the President of the NRA can be dismissed. • Self financed • Transparency and impartiality obligations • Staff not allowed to hold shares or board positions telecom companies • Appeals of NRA decisions in front of the Court of Appeal

Country	Separation of regulatory functions	
	Is there a separate independent NRA?	**If yes, how is independence assured?**
Serbia & Montenegro - *Montenegro*	Yes. Agency for Telecommunications of the Republic of Montenegro	Defined by the provisions of the Telecommunications Law • Appointment by Government (proposal by Council of Ministers, confirmation by National Assembly) • Dismissal by Government (proposal by Council of Ministers, confirmation by National Assembly) only under circumstances defined by the Law. • Conflict of interest forbidden by law • Self-financed • Empowered to adopt regulations without government approval
Serbia & Montenegro - *Serbia*	No	The Telecommunications Law of April 2003 foresees establishment of the independent NRA, but this body has not been established yet.
Serbia & Montenegro - *Kosovo*	Yes. Telecommunications Regulatory Authority (TRA)	Defined by the provisions of the Telecommunications Law (UNMIK/REG 2003/16) • Appointment by the Assembly upon recommendation by the Minister of Transport and Telecommunications. • A Board's member term shall be for a period of five years from the date of the Member's appointment. The number of terms a member may serve is limited to two times. • Upon a two-third vote of the Members, the Board shall remove a Member on the ground of professional incompetence, misconduct or a conflict of interest. • Authorized to issue regulations and instruction for the implementation of the present Law.
The former Yugoslav Republic of Macedonia	No. Telecommunications Directorate is a regulatory body within the Ministry of Transport and Communications. In the new Law on Electronic Communications of March 5, 2005, it is foreseen that an independent regulatory authority/ NRA will be established – The Electronic Communications Agency.	• NRA Commission to be approved by the Parliament for five-year terms. It can only be dismissed by Parliament on the basis of conditions defined by law. • Director of the Agency is selected by the Commission on the basis of a public tender for a five year term. The Director can be dismissed by the Commission on the basis of conditions defined by law.

Country	Separation of regulatory functions	
	Is there a separate independent NRA?	**If yes, how is independence assured?**
Turkey	Yes. Telecommunications Authority (TA)	• Independent legal entity • Board members appointed by Council of Ministers, with the approval of the President of the Republic, for a period of five years and may be re-elected. • Board members can only be dismissed before the expiration of a term by the Council of Ministers for inability to work due to a serious disease or illness, professional misconduct or conviction of criminal offences • Self-financed

Table 7 - NRA separation from ownership of telecommunications operators

3. NRA staffing

Table 8 below presents the number of employees in 2004 and 2005 as well as the plans for 2005. Many of the NRAs are fairly large organisations that require a certain amount of administrative overhead. Furthermore, the NRAs often have staff that work on equipment approvals or inspection duties. Therefore, the table also presents the number of employees that are engaged in key regulatory tasks as set out by EU's regulatory framework. These employees are professional people, typically lawyers and economists, responsible for

- frequency licensing;
- number management;
- market analysis;
- reference interconnection offers;
- reference unbundling offers;
- competitive safeguards, including:
  - significant market power obligations;
  - carrier selection and pre-selection;
  - number portability;
  - cost accounting;
- price regulation;
- universal service;

- dispute resolution in commercial disputes;
- consumer complaints.

However, it is difficult to make a judgment of what is a reasonable or adequate level of staffing. There are many individual as well as national characteristics that enter into such an evaluation, which would also have to consider their use of external consultants.

Country	Employees of NRAs on:			Employees handling telecoms regulatory tasks on:	
	1.1.2004	1.1.2005	Plan for year end 2005	1.1.2004	1.1.2005
Albania	31	36	43	11	14
Bosnia & Herzegovina	76	85	85	8	11
Bulgaria	214	217	237	78	80
Croatia	58	66	80	25	32
Romania	185	194	210	52	57
Serbia & Montenegro - *Montenegro*	26	29	35	15	17
Serbia & Montenegro - *Serbia*	NRA not yet established	NRA not yet established	NRA not yet established	NRA not yet established	NRA not yet established
Serbia & Montenegro - *Kosovo*	5	16	25	3	5
The former Yugoslav Republic of Macedonia	95	94	n/a	11	11
Turkey	455	454	n/a	n/a	75

Table 8 - Employees of NRAs and employees directly handling telecommunications regulatory tasks

Serbia had not established an NRA by April 1, 2005 and it would not be meaningful to indicate the number of people engaged in telecommunications regulations, partly in the Ministry of Capital Investments (frequency spectrum management, licensing regime, dispute resolution and others) and partly in the Community of Yugoslav PTT (technical regulation, master plans, numbering plan equipment certification, etc.).

The former Yugoslav Republic of Macedonia has a Telecommunications Directorate under the Ministry of Transport and Communications, which will form the base for the new NRA. The staffing of the Telecommunications Directorate is reflected in the table above.

NRA budgets, Table 9 below, presents information on the operational budget for 2005 in euro as well as the sources of revenue.

The EU regulatory framework assumes that the NRAs will be self-financing and that their fees only cover their administrative costs, except when allocating limited resources. The EU regulatory framework also requires that general authorisations be used for all activities except those that depend on limited resources. Since general authorisations represent a simple and inexpensive task, it follows that the corresponding licensing fees (or notification fees) must be modest. Where licensing fees represent a significant part of the revenues, it could be an indication of a situation where the fees are at a level that represents a barrier to market entry.

The countries that rely on licensing fees for a significant part of their revenue are in particular Albania and Bosnia and Herzegovina.

A financing approach more in line with the EU regulatory framework is to rely mainly on revenue related fees.

Country	Operational budget for 2005 in euro	Source of financing of 2004 budget
Albania	1 973 604	Revenues from the previous years: 44.4%. Revenues during the year 2005: 55.6% • Authorisation fees: 30.8% • Frequency fees: 68.8% • Numbering fees :0.2% • Others: 0.2%
Bosnia & Herzegovina	2 517 894	• Authorisation fees (63%) • Numbering fees (29%) • Frequency fees (8%)
Bulgaria	4 652 756	• Revenue related fees (43%) • Numbering fees (15%) • Frequency fees (40%) • Others (2%)
Croatia	6 622 142	• Revenue related fees (43.4%) • Numbering fees (42.2%) • Frequency fees (12.2%) • Other (2.2%)
Romania	8,514,213	• Revenue related fees (100%)
Serbia & Montenegro - *Montenegro*	1,800,000	• Revenue related fees (98%) • Frequency fees (2%)
Serbia & Montenegro - *Serbia*	0	The initial budget of the NRA is foreseen as a loan from the State.

Country	Operational budget for 2005 in euro	Source of financing of 2004 budget
Serbia & Montenegro - · *Kosovo*	600,000	Funds allocated from the Kosovo Consolidated Budget for the TRA establishment and its first year of operation (2004). Otherwise: • Authorisation fees • Numbering fees and • Frequency fees
The former Yugoslav Republic of Macedonia	3 888 310	• Frequency fees (52%) • Supervision fees (19%) • Numbering fees (18%) • Concession fees (11%)
Turkey	16 383 288	• Frequency fees (71%) • Certificate fees per radio device (17%) • Contribution share for NRA's expenses (9%) • Other (3%)

Table 9 - Operational budget of NRAs for 2004 and sources of financing

Notes:
The term "authorisation fees" is used as a term to describe fees for all types of service authorisations, including individual licences.
The former Yugoslav Republic of Macedonia - The budget relates to the Telecommunications Directorate.
Turkey - The radio device certification fees include fees from mobile phone certification.

4. Dispute resolution

The Framework Directive Art. 20 sets out a requirement for NRAs to issue binding decisions to resolve commercial disputes that arise from the regulatory framework.

The Universal Service Directive Art. 34 sets out a requirement for transparent, simple and inexpensive out-of-court procedures for disputes that involve consumers, but does not specify that this is a responsibility of the NRA.

Table 10 below presents whether the NRAs are authorised to resolve commercial disputes and the sanctions that are at their disposal to ensure that its decisions are respected.

Country	Type of commercial disputes that can be resolved by NRAs	Conflict resolution procedures and deadlines	Sanctions
Albania	Failure to reach an interconnection agreement.	Law on Telecommunications, Article 43: • NRA involvement after 2 months of failed negotiations • NRA has one month to decide	Law on Telecommunications, Articles 94-96: • fines • penal code provisions
Bosnia & Herzegovina	NRA decides	No procedures defined at the moment for resolution of commercial conflicts.	• Oral and written warnings; • Fines up to €75,000 or €150,000 if repeated violation • Interrupt broadcasting or the provision of telecommunications services for a period not exceeding 3 months; • Revocation of a licence.
Bulgaria	There is no legal ground in Bulgaria for the NRA to resolve conflicts: the Constitution disallows that kind of activity for all authorities except the Court. However, the NRA can issue binding instructions where an operator fails to fulfil its obligations. A legal amendment is waiting to be adopted by the Parliament. The amendment empowers CRC to resolve conflicts.	CRC can issue binding instructions where an operator fails to meet its obligations. It must take a decision within 2 months from receiving a complaint.	• Financial penalties • Order an operator to stop its activities.
Croatia	NRA decides	Law on Telecommunications, Article 13: • NRAs decision must be implemented within 15 days	Law on Telecommunications, Article 117: • Fine from €650 to €133,000 • Order an operator to stop activities • Issue a misdemeanour warrant

Country	Type of commercial disputes that can be resolved by NRAs	Conflict resolution procedures and deadlines	Sanctions
Romania	Disputes arising between providers about the obligations imposed on them on the grounds of the legislation in the electronic communications sector and disputes arising between end-users and providers on the enforcement of the provisions of Law no. 304/2003.	• Written petition Two procedures: 1. Dispute settlement by the mediation procedure • Shall be completed within 30 days 2. Dispute settlement by the contentious procedure • Can be used directly, or after failed mediation. • Appointment of "Commission" to deal with the case • Preliminary solution with 15 days for parties to comment • NRA decision within 4 months from the start of the settlement procedure • Decision can be appealed within 15 days to the Court of Appeal without preliminary procedure	Administrative fines
Serbia & Montenegro - *Montenegro*	NRA decides	Telecommunication Law Deadlines - Article 33, 37 and 60: • The parties may call in the NRA after 90 days of unsuccessful negotiations. • The NRA should take a decision within 60 days.	Telecommunication Law (Sanctions - Article 68, 69 and 70): • Fines • Order an operator to stop its activities.
Serbia & Montenegro - *Serbia*	To be defined	To be defined	• Order an operator to stop its activities.

Country	Type of commercial disputes that can be resolved by NRAs	Conflict resolution procedures and deadlines	Sanctions
Serbia & Montenegro - *Kosovo*	Section 11, paragraph 4 of the Law on Telecommunication UNMIK/REG 2003/16 NRA decides	UNMIK/REG 2003/16 Section 11-4 and 56-7. • NRA has six weeks to accept or reject a request for dispute resolution • For interconnection disputes, if it accepts the case, the NRA shall establish procedures and deadlines • Service provider must comply within 30 days	UNMIK/REG 2003/16 and Administrative Instruction No. 2004/3 issued by the Ministry of Transport and Telecommunication • Fines
The former Yugoslav Republic of Macedonia	New Law on Electronic communications prescribes disputes between operators of communications networks and providers of communications services which can be resolved by NRA	• Maximum time for NRA to reach a decision is 4 months • Mediation or arbitration • Mediator chosen by the parties or by the NRA within seven days • Arbitrators appointed by NRA Commission, the Minister and other interested parties for 5 years. • Result of arbitration is binding, final and enforceable	• Fines • Temporary or permanent ban on operations

Country	Type of commercial disputes that can be resolved by NRAs	Conflict resolution procedures and deadlines	Sanctions
Turkey	• Access and interconnection	• Parties may call in the NRA after 3 months of disagreement • After calling in the NRA, the parties still have 6 weeks (extendable to 10) to reach an agreement. • NRA decides within 4 months (extendable to 6)	• Administrative fine up to 3% of turnover
	• Roaming Roaming Ordinance dated March 8, 2002.	• NRA has 15 days to decide if a request is accepted or not • NRA expects parties to reach agreement in 4 weeks • If failing to agree, NRA will decide	• Administrative fine minimum 1% maximum 3% of turnover

Table 10 - NRAs powers in conflict resolution

5. Appeal procedures

The Framework Directive Art. 4 specifies that all decisions by the NRA shall be subject to appeal to a body which is independent of the parties involved. Therefore, this requirement sets out a similar requirement of independence for the appeal body as exists for the NRA itself.

In addition, the article sets out several requirements for the appeal mechanism:

- The appeal body may be a court, but it can also be a non-judicial body. If so, there is a requirement for a second appeal instance by a court or a tribunal.
- The decision of the NRA shall stand during the appeal process unless the appeal body decides otherwise.
- The appeal body must be able to take the merits of the case into consideration and not only rule on procedural grounds.

The appeal mechanism must be available not only to the parties involved, but also to any user affected by the decision.

Table 11 explains how the national appeal arrangements meet these requirements.

Country	Appeal body	NRA decision stands pending appeal decision?	Can appeal body rule on merits of a case?	Third party rights of appeal?
Albania	TRE decisions that nullify or amend the terms and conditions of licences: First instance - Minister of Transport and Telecommunications Second instance - Albanian Courts TRE decisions on fines: First instance - Board of TRE Second instance - Albanian Courts	No, the decision will be suspended until the appeal body takes a definitive decision.	No, the appeal body can only judge on the correct application of the law.	No, only a directly involved party can appeal.
Bosnia & Herzegovina	• First instance: Council of the Agency • Second instance: Court of Bosnia and Herzegovina.	Yes	Normally yes, but in a situation where the NRA decision is made upon strictly defined discretionary rights of the NRA to decide (given by Law), the appeal body cannot rule on merits.	Yes, if it can prove that it has a legal interest in the case.
Bulgaria	Supreme Administrative Court	Yes, if the NRA decides immediate entry into force. However, the Court may suspend the immediate entry into force.	No, the appeal body can only judge on the correct application of the law.	Only directly involved parties can appeal. If a General Administrative Act is issued, everyone who is concerned can appeal.
Croatia	Administrative Court	Yes. According to the Telecommunications Law of 2003 (Art. 13, §§ 3-6), and the Law on general administrative procedure. The Agency may also decide to suspend the decision during the appeal.	Yes	Yes, if it can prove that it has a legal interest in the case.

Country	Appeal body	NRA decision stands pending appeal decision?	Can appeal body rule on merits of a case?	Third party rights of appeal?
Romania	• Bucharest Court of Appeal • High Court of Cassation and Justice	Yes, if the NRA decides immediate entry into force. The Court may, however, suspend the immediate entry into force.	Yes	Yes
Serbia & Montenegro - *Montenegro*	Supreme Administrative Court	Yes	No, the Supreme Administrative Court can only judge on the correct application of the law.	Yes, but only if it can prove that it has a legal interest in the case.
Serbia & Montenegro - *Serbia*	Administrative Court	No	Yes	No
Serbia & Montenegro - *Kosovo*	• First instance: either the Regional Court (there are five regional courts in Kosovo) or the Supreme Court of Kosovo; • Final instance: the Supreme Court of Kosovo	Yes	Yes, the appeal body can rule both on the merits of the case and on the correct application of the law.	No, third parties not affected by the decision or, as it is stated in the law, "without legal interest in the case", do not have the right of appeal.
The former Yugoslav Republic of Macedonia	Commission of the government for resolution of second instance disputes.	Yes	No, the appeal body can only judge on the correct application of the law.	No, only a directly involved party can appeal.
Turkey	• Administrative Court • Council of State	Yes	Yes. The appeal body can judge both on the procedure and the merits of the NRA decision	No. Only a directly involved party can appeal

Table 11 - Appeal procedures against NRA decisions

Kosovo has a special form of appeal procedure in addition to the one that is presented above. Within three months from the final decision, which may be the NRA decision or the appeal body's decision, any party, including those not affected by the decision can make a request to the Public Prosecutor. He may accept the request, and then start an appeal, or he may reject it. Whichever way, he must take a decision within one month from receiving the request.

The Public Prosecutor may also start an appeal on its own, without any party making a request. This procedure is known as the "Request for Defending the Legality" and presents a legal

solution to a binding, but illegal decision made by the court. In such a case, the Public Prosecutor must take action within three months.

6. Regulatory framework for broadcasting networks

The 2003 acquis in the EU has brought all forms of electronic communications in under the same regulatory framework. This was driven by the convergence with new digital technologies so that all forms of networks will compete in the delivery of voice, data, Internet, radio and television communications, including the broadcasting networks.

While the EU framework does not rule out that regulatory tasks can be shared among two or more authorities in a well-defined manner, the thrust of this legislation is to bring all forms of electronic communications, including broadcasting networks, under a common regulatory framework under a single regulator.

There are two considerations that make this particularly important for decisions on frequencies used for broadcasting:

1. Over the next few years, the broadcasting industry will phase out analogue transmission in favour of digital technologies. This will release significant amounts of radio frequency spectrum, which can then be used for other purposes. The determination of the frequency allocation that best serves the public interest requires a non-sectorial view on how the broadcasting frequencies should be refarmed.

2. Digital broadcasting transmission technologies increasingly permit the capacity available to broadcasting networks to be used for non-broadcasting applications. There is a concern that frequency licence conditions currently granted for broadcasting networks may focus too narrowly on broadcasting objectives and thus restrict these networks from participation in other markets. This may pose a potential threat to efficient radio frequency utilisation.

Most EU Member States, with very few exceptions, have decided to have a single regulatory authority responsible for all types of frequencies available for civil purposes. The relative priorities of broadcasting, telecommunications and other use of radio frequencies are normally determined at a relatively high political level through the adoption of the national frequency plan. Table 12 explains whether the broadcasting networks are covered by the same regulatory framework as other telecommunications / electronic communications activities and, in particular, if the frequency management is provided by the same bodies.

Country	Are broadcasting networks covered by the same regulatory framework as telecommunications?	Are frequency allocations and assignments carried out by the same authority for broadcasting as for telecommunications
Albania	No. National Council of Radio and Television	Yes for allocation - Council of Ministers decides the frequency plan No for assignment - National Council of Radio and Television
Bosnia & Herzegovina	Yes	Yes

Country	Are broadcasting networks covered by the same regulatory framework as telecommunications?	Are frequency allocations and assignments carried out by the same authority for broadcasting as for telecommunications
Bulgaria	Yes	Yes
Croatia	Yes	Yes
Romania	Yes	Yes
Serbia & Montenegro - *Montenegro*	No Broadcasting Agency	Yes for allocation No for assignment - Broadcasting Agency
Serbia & Montenegro - *Serbia*	Yes	Yes
Serbia & Montenegro - *Kosovo*	Not defined yet	Not defined yet
The former Yugoslav Republic of Macedonia	Yes	Yes
Turkey	No - Radio and Television Supreme Council (RTSC)	Yes – for allocation No – for assignment (RTSC)

Table 12 - Regulatory treatment of broadcasting networks

7. Frequency management

The following table adds the specific information on which bodies responsible are responsible for:

- Frequency allocation – which includes the decision on the national frequency plan.
- Frequency assignments – which are the decisions on who is licensed to use frequencies within the national frequency plan. (Frequencies for the military sector are normally decided outside this framework).

Country	Frequency allocation	Frequency assignment	Legal basis
Albania	Council of Ministers	Telecommunication Regulations Entity (TRE) National Council of Radio and Television	Law on Telecommunications No. 8618 of June 4, 2000, Art. 70. National radio frequency plan Approved by Government of Albania, (Decision No. 379, date 31.05.2001)
Bosnia & Herzegovina	Communications Regulatory Agency (RAK) of Bosnia and Herzegovina	RAK	Law on Communications of 2002, Art. 30, 31, 32

Country	Frequency allocation	Frequency assignment	Legal basis
Bulgaria	National Radio Frequency Spectrum Council (CNRFS) with the Council of Ministers	Communications Regulation Commission	Articles 9-11 and 28, Telecommunications Act, Published in the State Gazette, issue 88/ Oct. 7, 2003
Croatia	Ministry of the Sea, Tourism, Transport and Development	Croatian Telecommunications Agency	Articles 76 and 84, Law on Telecommunications
Romania	The Ministry of Communications and Information Technology	Inspectorate General for Communications and Information Technology	• Government Emergency Ordinance No. 79/2002 on the general regulatory framework for communications, approved with the amendments and completions, by Law No. 591/2002, with the following amendments and completions: Art. 8 - (1), Art. 14 - (1) • LAW No. 510 /2004 on the reorganization of the Inspectorate General for Communications and Information Technology: Art. 12 – (2), Art. 12 – (4)
Serbia & Montenegro - *Montenegro*	Government of Montenegro	Agency for telecommunications of the Republic of Montenegro Broadcasting Agency	Telecommunications Law of 2000, Article 12, Paragraph 9
Serbia & Montenegro - *Serbia*	Government of the Republic of Serbia (Official Gazette of R. Serbia No 112/04)	Ministry of Capital Investments	Law on Telecommunication Systems (Official Gazette of the SFRJ, No 41/88, Art. 60, 62)
Serbia & Montenegro - *Kosovo*	UNMIK (FMO-Frequency Management Office)	TRA and FMO	UNMIK/REG 2003/16, Law on Telecommunication, Article 22 and 36
The former Yugoslav Republic of Macedonia	Telecommunications Directorate	Telecommunications Directorate	Telecommunications Act of 1998, Art. 18.

Country	Frequency allocation	Frequency assignment	Legal basis
Turkey	Telecommunications Authority	Telecommunications Authority	Wireless Law No 2813, Articles 9 and 11 Telegram and Telephone Law No. 409, Article 2

Table 13 - Frequency allocation and assignment

8. Cooperation between NRA and competition authority

There is a considerable overlap between the regulatory framework for electronic communications in the EU (the 2003 acquis) and general competition law. The competition law applies obviously to mergers and concentration in the telecommunications sector. In addition, the general competition framework for dominance and its abuse apply in parallel with the *ex ante* provisions defined by the sector specific directives.

Furthermore, the 2003 acquis relies largely on competition law principles, in particular for market analysis and the designation of significant market power.

This means that the electronic communications sector is supervised by both a telecommunications authority and a competition authority, each with different responsibilities and perspectives. However, it is the responsibility of each authority to consider both legal frameworks whenever they take a decision. It shall not be possible for one authority to take a decision that can be contradicted by the other.

In practice, this requires a good co-operation between the two authorities with some agreement on which authority shall take the lead in different types of cases and procedures to make sure that the views of the other authority are taken into account when necessary. It is recommended that these principles be set out in a formal agreement between the two parties.

Table 14 examines whether or not such formal agreements have been established.

Country	Competition authority	Formal agreement between NRA and Competition Authority
Albania	The Competition Authority was created on February 2004, with the Law No. 9121, of July 28, 2003 On Protection of Competition. The Authority is responsible for competition in general, including the monitoring of competition in the electronic communications sector. It is composed of a Commission - a collegiate body of 5 members appointed by Parliament, and a Secretariat as an administrative and investigative body. At the same time, the Tirana District Court is also authorised to apply the competition rules.	TRE and Competition Authority cooperate on specific issues. TRE and Competition Authority are currently negotiating a Memorandum of Understanding.

Country	Competition authority	Formal agreement between NRA and Competition Authority
Bosnia & Herzegovina	Competition Council on the state level was established in 2003. In addition, the Offices of Competition and Consumers Protection were set up in the Federation of Bosnia and Herzegovina and the Republika Srpska.	No
Bulgaria	Competition Protection Commission (CPC) is the common competition authority that monitors all sectors including electronic communications, according to the provisions of the Competition Protection Act.	Yes
Croatia	Croatian Competition Agency	There is no formal agreement. Cooperation is foreseen by the Law on Telecommunications.
Romania	Competition Council	On July 14, 2004, the ANRC signed a Collaboration Protocol with the Competition Council. The document establishes the terms under which the institutions coordinate their efforts with a view to promote competition in the electronic communications and postal sectors as well as to protect end-users' rights and interests. The two institutions will develop a common annual action plan for competition in the electronic communications and postal services markets.
Serbia & Montenegro - *Montenegro*	No such authority exists. Agency for telecommunications of the Republic of Montenegro also has the responsibility to provide and encourage competition in electronic communication sector.	No
Serbia & Montenegro - *Serbia*	The Competition authority is a part of the Ministry of Trade, Tourism and Services, as Antimonopoly Department. Law on Protection of Competition is in process of adoption, by which a separate Competition authority will be established.	No NRA established.
Serbia & Montenegro - *Kosovo*	No such authority exists. Its establishment is foreseen by the Law on Concessions	No

Country	Competition authority	Formal agreement between NRA and Competition Authority
The former Yugoslav Republic of Macedonia	Under the new Law on Protection of Competition of January 11, 2005, the Commission for Protection of Competition was established on February 15, 2005.	Article 21 of the new Law on Electronic communications states: • The Agency and the Commission for Protection of Competition shall exchange data and information they need in exercising their competences, where the scope of exchange of information shall be limited to data and information that is relevant and proportionate to the purpose for which they are exchanged. • In the implementation of relevant market analysis and determination of significant market power under this Law, the Agency shall cooperate with the Commission for Protection of Competition.
Turkey	Competition Authority	Protocol on Cooperation between the Competition Authority and the Telecommunications Authority signed on Sept. 16, 2002.

Table 14 - Cooperation between NRA and competition authority

C. Regulations – market access

The information in this chapter reflects the situation, as it existed on April 1, 2005.

This chapter provides information on the liberalisation status and authorisation frameworks for the provision of public fixed telecommunications networks, voice telephony services and data services, and on the status of competition in the fixed and mobile markets.

1. Market access

Table 15 below summarises the liberalisation status of public fixed telecommunications networks and services on the local, domestic long distance and international level. This table only addresses the legal framework enabling liberalisation, while its practical implementation could be assessed based on the actual number of licensed operators and the proportion of numbering resources shown, respectively, in Table 23 and Table 24 below.

Bosnia and Herzegovina liberalised local and domestic long distance telephone services as well as data services in 2002. International voice services are expected to open to competition in 2006.

Bulgaria, Croatia and Romania were the first SEE countries to introduce full liberalisation of local, domestic long distance and international networks and services on January 1, 2003, followed by Montenegro – on January 1, 2004.

In Turkey, domestic long-distance and international networks have also been liberalised from January 1, 2004, while liberalisation of local services is expected after July 2005. Bosnia & Herzegovina, on the contrary, liberalised local and domestic long distance services in 2003, but international networks are expected to open for competition in 2006. Liberalisation in Albania has been implemented gradually: starting with rural local networks in 1998, moving to domestic long distance networks in July 2003 and international networks in January 2005. The status of urban local networks remains unclear, and Albtelecom effectively maintains its monopoly over urban telephone services.

In the former Yugoslav Republic of Macedonia, liberalisation of public fixed telecommunications networks and services was originally foreseen from January 1, 2005, but has been delayed pending adoption of the secondary legislation required under the new Law of Electronic Communications of March 5, 2005. In Serbia, Telekom Srbija maintains its monopoly rights over the provision of fixed telephone networks and services until June 2005.

In Kosovo, liberalisation of fixed networks and services was formally introduced by the Law on Telecommunications UNMIK/REG 2003/16 of May 12, 2003. However, no secondary legislation on licensing and authorisation procedures has been adopted so far. Its adoption and the issuing of the first licences to alternative providers are foreseen after the privatisation of PTK, the timing of which would depend, among other things, on the final resolution of Kosovo's status.

Country	Liberalisation status for fixed public telecommunications networks and services			
	Local	**Domestic long distance**	**International**	**Comments**
Albania	Rural local networks liberalised from 1998. Urban local networks are not explicitly defined in the law. Albtelecom was granted exclusive rights for urban telephone services until at least June 30, 2003 (Council of Ministers Decision No. 692, of Dec. 27, 2002)	Liberalised from July 2003	Liberalised from Jan. 1, 2005	Law No. 8287 of Feb. 18, 1998, Article 4 liberalised rural local networks; Council of Ministers Decision No. 464 of July 3, 2003 liberalised domestic long-distance and international services; Law No. 8618 of June 14, 2000 liberalised provision of public payphones from June 2000.
Bosnia & Herzegovina	Liberalised from July 1, 2002	Liberalised from July 1, 2002	No Planned from Jan. 1, 2006, as determined by the Telecommunication Sector Policy	-
Bulgaria	Liberalised from Jan. 1, 2003	Liberalised from Jan. 1, 2003	Liberalised from Jan. 1, 2003	Liberalisation introduced by §10 of the Final & Transitional Provisions of the Telecom Act of 1998.
Croatia	Liberalised from Jan. 1, 2003	Liberalised from Jan. 1, 2003	Liberalised from Jan. 1, 2003	-
Romania	Liberalised from Jan. 1, 2003	Liberalised from Jan. 1, 2003	Liberalised from Jan. 1, 2003	-
Serbia & Montenegro: *Montenegro*	Liberalised from Jan. 1, 2004	Liberalised from Jan. 1, 2004	Liberalised from Jan. 1, 2004	Article 27, Telecommunications Law of 2000 (Official Gazette of the Republic of Montenegro, No. 59/2000)
Serbia & Montenegro: *Serbia*	No	No	No	Telecommunications Law of April 2003 establishes Telekom Srbija's monopoly until June 2005.

Country	Liberalisation status for fixed public telecommunications networks and services			
	Local	Domestic long distance	International	Comments
Serbia & Montenegro - *Kosovo*	Formally liberalised in 2003	Formally liberalised in 2003	Formally liberalised in 2003	Secondary legislation on licensing and authorisation under the Law on Telecommunications UNMIK/REG 2003/16 of May 12, 2003 is not adopted.
The former Yugoslav Republic of Macedonia	No Planned in 2005	No Planned in 2005	No Planned in 2005	Secondary legislation under the Law of Electronic Communications of March 5, 2005 is being prepared.
Turkey	No Planned on July 1, 2005 according to the Communiqué on unbundled access to local loops	Liberalised from Jan. 1, 2004	Liberalised from Jan. 1, 2004	Telecommunications Act (Law No. 4502, Official Gazette Jan 29, 2000).

Table 15 - Liberalisation of public fixed telecommunications networks and services

Table 16 addresses the liberalisation status of data networks and services, which in all SEE countries are now open to competition. Furthermore, the liberalisation of data networks in most countries was introduced a few years earlier than fixed networks enabling provision of voice telephone services.

In Romania, data networks and services have been liberalised since 1992. In Bulgaria, liberalisation started in 1993, when the first individual licence for establishment, maintenance and operation of a public data communications network and the provision of data services was granted to a joint venture of BTC and Sprint International. Infrastructure was partly liberalised in 1993, removing restrictions on building new infrastructure, subject to refusal of the incumbent to provide required transport facilities. Later on, five or seven individual licences to provide data services were granted under the Telecom Act of 1998.

In Turkey, the provision of data services was liberalised on June 10, 1994 and the first licences to service providers were issued in March 2002 following the establishment of the NRA on January 27, 2002 under the Law No. 4502. However, the provision of data networks remained under the incumbent's monopoly until January 1, 2004.

Country	Liberalisation status for data networks and services		
	National	International	Comments
Albania	Liberalised from 1998	Liberalised from 1998	Article 4 of the Law No. 8287 of February 18, 1998

Country	Liberalisation status for data networks and services		
	National	International	Comments
Bosnia & Herzegovina	Liberalised from July 1, 2002	Liberalised from July 1, 2002	-
Bulgaria	Liberalised from 1993	Liberalised from 1993	-
Croatia	Liberalised from 1999	Liberalised from 1999	-
Romania	Liberalised from 1992	Liberalised from 1992	-
Serbia & Montenegro - *Montenegro*	Liberalised from Jan. 1, 2004	Liberalised from Jan. 1, 2004	Article 27 in Telecommunications Law of 2000 (Official Gazette of the Republic of Montenegro, No. 59/2000)
Serbia & Montenegro - *Serbia*	Liberalised from 2003	Liberalised from 2003 Requirement to use the incumbent's international lines until June 2005.	Liberalisation introduced by Telecommunications Law of April 2003. Several ISPs were registered as service providers with the Ministry under the previous Telecom Law. In addition, data services are also offered by Cable TV providers via their own infrastructure. The status of Cable TV providers is not yet regulated.
Serbia & Montenegro - *Kosovo*	Liberalised from May 2003	Liberalised from May 2003	The first ISP authorisations were issued to DardaNet (PTK subsidiary), IpkoNet and Kujtesa on May 18, 2005.
The former Yugoslav Republic of Macedonia	Liberalised from February 1998	Liberalised from February 1998 Requirement to use the incumbent's lines for international traffic until April 2000.	-

Country	Liberalisation status for data networks and services		
	National	International	Comments
Turkey	Data services liberalised from June 10, 1994 Data networks – from Jan. 1, 2004	Data services liberalised from June 10, 1994 Data networks – from Jan. 1, 2004	Turk Telekom's monopoly over fixed telephone networks and voice telephony services expired on Jan. 1, 2004.

Table 16 - Liberalisation of data networks and services

2. Authorisation frameworks for terrestrial services

Under the EU 2003 regulatory framework, Article 3 of the Authorisation Directive (2002/20/EC) establishes a general authorisation regime for the provision of electronic communications networks and/or services. Undertakings may be required to notify the intention to commence the provision of electronic communication networks or services and to submit information required to allow the national regulatory authority (NRA) to keep a register or list of providers. However, there is no requirement to obtain an explicit decision by the NRA before the start of activities.

Only Romania and the former Yugoslav Republic of Macedonia currently have in place authorisation frameworks that are in line with the provisions of the Authorisation Directive. However, in the former Yugoslav Republic of Macedonia the concession agreement with the incumbent operator still has to be harmonised with the new Electronic Communications Law by December 5, 2005. In all other countries, an individual or a class licence is required, with some variations depending on whether the business activities involve the use of scarce resources, such as spectrum and numbers.

Bulgaria and Turkey are currently drafting new legislation intended to transpose the EU 2003 regulatory framework and, in particular, to introduce the general authorisation regime in line with the Authorisation Directive. In Croatia, the transposition of the EU 2003 regulatory framework is expected during 2006-2007.

Table 17 summarises the authorisation framework for the provision of public fixed telephony networks and services.

Country	Authorisation requirements for fixed telephony	
	Fixed networks	**Telephony services**
Albania	Individual licence	Individual licence
	Individual licences are classified in two categories: • Category I - national fixed or mobile public telephony. The number of licences is decided by the government • Category II - public telephony in rural areas, paging, global services of mobile individual communications (and other services that use frequencies). General licences are issued for Internet services, data transmission services, value added services, public services of paid telephones (coins or prepaid cards), and other services not classified in individual licenses (Law No. 8618 of June 14, 2000). Effectively, a 'general licence' is an individual authorisation issued by the NRA.	
Bosnia & Herzegovina	Individual licence	Individual licence
Bulgaria	Individual license	Individual license
	Under the TA of 2003, there are two types of regimes for data networks and services, depending on the scarce resource use, respectively based on individual or class licences.	
Croatia	Individual licence	Individual licence
Romania	General authorisation with notification	General authorisation with notification
Serbia & Montenegro - *Montenegro*	Individual licence	Individual licence
	Licensing regime is defined in Article 3 in the Rulebook on issuing and registering general and individual licences (Official Gazette of the Republic of Montenegro, No. 08/2002).	
Serbia & Montenegro - *Serbia*	Individual authorisation/licence	Individual authorisation/licence
	Secondary legislation on licensing and authorisations framework still has to be adopted. Individual licence is foreseen under Art. 33 of the Telecom Law if the business activities involve the use of scarce resources (e.g. radio frequencies or numbering).	
Serbia & Montenegro - *Kosovo*	Individual authorisation/licence	Individual authorisation/licence
	Secondary legislation on licensing and authorisations framework still has to be adopted. The Law on Telecommunications UNMIK/REG 2003/16 of May 12, 2003 states: No person shall provide telecommunications services to the public in Kosovo without obtaining an authorisation from the TRA to provide such services (Section 21). No person shall provide telecommunications services involving a limited resource, including the right to use number of frequency allocation, space on a utility pole, tower or in a conduit, without a license from the TRA to provide such services (Section 22). Construction and maintenance of independent public telecommunications networks shall be performed by licensed service providers to meet needs of public and private legal entities (Section 53(3)).	
The former Yugoslav Republic of Macedonia	General authorisation with notification	General authorisation with notification

Country	Authorisation requirements for fixed telephony	
	Fixed networks	Telephony services
Turkey	Turk Telekom operates under the Authorisation Agreement	Type 2 Telecommunications Licence (for national and international long distance telephony service providers)

Table 17 - Licensing requirements for public fixed telecommunications networks and services

Table 18 summarises licensing requirements for wireless local loop (WLL). Fixed wireless access subscriber access applications such as WLL could represent reliable and cost effective complements or alternatives for providing voice and data services, especially in the SEE countries where the penetration of fixed networks is still relatively low and unbundled access to the incumbent's copper local loops is not available.

Country	Licensing requirements for wireless local loop				
	Licensing requirements	Legal basis	Auction vs. beauty contest	Frequency bands	Status and number of awarded licences
Albania	For local services, a frequency licence from the TRE (depending on type of equipment and availability of frequencies). Individual licence (issued by government) is necessary for nation-wide services.	Law No. 8618 of June 14, 2000 Council of Ministers Decision No. 692 of Dec. 27, 2002	Public tender (international bid)	3.4-3.6 GHz 10.5 GHz 26 GHz	None
Bosnia & Herzegovina	Individual licence which includes a frequency licence	Regulations on the use of the particular spectrum band	Public tender on the basis of the beauty contest	3.4 – 3.6 GHz	None

Country	Licensing requirements for wireless local loop				
	Licensing requirements	**Legal basis**	**Auction vs. beauty contest**	**Frequency bands**	**Status and number of awarded licences**
Bulgaria	Individual licensing for point-to-multipoint (PMP) FWA in the following bands: 3.4 – 3.6 GHz 3.6 – 3.8 GHz (for private networks only) 26 GHz WLL DECT	Art. 49(2)1 of TA, Art. 2 (1) of Regulation No. 13 of 2003 (on licensing requirements) Ordinance of August 12, 2004; Ordinance No. 7 of Oct. 4, 2004	Planned auctions for two 3.4-3.6 GHz national licenses 3.6 – 3.8 GHz (for private networks only, no contest or auction) 26 GHz	WLL: 2400 – 2483.5 MHz 5150 – 5350 MHz 5470 – 5 725 MHz PMP FWA: 3.4 – 3.6 GHz 3.6 – 3.8 GHz (for private networks only) 26 GHz DECT 1880 – 1900 MHz	1 licence 3.6 – 3.8 GHz 1 DECT licence
Croatia	Licence for provision of services, individual licence for base stations, licence exemption for user terminals	Law on telecommunications, By-law on concessions and licences for provision of telecommunications services	Public tender on the basis of the beauty contest	3.4 – 3.6 GHz for FWA; 24.5 – 26.5 GHz for FWA	3 licences in 3.4 – 3.6 GHz
Romania	General authorisation from ANRC and frequency licence granted by the Inspectorate General for Communications and Information Technology (IGCTI) is required.	Art. 4 par. (2) and Art. 14 par. (1) from Government Emergency Ordinance No. 79/2002 on the general regulatory framework for communications	Auction Up to now have been granted: 97 licences in 3.5 GHz band 62 licences in 26 GHz band	3.4 – 3.6 GHz 24.5 – 26.5 GHz	17 operators
Serbia & Montenegro - *Montenegro*	Frequency licence	Rulebook of issuing and register general and specific licences (Official Gazette No. 08/2002)	The contests are not yet organised (no demand for licences)	3.4 – 3.6 GHz 10.15 – 10.30 GHz 24.5–26.5 GHz 27.5–29.5 GHz	None
Serbia & Montenegro - *Serbia*	Frequency licence	Yes	Not decided	3.4 – 3.6 GHz 10.15 – 10.30 GHz 24.50 – 26.50 GHz	None

Country	Licensing requirements for wireless local loop				
	Licensing requirements	**Legal basis**	**Auction vs. beauty contest**	**Frequency bands**	**Status and number of awarded licences**
Serbia & Montenegro - *Kosovo*	No licences available	-	-	-	-
The former Yugoslav Republic of Macedonia	Notification and permission for using radio frequencies	Law on electronic communications of 2005	Public tender is planned	3.4-3.6 GHz 5.150-5.350 GHz 5.470-5.725 GHz 24.5-26.5 GHz 27.5-29.5 GHz	None
Turkey	Individual licence	The Annex Ordinance about FWA of Authorization Ordinance.	Frequency allocations are planned to be made by auction.	24.5-26.5 GHz	No operators have been authorised yet.

Table 18 - Licensing requirements for wireless local loop

Table 19 summarises the authorisation requirements for Internet service providers (ISPs), and where ISPs have the right to interconnection, whether the call origination or call termination model is used for settlements between the incumbent operator and ISPs.

The call termination model, where the incumbent pays interconnection charges to the ISP for terminating Internet traffic and then bills the retail customer, prevails in Croatia, Serbia, Kosovo and is proposed in Albania. In Romania and Turkey, despite the ISP's right to interconnection, no interconnection agreements exist in practice between the incumbent and ISP. As a result, an alternative arrangement is used, where ISPs bill the end user for Internet access, while the incumbent, separately, for the line usage (including fixed charge and calling charge).

Country	Authorisation requirements for ISP	Interconnection	
		Right to interconnection	**Call origination or termination**
Albania	General (class) licence Internet licences issued by TRE classified into: PoP, local, regional, national and backbone.	Yes	Call termination model proposed in the draft Interconnection Agreement that is currently under discussion.
Bosnia & Herzegovina	General authorisation with notification	Yes	Call origination

Country	Authorisation requirements for ISP	Interconnection	
		Right to interconnection	Call origination or termination
Bulgaria	General authorisation without notification. Individual licence is required to provide public services with the use of numbers from the National Numbering Plan.	Yes	Both models are applicable, subject to commercial agreement.
Croatia	General authorisation with notification	Yes	Call termination
Romania	General authorisation with notification	Yes	Neither call termination nor call origination model is used, as there are no interconnection agreements between ISPs and the incumbent.
Serbia & Montenegro - *Montenegro*	General authorisation Individual licence - in the case of operating own network. The NRA to issue the Rulebook for Internet service providers by end 2005.	Yes (not applied in practice)	Call origination
Serbia & Montenegro - *Serbia*	Individual authorisation	Yes	Call termination
Serbia & Montenegro - *Kosovo*	Individual authorisation	Yes	Call termination
The former Yugoslav Republic of Macedonia	General authorisation with notification foreseen in the Electronic Communications Act, Article 144 should be implemented by Dec. 5, 2005 (previously provided on a concession basis).	Not unless the ISP has its own network. If the ISP has its own network, it is an Internet Services Operator and interconnection between two network operators is obligatory.	Call origination

Country	Authorisation requirements for ISP	Interconnection	
		Right to interconnection	Call origination or termination
Turkey	General authorisation with notification	Yes However, this is not applied in practice. See the next column for detailed information.	Neither call termination nor call origination model is used, as there are no interconnection agreements between ISPs and the incumbent. The ISP bills the customer for Internet access and the incumbent bills the customer for the line usage (fixed charge and calling charge)

Table 19 - Licensing requirements for Internet Service Providers

Table 20 addresses the NRA's official position on, and authorisation requirements for, the provision of voice telephony services over Internet protocol (VoIP).

Under the EU 1998 acquis, the status of VoIP on the EU level has been outlined in the "Commission Communication on the Status of voice on the Internet under Community Law, in particular under Directive 90/388/EC", the purpose of which was not to regulate VoIP services in the same way as voice telephony if they were not substitutable. Currently, there is no specific EU-level VoIP regulation, neither is there any specific voice telephony regulation which is the consequence of technology neutrality emphasised in the new regulatory framework. Under the EU 2003 package, VoIP providers operate under the same general authorisation regime as any other communications providers.

Only Romania and the former Yugoslav Republic of Macedonia currently have in place authorisation frameworks that are in line with the provisions of the Authorisation Directive.

In Bulgaria, VoIP telephony services had been offered freely even before the liberalisation on January 1, 2003, as long as the service did not qualify with the specific quality of service (QoS) requirements set for the fixed voice telephone service. On the other hand, compliance with QoS requirements is a minimum requirement for an authorisation that gives the right to interconnect (under RIO conditions of the incumbent). Therefore, VoIP service providers that seek a right to interconnect are required to apply for an authorisation.

In Croatia, under the Telecommunication Law of 1999, VoIP was considered a part of Internet service, so that no further authorisation was needed. Under the Law of 2003, VoIP has been defined as separate service requiring an authorisation with notification. Moreover, the authorisation fees for VoIP were initially kept unusually high: a €33,000 one-off fee plus an annual fee of 1% of revenue. The by-law on payments of fees for provision of telecommunication services amended on February 17, 2005, lowered the one-off fee by a factor of 50 to €670, and the annual fee was lowered tenfold, to 0.1%. It is left to the NRA to decide how the network access and interconnection regimes should be handled.

In Turkey, the provision of VoIP requires a long distance telephony service licence and is subject to the same conditions as the fixed voice telephony service.

Country	Voice over IP authorisation requirements		
	Official position on voice over IP	**Date of liberalisation**	**Licensing requirements**
Albania	No official position (currently under discussion)	-	-
Bosnia & Herzegovina	Commercial use of VoIP is prohibited for the time being.	-	-
Bulgaria	No official position No authorisation if the VoIP services do not meet the QoS parameters: R factor – not less than 75; one-way delay > 150 millisecond, set out by Art. 3, all. 2 of Regulation No. 12 of May 5, 2004 for fixed voice telephony service.	Not regulated.	No licensing/authorisation regime for VoIP
Croatia	The right to provide VoIP telecommunications services is acquired by a legal or natural person by submitting a written notification to the Agency.	June 30, 1999	General authorisation with notification
Romania	Based on the principle of technological neutrality, VoIP services are considered telephony services if they fall within the scope of the definition of the publicly available telephony services, provided for by Art. 2, par (1), letter c) of Law No. 304/2003 on the universal service and users' rights relating to electronic communications networks and services.	Jan. 1, 2003	General authorisation with notification
Serbia & Montenegro - *Montenegro*	VoIP has to be authorised as telephony services.	Jan. 1, 2004	Individual licence
Serbia & Montenegro - *Serbia*	No official position. VoIP offered by some ISPs, however, considered illegal.	-	VoIP is not yet regulated. NRA is entitled to determine the quality of service conditions

Country	Voice over IP authorisation requirements		
	Official position on voice over IP	**Date of liberalisation**	**Licensing requirements**
Serbia & Montenegro - *Kosovo*	No official position	-	Individual authorisation Secondary legislation on authorisation regime still to be adopted.
The former Yugoslav Republic of Macedonia	No official position. The Electronic Communications Act is technology neutral.	March 5, 2005	General authorisation with notification
Turkey	No specific position on VoIP. VoIP requires a long distance telephony service licence.	Jan. 1, 2004	Individual licence

Table 20 - Voice over IP licensing requirements

Table 21 below summarises the authorisation requirements for Cable TV networks.

In Albania, Romania and the former Yugoslav Republic of Macedonia, an authorisation from two respective national authorities may be required: an authorisation from the national broadcasting authority for the provision of content over Cable TV networks, and an authorisation from the NRA responsible for telecommunications sector for the construction of cable infrastructure.

In Turkey, the Telecommunications Authority has recently issued a regulation on the licensing of cable platform services (Ordinance Amending the Ordinance on the Authorisation of Telecommunications Services and Infrastructure, Official Gazette No 25718, February 5, 2005). Under the regulation, the provision of cable platform services requires a type 2 telecommunications licence valid for 20 years. Cable platform services are defined as the one-way and two-way provision of all kinds of sound, data, image, and radio/TV signals over the cable platform network, including telephone services as well as radio, TV, Internet and data. The authorisation also covers the establishment of infrastructure.

Authorisation frameworks for cable TV still have to be defined in Serbia and Kosovo.

Country	Cable TV licensing			
	Availability of Cable TV licences	**Licensing requirement**	**Number of national licences**	**Number of local licences**
Albania	Available	Licence The National Council of Radio and Television-NCRT, is the authority responsible for the Cable TV licences. The TRE issues the authorisation for the construction of cable network. (Law No. 8410 of Sept. 30, 1998 "On private and Public Radio and Television in the Republic of Albania". Art. 123, 127)	-	26
Bosnia & Herzegovina	Generally available	Individual licence	-	51
Bulgaria	Generally available	General authorisation	-	647
Croatia	Generally available	Individual licence	2	24
Romania	Cable TV licences are generally available to any organisation that wishes to operate nationally or locally	General authorisation – ANRC Individual licences or notices from the National Audio-Visual Council (CNA) / Individual licences or authorisations from the IGCTI	-	The National Audio-Visual Council (CNA) granted 653 licences for Cable TV operators. Licenses were granted in 8,610 localities.
Serbia & Montenegro - *Montenegro*	Generally available	Individual licence issued by the Broadcasting Agency of the Republic of Montenegro.	-	1

Country	Cable TV licensing			
	Availability of Cable TV licences	**Licensing requirement**	**Number of national licences**	**Number of local licences**
Serbia & Montenegro - *Serbia*	Authorisation requirements for Cable TV still to be defined.	-	-	The licences for Cable TV are not issued, however there are more than 20 Cable TV operators in bigger cities with more than 400,000 subscribers.
Serbia & Montenegro - *Kosovo*	Authorisation requirements for Cable TV still to be defined.	-	-	-
The former Yugoslav Republic of Macedonia	Available	The Broadcasting Council is responsible for issuing concessions for the content, according to the Broadcasting Law; The Agency for electronic communications is responsible for notifications for provisioning telecommunication services and permission for using frequencies.	0	In the past, 65 concessions were awarded by the Broadcasting council for covering local areas. Service provision has to be harmonised and comply with the new Electronic Communications Law by Dec. 5, 2005.
Turkey	Cable TV licences are generally available to any organisation that wishes to operate nationally or locally	Individual licence – Type 2 telecommunications licence.	1	0

Table 21 - Cable TV licensing requirements

3. Authorisation fees

General authorisations as well as individual licences may be subject to authorisation fees. In many countries, such fees have been quite high in the period immediately after termination of monopoly rights. The high level may be triggered by the fact that the telecommunications sector represents a potential source of revenues for the state budget as much as an objective to protect the incumbent operator. Regardless of the purpose, high authorisation fees may constitute a barrier to entry into the market and, in addition, they send signals that the market is not fully liberalised.

The regulatory framework of the EU, both the 1998 acquis and the 2003 acquis, requires authorisation fees to be limited to what is necessary to cover the administrative cost of the regulatory authority. Only those fees that are paid for access to limited resources may deviate from this criterion. In practice, this means that all fees levied by the NRA are affected by this requirement, with the exception of fees for:

- radio frequency spectrum where demand exceeds supply;
- numbering resources. Normally, the national numbering plan must be managed so there are sufficient numbers for all operators. Since the theoretical numbering space available is unlimited, the only limited resource in the longer term is special short numbers represented by a limited number of digits.
- Rights of way. In theory, rights of way can represent a limited resource under certain circumstances but normally, the availability of land and rights of way does not represent a limited resource.

Table 22 below provides an overview of one-off and annual fees for two important telecommunications services for which the number of operators is not limited because of resource constraints.

Country	Fixed telephony networks and services		Voice over IP	
	One time fees	Annual fees	One time fees	Annual fees
Albania	see note below	54,829	not defined	not defined
Bosnia & Herzegovina	0	60,000	0	0
Bulgaria	31,700	revenue related	0	0
Croatia	2,607	revenue related	652	revenue related
Romania	notification only	revenue related	notification only	revenue related
Serbia & Montenegro - Montenegro	6,000,000	revenue related	specific licence	revenue related
Serbia & Montenegro - Serbia	not yet available	not yet available	not yet available	not yet available
Serbia & Montenegro - · Kosovo	2,900,000	under preparation	not yet available	not yet available
The former Yugoslav Republic of Macedonia	notification only	under preparation	notification only	under preparation
Turkey	250,000	revenue related	250,000	revenue related

Table 22 – Authorisation fees

Notes:
Albania: A Licence of First category is required for fixed telephony networks and services. According to the Law on Telecommunications in the Republic of Albania such licences are awarded through a beauty contest where the offer of a one time licence fee is one of the criteria. The licensing conditions for VoIP services have not yet been determined.
Bosnia and Herzegovina: The fixed telephony network licence (on the national level) has an annual fee of €25,000. The fixed telephony service licence has an annual fee of €35,000. Thus the total for the two licences is €60,000. VoIP licences are not yet issued and the authorisation fee is not yet determined. The authorisation fee for an ISP is €2,000 per year.

Bulgaria: VoIP operators are not covered by the Telecommunications law and can operate legally without any rights and obligations stemming from this law. In particular, they do not have interconnection privileges and many operate on the basis of retail based ISDN origination and termination. If they meet certain minimum quality criteria, they can alternatively choose to operate as a telephony operator.
Montenegro: The telephony fee is the one paid by the incumbent operator. This is currently the only national licence for fixed telephony network and services. VoIP operations require a specific telephony service licence subject to a one-off-fee to be set following a tender procedure and an annual revenue-related fee.
Kosovo: The fixed telephony fees are not actually established as one-time fees, as no secondary legislation on licensing and authorisations has been adopted. The fee for fixed telephony networks and services is the one paid by the incumbent operator, PTK, set in its licence according to the agreement between UNMIK and the Government. The licensing conditions for VoIP services have not yet been determined.
The former Yugoslav Republic of Macedonia: All services that do not require limited resources can be carried out on the basis of a notification.
Turkey – The operation of a national fixed network and telephony service requires a Type 1 Telecommunications licence and these are issued in limited numbers in an auction. A Type 2 Telecommunications licence is required for more limited activities, such as the provision of long distance services, and these may cost as much as €250,000 plus 0.5% of net annual sales. The licence fee shown in the table is for a long distance carrier with a Type 2 Telecommunications licence subcategory A, which may operate on the basis of carrier pre-selection.

4. Status of fixed network competition

Table 23 provides information about the number of licensed operators in fixed telephony across the SEE countries. This is an essential indicator of the liberalisation of the fixed market and is provided for two types of licenses:

- number of licences issued for provision of public voice telephony (local/national);
- number of licences issued for the operation of public network infrastructure and the provision of network services (local/national).

In Albania, in practice the alternative operators are only offering services in rural areas: all 51 local operators are the operators licensed for rural telecommunications. No licences have been issued so far to alternative long distance carriers, and Albtelecom remains the only provider of national long distance networks and services, although the market was formally liberalised in 2003. Similarly, in Montenegro, where the market was formally liberalised on January 1, 2004, Telecom Montenegro, the incumbent, remains the only licensed fixed telephony operator. In Kosovo, the incumbent PTK is also the only authorised provider of public fixed telephone networks and services. The ERT issued the licence to PTK on July 30, 2004 in accordance with Section 50 of the Telecommunications Law. Secondary legislation on the authorisation regime still has to be adopted, and the issuing of first licences to alternative providers of public fixed telephony services is foreseen after the privatisation of PTK.

In Serbia, no licences have been issued so far and the authorisation framework still has to be addressed in secondary legislation. Telekom Serbia is the only de facto operator of public voice telephony and network services.

In Bosnia and Herzegovina, the three regional incumbent operators remain the only providers of fixed networks and long-distance national telephone services. Competition is only present at the level of local services provision.

In the former Yugoslav Republic of Macedonia, liberalisation was introduced by the new Electronic Communications Law of March 5, 2005. However, no licences have been issued so far pending adoption of the secondary legislation. Macedonian Telecom, the incumbent operator, provides fixed telecommunications services according to the Concession Agreement issued under the previous law.

Country	Number of licences for provision of fixed telecommunications services			
	Public voice telephony		Network services	
	Local	National	Local	National
Albania	51	1	51	1
Bosnia & Herzegovina	3	3	64	3
Bulgaria	0	0	0	13* 10**
Croatia	-	8	2	7
Romania	233 authorised providers		1711 authorised providers	
Serbia & Montenegro - *Montenegro*	1	1	1	1
Serbia & Montenegro - *Serbia*	-	-	-	-
Serbia & Montenegro - *Kosovo*	1	1	1	1
The former Yugoslav Republic of Macedonia	-	-	-	-
Turkey	1	44	1	1

Table 23 - Number of licences for provision of fixed telecommunications services

Note:
Bulgaria: * Number of licensed operators for fixed networks and services. ** Number of licensed operators of fixed networks for the provision of fixed telephone service through carrier selection and carrier pre-selection.

Table 24 below shows the proportion of fixed numbers allocated to alternative operators, which is also an important indicator of the actual state of competition in the fixed market.

Country	Percentage of fixed numbers allocated to fixed incumbent operator	Percentage of fixed numbers allocated to fixed alternative operators
Albania	89.6%	10.6%
Bosnia & Herzegovina	100%	-
Bulgaria	97%	3%
Croatia	98.6%	1.4%
Romania	47.9%	52.1%
Serbia & Montenegro - *Montenegro*	100%	-
Serbia & Montenegro - *Serbia*	100%	-
Serbia & Montenegro - *Kosovo*	100%	-
The former Yugoslav Republic of Macedonia	100%	-
Turkey	100%	-

Table 24 - Proportion of fixed numbers allocated to the fixed incumbent and to fixed alternative operators

5. Radio networks and services

Table 25 shows 2G mobile licences granted in the SEE countries

Country	Number of 2G operators and licences for the provision of digital mobile services		
	GSM 900 licences Operator names	DCS (GSM 1800) licences Operator names	Sum 2G operators
Albania	• Albanian Mobile Communications (GSM 900/1800) • Vodafone Albania (GSM 900/1800) • Eagle Mobile (GSM 900/1800) (not yet operational)		2+1
	Albanian Mobile Communication and Vodafone Albania are in operation. Eagle Mobile is under the process of network construction.		
Bosnia & Herzegovina	• BH Telecom d.d. Sarajevo (GSM 900, 1800) • Telekom Srpske a.d. Banja Luka (GSM 900/1800) • Hrvatske Telekomunikacije d.o.o. Mostar (GSM 900/1800)		3
Bulgaria	• Mobiltel AD (MTel) – GSM 900/1800 • Cosmo Bulgaria Mobile EAD (GloBul) – GSM 900/1800 • BTC Mobile EOOD - GSM 900/1800 (not yet operational)		3
	There is one analogue operator (Radio Telecommunication Company) using NMT 450 standard.		

Country	Number of 2G operators and licences for the provision of digital mobile services		
	GSM 900 licences **Operator names**	**DCS (GSM 1800) licences** **Operator names**	**Sum 2G operators**
Croatia	• T-Mobile Hrvatska d.o.o. (GSM-900); • VIPnet d.o.o. (GSM-900).	Tele2 d.o.o. (GSM/DCS-1800) – not yet operational	2+1
	On May 13, 2005 the NRA issued a public call for tenders for a fourth 2G (DCS 1800) mobile licence in Croatia. The bids were invited by June 17, 2005.		
Romania	• Mobifon SA – GSM 900 • Orange Romania SA – GSM 900	• Mobifon SA- DCS 1800 • Cosmorom SA – DCS 1800 • Orange Romania SA – DCS 1800	3
	In addition, Telemobil SA (ZAPP) has been issued a licence to operate a CDMA 2000 network in the 450 MHz spectrum band.		
Serbia & Montenegro - *Montenegro*	• Promonte (GSM-900/DCS-1800) • Monet (GSM-900/DCS-1800)		2
Serbia & Montenegro - *Serbia*	• "Telekom Srbija" a.d. (GSM 900/1800) • Mobile telecommunications "Srbija" BK-PTT (Mobtel) (GSM 900/1800 and NMT 900)		2
Serbia & Montenegro - *Kosovo*	• Vala 900 • Mobikos/Mobitel GSM 900/1800 (not operational)	Mobikos/Mobitel GSM 900/1800 (not operational)	2+1
	The second mobile operator de-facto operating in Kosovo is "Mobilne Telekomunikacije "Srbija" BK-PTT" (Mobtel), a GSM -900 MHz network operator that was present in Kosovo before the war; and although unlicensed after the war, it continues its operations. The TRA considers its operations unauthorised and Mobtel was requested by UNMIK to release GSM frequencies in Kosovo. The validity of the licence contract issued by the TRA to Mobikos/Mobitel was questioned by UNMIK and currently the matter is considered at the Supreme Court of Kosovo.		
The former Yugoslav Republic of Macedonia	• Mobimak AD , (GSM 900 MHz) • Cosmofon AD, (GSM 900 MHz)	-	2

Country	Number of 2G operators and licences for the provision of digital mobile services		
	GSM 900 licences Operator names	DCS (GSM 1800) licences Operator names	Sum 2G operators
Turkey	• Turkcell İletişim Hizmetleri A.Ş GSM(900) • Telsim Mobil Telekomünikasyon Hizmetleri A.Ş. GSM(900)	AVEA Telekomünikasyon Hizmetleri A.Ş. GSM(1800)	3
	NMT 450 network is operated by Türk Telekom in the scope of its Authorization Agreement (415.5-420/425.5-430 MHz).		

Table 25 - Number of 2G operators and licences for the provision of digital mobile services

Table 26 shows whether there is an obligation for the licensed mobile operators to provide access to virtual network operators and service providers.

Croatia is the only country, where mobile operators with SMP are required under Article 53(3) of the Telecommunications Law[7] to accept all reasonable requests for so-called special access, which covers any category of service providers and virtual operators.

Country	Legal obligation for mobile operators to deal with			Commercial reality
	Service providers	Enhanced service providers	Mobile virtual network operators	
Albania	Yes	No	No	No
Bosnia & Herzegovina	Yes	Yes	No	No
Bulgaria	No	No	No	No
Croatia	Yes	Yes	Yes	Yes SMS service providers
Romania	No	No	No	No
Serbia & Montenegro - *Montenegro*	No	No	No	No
Serbia & Montenegro - *Serbia*	No	No	No	Mobtel, as a MNO is in cooperation with a service and application provider.

[7] Operators with significant market power must meet the request for a special interface or a special network access if there are technical possibilities for that and if the principle of non-discrimination is not violated by that. The costs incurred from that request shall be subject to agreement between the operators and the applicant submitting the request, about which the operator must inform the Agency.

Country	Legal obligation for mobile operators to deal with			Commercial reality
	Service providers	Enhanced service providers	Mobile virtual network operators	
Serbia & Montenegro - *Kosovo*	No	No	No	No
The former Yugoslav Republic of Macedonia	No	No	No	No
Turkey	No	No	No	Yes, 1 airtime reseller is operating in the Turkish mobile market.

Table 26 - Service providers and mobile virtual network operators

Table 27 summarises information on 3G mobile licences granted in SEE countries.

Only in three countries – Bulgaria, Croatia and Romania – have licences for 3G mobile networks based on the UMTS standard been granted so far. In Croatia and Romania, the licences were awarded following a beauty contest procedure, in Bulgaria – by an auction.

In addition, in Romania, Telemobil SA was issued a licence to operate a CDMA 2000 network in the 450 MHz spectrum band.

In other countries, the timing for issuing 3G licences has not been decided yet.

In Serbia, trial 3G licences have been temporarily issued to both 2G operators in the 2 GHz band, subject to a payment of some sort of tax. This band is currently occupied and it is planned to make it available soon. However, there has been no decision on issuing 3G licences for the provision of public services.

Country	Licensees	Administrative fees	Spectrum fees	Deadline for service launch	Coverage and roll-out obligations
Bulgaria	*May 11, 2005*: Mobiltel; GloBul; BTC Mobile	*Mobiltel*: BGN 78m (€50m) for Class A licence (with 2x10 MHz and 1x5 MHz capacity) *GloBul and BTC Mobile*: BGN 42m (€21.5m) for the two Class B licences (with 2x5 MHz and 1x5 MHz capacity, each)	Annual spectrum fees: Class A licence - BGN 2.5m (€1.3m); Class B licences - BGN 1.5m (€775,000), each	May 2007	Class A licence: • 20% population by May 2007 • 55% population by May 2010 Class B licences: • 15% population by May 2007 • 50% population by May 2010
Croatia	*Oct. 2004*: T-HT Mobile; VIPnet *Dec. 2004*: Tele2	*T-HT Mobile and VIPnet*: KN 132m (€°17.6m) *Tele2:* KN 172m (€ 22.9m) for a combined 2G/3G concession *All licensees:* annual fee of 1% revenue from UMTS service	Annual fee of KN 5m (€ 670,000) for 5 MHz frequency block	*T-HT Mobile and VIPnet:* June 2005 *Tele2:* August 2005	• 25% of population within two years after the grant of concession • 50% of population within five years after the grant of concession Within maximum two years after the grant of concession, the third operator (Tele2) has the option to request additional time from the NRA to meet the above 3G obligations.
Romania	*Nov. 12, 2004.* Mobifon Orange	$35m payable in six instalments as follows: • $10.5m within 120 days after the notification announcing the winner of the auction and • the next five annual instalments, of $4.9m each, starting from 2006	Each 3G licensee pays to IGCTI an annual tariff for the use of the spectrum: €1.2m/paired block of 2x5 MHz/ year; €600,000/ unpaired block of 5 MHz/year	Individual commitments In April 2005, Mobifon launched 3G services, with coverage area in 8 cities.	The minimum coverage by Dec 31, 2011 shall comprise Bucharest and 10 major towns, chosen by the applicant. The coverage, distribution and deployment rate will be evaluated based on the candidates' commitment for three different deadlines: Dec. 31, 2005, Dec. 31, 2008 and Dec. 31, 2011.

Table 27 - Information about assigned UMTS licences

Three frequency bands have been reserved for R-LAN systems by two European Radiocommunications Committee (ERC) Decisions:

Frequency band	ERC Decisions
2.400 – 2.483 GHz (max. 100 mW)	ERC Decision 01/07
5.150 – 5.350 GHz (indoor only max. 200 mW) 5.470 – 5.725 GHz (indoor and outdoor max. 1 W)	ECC Decision 04/08 (replaces ERC Decision 99/23)

Table 28 below shows whether:

- the full frequencies in the 2.4 GHz and 5 GHz bands are available for R-LAN systems;
- the operation of a public R-LAN network for the provision of public access to a licensed telecommunications network is subject to an individual licence or a general authorisation (with or without registration);
- the incumbent operates a commercial service.

Country	Public Radio Local Area Networks (R-LAN)			
	Full frequency bands available		Licensing requirements for provision of access to public network	Availability of commercial service by the incumbent operator
	2.4 GHz	5 GHz		
Albania	Yes	Yes	General authorisation	Yes
Bosnia & Herzegovina	Yes	Yes	General authorisation	No
Bulgaria	Yes	Yes	General authorisation with notification to the CRC	Yes
Croatia	Yes	Yes	General authorisation	Incumbent – No Others - Yes
Romania	Yes	No (5.8 GHz only)	General authorization with notification to ANRC	No
Serbia & Montenegro - *Montenegro*	Yes	No	Individual licence only for public telecommunication services, general authorisation for other	No

Country	Public Radio Local Area Networks (R-LAN)			
	Full frequency bands available		Licensing requirements for provision of access to public network	Availability of commercial service by the incumbent operator
	2.4 GHz	5 GHz		
Serbia & Montenegro - *Serbia*	Yes	Yes	General authorisation is foreseen	No
Serbia & Montenegro - *Kosovo*	Yes	No	General authorisation is foreseen	No
The former Yugoslav Republic of Macedonia	Yes	Yes	Notification and permission for using radio frequencies	No
Turkey	Yes	Yes	The regulation studies on Public R-LAN Services are underway. At present, R-LAN services are available for indoor applications. Authorisation requirement for outdoor applications is planned to be a general authorisation in the scope of the study about R-LAN services. No requirement for indoor applications.	No The incumbent operator - Türk Telekom- will have the right to provide Public R-LAN services in the scope of its Authorization Agreement.

Table 28 - Public Radio Local Area Networks (R-LAN)

D. Regulations – Competitive safeguards

The information in this chapter is intended to reflect the situation as it existed on April 1, 2005.

1. Carrier selection and pre-selection

Carrier selection and pre-selection are the basic mechanisms for enabling competition while a national market is being liberalised. Carrier selection allows a subscriber, who is connected to the incumbent operator's network, to select a competitive operator to perform local calls, long-distance calls and/or international calls by dialling a carrier selection sequence.

When carrier pre-selection is available, the subscriber can make a permanent (or semi-permanent) selection of an alternative operator for all calls or certain types of call.

Article 19 of the Universal Service Directive requires carrier selection and pre-selection from all operators of fixed telephony with significant market power.

The next two tables present the status for carrier selection and pre-selection. The very early phases of liberalisation are demonstrated by the fact that very few of the geographic units have implemented these mechanisms by April 1, 2005.

Romania has carrier selection for all types of calls, but no carrier pre-selection at all. Bulgaria has both carrier selection and pre-selection for long distance and international calls, but no type of carrier selection for other types of call. There are 10 licensed operators for CS and CPS services but no one is operating on the reference date.

Croatia and Turkey have legal requirements for carrier selection, but on April 1, 2005 these requirements were not yet implemented in practice. Serbia also has provisions for carrier selection in its Telecommunications Law of 2003, but its implementation requires further guidelines from the NRA which is not yet established.

The former Yugoslav Republic of Macedonia has, in its new Telecommunications Act of February 2005, a legal requirement to introduce carrier selection and pre-selection by September 1, 2005.

Albania has made provisions for carrier selection in its numbering plan, but other aspects are still under debate.

Country	Carrier selection				
	Local calls	Long distance calls	International calls	Calls to mobile	Calls to non-geographical numbers
Albania	Not decided yet	Not decided yet	Not decided yet	Not decided yet	Not decided yet
Bosnia & Herzegovina	Implementation foreseen after 1.1.2006	Implementation foreseen after 1.1.2006	Implementation foreseen after 1.1.2006	Implementation foreseen after 1.1.2006	Implementation foreseen after 1.1.2006
Bulgaria	Not available	29.06.2004	29.06.2004	Not available	Not available

Country	Carrier selection				
	Local calls	Long distance calls	International calls	Calls to mobile	Calls to non-geographical numbers
Croatia	1.1.2003 Not available yet	1.1.2003 Not available yet	1.1.2003 Not available yet	1.1.2003 Not available yet	Not decided
Romania	February 2003	February 2003	February 2003	February 2003	February 2003
Serbia & Montenegro - *Montenegro*	Not defined yet	Not defined yet	Not defined yet	Not defined yet	Not defined yet
Serbia & Montenegro - *Serbia*	Legal obligation not yet applied	Legal obligation not yet applied	Legal obligation not yet applied	Legal obligation not yet applied	Legal obligation not yet applied
Serbia & Montenegro - · *Kosovo*	Not decided	Not decided	Not decided	Not decided	Not decided
The former Yugoslav Republic of Macedonia	30.09.2005 (legal requirement)	30.09.2005 (legal requirement)	30.09.2005 (legal requirement)	30.09.2005 (legal requirement)	30.09.2005 (legal requirement)
Turkey	Carrier selection is not implemented for local calls	17.05.2004 legally But due to the technical problems, currently it is implemented via calling card services only	17.05.2004 legally But due to the technical problems, currently it is implemented via calling card services only	17.05.2004 legally But due to the technical problems, currently it is implemented via calling card services only	17.05.2004 legally But due to the technical problems, currently it is implemented via calling card services only

Table 29 - Availability of carrier selection

Country	Carrier pre-selection				
	Local calls	Long distance calls	International calls	Calls to mobile	Calls to non-geographical numbers
Albania	Not decided yet	Not decided yet	Not decided yet	Not decided yet	Not decided yet
Bosnia & Herzegovina	Implementation foreseen after 1.1.2006	Implementation foreseen after 1.1.2006	Implementation foreseen after 1.1.2006	Implementation foreseen after 1.1.2006	Implementation foreseen after 1.1.2006
Bulgaria	Not available	01.01.2005	01.01.2005	Not available	Not available
Croatia	02. 04. 2005 Not available yet	02. 04. 2005 Not available yet	02. 04. 2005 Not available yet	02. 04. 2005 Not available yet	Not decided
Romania	Obligation foreseen after mid 2006	Obligation foreseen after mid 2006	Obligation foreseen after mid 2006	Obligation foreseen after mid 2006	Obligation foreseen after mid 2006

Country	Carrier pre-selection				
	Local calls	Long distance calls	International calls	Calls to mobile	Calls to non-geographical numbers
Serbia & Montenegro - *Montenegro*	Not defined yet	Not defined yet	Not defined yet	Not defined yet	Not defined yet
Serbia & Montenegro - *Serbia*	Legal obligation not yet applied	Legal obligation not yet applied	Legal obligation not yet applied	Legal obligation not yet applied	Legal obligation not yet applied
Serbia & Montenegro - · *Kosovo*	Not decided	Not decided	Not decided	Not decided	Not decided
The former Yugoslav Republic of Macedonia	30.09.2005 (legal requirement)	30.09.2005 (legal requirement)	30.09.2005 (legal requirement)	30.09.2005 (legal requirement)	30.09.2005 (legal requirement)
Turkey	Carrier pre-selection is not implemented for local calls	17.05.2005 target date	17.05.2005 target date	17.05.2005 target date	17.05.2005 target date

Table 30 - Availability of carrier pre-selection

The number of operators with allocated access code provides a good indicator of the level of competition in the national telephony markets. Given the early phase of liberalisation in this region, it is not surprising that most of the geographic units are still without any such alternative operators.

Romania has 47 operators with access codes and 31 of these could be reached through carrier selection by the end of 2004.

Turkey has 25 alternative operators with access codes, but carrier selection procedures are not yet operational for technical reasons.

Croatia has three operators with access codes, but by April 1, 2005, the carrier selection procedures were not yet operational.

Country	Operators with allocated access code	Operators using CS for the provision of services	Operators using CPS for the provision of services
Albania	0	0	0
Bosnia & Herzegovina	0	0	0
Bulgaria	10	0	0
Croatia	3	0	0
Romania	47	31	0
Serbia & Montenegro - *Montenegro*	0	0	0

Country	Operators with allocated access code	Operators using CS for the provision of services	Operators using CPS for the provision of services
Serbia & Montenegro - *Serbia*	0	0	0
Serbia & Montenegro - *Kosovo*	0	0	0
The former Yugoslav Republic of Macedonia	0	0	0
Turkey	25	0	0

Table 31 - Operators with allocated access codes and use of CS and CPS for provision of voice telephony

Notes:
Bulgaria: The ten Bulgarian operators were not yet operating under the interconnection agreement by January 1, 2004. Their operating licences make no distinction between CS and CPS.
Romania: The reference date for the Romanian numbers is January 1, 2004.

2. Number portability

Another important competitive safeguard is number portability, which enables a subscriber to maintain his or her old telephone number when changing operator. This is particularly important for business users, for whom a change of telephone number is costly and represents a risk of loss of revenue.

Article 30 of the Universal Service Directive requires all operators of publicly available telephone services, mobile as well as fixed, to provide number portability.

Number portability is not yet implemented in any of the countries or geographic units being presented in this report. Bulgaria has set a date for its introduction from January 1, 2009 for fixed telephony. This date has been accepted by the European Commission because of Bulgaria's low degree of digitalisation (35%). Number portability normally requires digital switches for its implementation. For mobile networks, this is normally not a problem and Bulgaria will implement number portability for mobile numbers from January 1, 2007. This date coincides with the expected date of accession for Bulgaria.

A legal requirement has been established in Croatia (from April 2005) and in the former Yugoslav Republic of Macedonia (from March 2007). Serbia has a provision for number portability in its Telecommunications Law of 2003, but its implementation requires further guidelines from the NRA, which is not yet established. The other countries and geographic units have not yet taken a decision on number portability.

Kosovo does not have its own national prefix in the ITU's international numbering plan. Numbers in the fixed network use the +381 prefix of Serbia and Montenegro. A regime for number portability in the fixed network may be established during 2005. Only one of Kosovo's mobile operators, Mobtel (not authorised by TRA), is using numbers with the +381 prefix. The two others have made arrangements with Monaco and Slovenia for the use of numbers that belong to their numbering plans. It is not clear how number portability can be implemented under these circumstances.

Albania has taken some preliminary steps toward the introduction of a number portability requirement, but has not yet decided on the details.

Country	Geographic fixed numbers	Non-geographic fixed numbers	Mobile numbers
Albania	Not decided	Not decided	Not decided
Bosnia & Herzegovina	Not decided	Not decided	Not decided
Bulgaria	01.01.2009	01.01.2009	01.01.2007
Croatia	2. 4. 2005 Not yet implemented	2. 4. 2005 Not yet implemented	Planned for 30. 10. 2005
Romania	To be analysed in 2005	To be analysed in 2005	To be analysed in 2005
Serbia & Montenegro - *Montenegro*	Not decided	Not decided	Not decided
Serbia & Montenegro - *Serbia*	Legal obligation not yet applied	Legal obligation not yet applied	Legal obligation not yet applied
Serbia & Montenegro - · *Kosovo*	May be decided during 2006.	May be decided during 2006.	Not decided
The former Yugoslav Republic of Macedonia	05.03.2007	05.03.2007	05.03.2007
Turkey	Not yet Planned to issue regulation by the end of 2005	Not yet Planned to issue regulation by the end of 2005	Not yet Planned to issue regulation by the end of 2005

Table 32 - Availability of number portability

3. SMP regulations

The regulations for significant market power (SMP) set out the criteria for the designation of operators that subsequently will be subject to asymmetric ex-ante conditions. Such conditions, which apply only to SMP operators, typically set out requirements for competitive safeguards that are intended to protect alternative operators. Examples of such requirements, referred to in EU's regulatory jargon as "remedies", include non-discrimination, cost orientation and transparency. The transparency requirement is often further defined as a requirement for the establishment and publication of a reference interconnection offer.

Such regulations are normally implemented in primary and/or secondary legislation. The actual designation of an SMP operator is normally a regulatory decision. The remedies that apply to an SMP operator can either be pre-determined in legislation, as they were in the 1998 acquis, or defined as part of the regulatory decision as provided in the 2003 acquis.

The adoption of SMP regulations is normally a fairly straightforward process. Depending upon the designation procedures, the actual analysis required to come to a regulatory decision may be more or less demanding on a regulator.

The real challenge with SMP regulations is to make them apply in real world conflicts that arise between an SMP operator and a new entrant. Often, the regulatory authority has to intervene and resolve such conflicts.

It is difficult to find an indicator that can provide a useful measurement of effectiveness of a national SMP regime. The following table provides information on the status of the legal arrangement and on the operators that have been designated as having SMP. The table shows that only Serbia does not yet have such a framework in place. Nevertheless, Serbia considers that it has two operators with significant market power.

Only Romania has adopted the 2003 acquis and implemented a formal market analysis procedure. Since it is not an EU Member State, it does not have to notify the results of its market analyses to the European Commission and it has more freedom than an EU Member State to define its own markets relevant for ex ante regulation. The information in the table below shows that Romania, as a consequence of applying competition law principles in defining relevant markets, as required by the 2003 acquis, has a segmented definition of the relevant markets, and consequently of the scope of SMP designation, and an increased flexibility in the way the remedies can be applied.

Country	Legal scope of SMP designation	SMP remedies allowed by legislation	SMP designation in practice
Albania	Law No. 8618, dated 14.6.2000 Definition as Organization with Significant Market Power Art. 2, Para. No. 11* Determination as Organisation with Significant Market Power by TRE. Art. 17* Obligations for Interconnection of Organisation with Significant Market Power Art. 42 *	• Non-discrimination • Cost-orientation • Transparency • Meet all reasonable request for access • Respect confidentiality	Albtelecom AMC Vodafone Albania
Bosnia & Herzegovina	• Law on Communications 2003, Art. 14 provides a general provision for designation of SMP based on competition law principles • Leased lines Art. 17	• Non-discrimination • Cost-orientation • Transparency • Meet all reasonable request for access • Respect confidentiality	During assigning the Licences for public fixed telephony operators, there were appointed three SMP operators: • BH Telecom d.d. Sarajevo • Telekom Srpske a.d. Banja Luka • Hrvatske Telekomunikacije d.o.o. Mostar

Country	Legal scope of SMP designation	SMP remedies allowed by legislation	SMP designation in practice
Bulgaria	Telecommunications Act, Articles 44 and 45, all. 2: • Fixed telephone networks and provision of fixed voice telephone services • Provision of service "leased lines" • Mobile telecommunications networks and provision of voice telephone services through them NB The interconnection market is not included in the Bulgarian regime.	• Non-discrimination; • Meet all reasonable request for access • RIO and RUO • Transparency and access to information; • Cost-orientation; • Accounting separation; • Respect confidentiality; • Co-location for Interconnection, • Provision of "leased lines", special access, local loop unbundling and co-location.	1. Bulgarian Telecommunication Company EAD (fixed voice telephony network and fixed voice telephone services; leased lines). BTC is designated as SMP operator and all the remedies, set out by virtue of the TA are imposed. 2. Mobiltel AD (mobile networks and services) is required to ensure only non-discriminatory conditions for interconnection, transparency and confidentiality.
Croatia	Law on telecommunications Art 51 – 64 refers in general to relevant markets, and specifically to: • public voice services in the fixed network; • public mobile services; • interconnection markets; • leased lines;	• Non-discrimination • cost-orientation • transparency • meet all reasonable request for access • respect confidentiality • accounting separation • local loop unbundling • price control	HT- Hrvatske Telekomunikacije d.d. (fixed operator) T-Mobile Hrvatska d.o.o. VIPnet d.o.o.(mobile operator)
Romania	**Art. 32 par.(1)-(3) of Government Emergency Ordinance No. 79/2002** sets up the legal bases for identification of relevant markets and for designating significant market power providers. Decision of president of ANRC No. 136/2002, with subsequent completions, identifies the following relevant wholesale markets: • Access to the fixed public telephone networks for the purpose of call origination, termination and transit	**Wholesale markets**: • transparency • non-discrimination, • accounting separation, • access to and use of specific network elements • cost orientation. **Retail markets**: for all SMP providers of EC services:	Romtelecom Mobifon Orange Romania Telemobil Cosmorom

Country	Legal scope of SMP designation	SMP remedies allowed by legislation	SMP designation in practice
	• Full or shared unbundled access to the twisted metallic pair local loop, for the purpose of providing broadband electronic communications services and publicly available telephone services at fixed locations • "Bit-stream" access to the twisted metallic pair, optical fibre, or coaxial cable local loop and to the radio local loop, for the purpose of providing broadband electronic communication services • Terminating segments of leased lines • Trunk segments of leased lines • Access to the public mobile telephone networks operated by each Romanian mobile operators for the purpose of call termination and the following relevant retail markets: • Access at a fixed location to a public telephone network for residential customers / for non-residential customers • Local calls at a fixed location for residential customers / for non-residential customers • National calls at a fixed location for residential customers / for non-residential customers • Calls at a fixed location to public mobile telephone networks for residential customers / for non-residential customers • International calls at a fixed location for residential customers / for non-residential customers	• the interdiction of excessive prices • the interdiction predatory prices • the interdiction of undue preference to specific end-users; • services unbundling - for SMP providers of access to a public telephony network at a fixed location: • carrier selection • carrier pre-selection - for SMP providers of leased lines services: • provision of part or all of the minimum set of leased lines, non-discrimination, cost orientation and transparency	
Serbia & Montenegro - *Montenegro*	Articles 12, 28, 29, 37 in Telecommunications Law (Official Gazette of the Republic of Montenegro, No. 59/2000)	• non-discrimination • cost-orientation • transparency • meet all reasonable requests for access • respect confidentiality	Telecom Montenegro Internet CG

Country	Legal scope of SMP designation	SMP remedies allowed by legislation	SMP designation in practice
Serbia & Montenegro - *Serbia*	Not yet	Not yet	Telekom Srbija (100% of fixed network and services market, 53% mobile network and services market) Mobtel (47% of mobile market)
Serbia & Montenegro - · *Kosovo*	Regulation 2003/16 Section 55 Open Access to Networks and Services	• non-discrimination • cost-orientation • transparency • meet all reasonable requests for access • respect confidentiality	PTK
The former Yugoslav Republic of Macedonia	Reference to Law on electronic communications, Art 146 • Fixed telephony network, • Fixed telephony services, • Leased lines	• non-discrimination • cost-orientation • transparency • meet all reasonable request for access • respect confidentiality • interconnection obligation • accounting separation • minimum set of leased lines • retail rate regulation • carrier selection and pre – selection	Makedonski Telekomunikacii A.D.

Country	Legal scope of SMP designation	SMP remedies allowed by legislation	SMP designation in practice
Turkey	• Tariff Ordinance, Art .2 • Ordinance on Access and Interconnection , Art 7,10,14,15,16,18,19,24 • Ordinance on Quality of Service in the Telecommunications Sector, Articles 6-19 and temporary Article 1. • Communiqué on Defining Operators Having SMP This document refers to "relevant markets" in general.	• non-discrimination • cost-orientation • transparency • meet all reasonable request for access • respect confidentiality • obligation to follow national and international QoS standards	Türk Telekom A.Ş. (Fixed) Turkcell İletişim Hizmetleri A.Ş. (Mobile)

Table 33 - SMP regulations as a competitive safeguard

The designation of operators having SMP is done for a number of specific markets. Under the new regulatory framework in the EU (the 2003 acquis), the European Commission has defined 18 relevant markets to be analysed in order to determine one or more operators having SMP. Seven of these are retail markets. The other eleven are wholesale markets, three of which are related to fixed network interconnection (fixed call origination, termination and transit and two – to mobile network interconnection (mobile call origination and call termination on individual mobile networks).

The previous 1998 acquis defined four broader markets relevant for ex ante regulation, in such a way that they included both retail and wholesale aspects. These markets covered: public fixed telephony networks and services, leased lines, public mobile telephony networks and public mobile telephony services. In addition, mobile operators designated as having SMP in the overall market for interconnection would be subject to a set of specific obligations.

The table below shows whether national operators have been designated as having SMP in a market that implies specific interconnection obligations, whether there is a requirement for its interconnection tariffs to be cost oriented, and what type of cost orientation principle applies.

The table shows that only Bulgaria, Serbia and Turkey have not yet applied cost orientation requirements for interconnection.

For Bulgaria, the interconnection market is not defined as a relevant market in the Bulgarian Telecommunications Act and for this reason no SMP regulations are applied. This may be based on a misinterpretation of the 1998 acquis, where the SMP regime is associated with the broader activities such as the fixed public telephone network and the public mobile telephone network. Under the 1998 acquis, a public fixed telephone network operator designated as having SMP is always considered to have SMP on the interconnection market. A public mobile telephone network operator, on the other hand, is only considered to have SMP on the interconnection market if it passes the additional test of having more than 25% market share on the total interconnection market (combining both fixed and mobile traffic).

In the case of Serbia, SMP designation is yet another task that awaits the NRA once it is established.

Most of the geographic units have applied a cost orientation requirement for fixed network interconnection charges of operators with SMP. Albania, Croatia, Montenegro, Kosovo and Romania have also regulations in place for cost orientation for the mobile operators with significant market power.

The former Yugoslav Republic of Macedonia has not yet decided on the cost accounting principles that will apply to interconnection.

Country	SMP on interconnection					
	Number of SMP operators		Cost orientation imposition for SMP operators			
	Fixed	Mobile	Fixed	Mobile	Cost base	Cost standard
Albania	Albtelecom	Albanian Mobile Communications Vodafone Albania	Albtelecom	Albanian Mobile Communications Vodafone Albania	-	-
Bosnia & Herzegovina	BH Telecom d.d. Sarajevo Telekom Srpske a.d. Banja Luka Hrvatske Telekomunikacije d.o.o. Mostar	-	Yes	-	Forward looking historic Bench-marking	LRIC Bench-marking
Bulgaria	None	None	n/a	n/a	n/a	n/a
Croatia	HT- Hrvatske Telekomunikacije d.d.	T-Mobile Hrvatska d.o.o. VIPnet d.o.o	Yes	Yes	Not specified Benchmarking	Not specified Benchmarking
Romania	Romtelecom	-	Yes	-	Current cost	LRAIC
		Mobifon	-	Yes	Current cost	LRAIC
		Orange Romania	-	Yes	Current cost	LRAIC
		Telemobil	-	No	-	
		Cosmorom	-	No	-	
Serbia & Montenegro - *Montenegro*	Telecom Montenegro	• Promonte • Monet	Yes	Yes	Current historic	Fully distributed costs
Serbia & Montenegro - *Serbia*	None	None	-	-	-	-
Serbia & Montenegro - · *Kosovo*	PTK	PTK (Vala 900)	Yes	Yes	Effectively bench-marking	Effectively bench-marking

Country	SMP on interconnection					
	Number of SMP operators		Cost orientation imposition for SMP operators			
	Fixed	Mobile	Fixed	Mobile	Cost base	Cost standard
The former Yugoslav Republic of Macedonia	Makedonski Telekomunikacii A.D.	None	Yes	n/a	*	*
Turkey	Turk Telecom	Turkcell	Yes	Yes	-	-

Table 34 - Operators declared as having SMP on interconnection and imposition of cost orientation

Note:
Romania: Orange and Mobifon are required to charge cost oriented termination tariffs based on LRIC model, which will be approved by ANRC. Until LRIC is implemented, Orange and Mobifon MTRs are regulated by a price cap.

4. Reference interconnection offer (RIO)

One of the key factors in enabling a competitive telecommunications market is the establishment of a reference interconnection offer from the operator with significant market power. This is an offer, which must be available to all alternative operators in a non-discriminatory manner. The table below shows that Bulgaria, Croatia, Montenegro, Romania and Turkey have established and published such offers.

An even better indicator of a competitive market is the number of interconnection agreements that have actually been concluded. Romania can demonstrate a rather impressive environment with 33 agreements concluded for fixed-to-fixed network interconnection.

In Turkey, 23 agreements have been concluded for fixed-to-fixed network interconnection. These are mainly between Turk Telecom and long-distance carriers and between the long-distance carriers themselves.

In Bulgaria, six interconnection agreements have been concluded between fixed telephony operators. However, in addition over 80 operators carry traffic to and from the incumbent via ISDN connections at normal retail rates. The traffic is typically international as well as national long distance VoIP calls from which these operators can make a profit even without normal interconnection agreements. This activity does not require any specific authorisation or notification to the NRA.

Albania, which has not yet established a RIO, can nevertheless claim 46 interconnection agreements between fixed networks. This is due to its very special situation with one incumbent operator and a large number of small operators, each of which operates in a distinct rural area. A draft interconnection agreement is available on request for interested operators.

There are cross-territory interconnection agreements in place between Mobtel in Serbia and mobile operators in Montenegro.

Country	Status of RIO	Number of interconnection agreements		
		Fixed – Fixed	Fixed – Mobile	Mobile - Mobile
Albania	Not available	46	2	1
Bosnia & Herzegovina	Drafts exists for each of the three incumbent operators	0	0	0
Bulgaria	Published	6	3	3
Croatia	Published 25.02.2005.	2	4	1
Romania	Published in February 2003	33	33	6
Serbia & Montenegro - *Montenegro*	Published	0	2	1
Serbia & Montenegro - *Serbia*	Not available		1 between Telekom Srbija and Mobtel	
Serbia & Montenegro - · *Kosovo*	Not available			
The former Yugoslav Republic of Macedonia	To be submitted for approval within 30 days after NRA is established	-	2	1
Turkey	Published	23	3	4

Table 35 - Reference interconnection offer of fixed incumbent operator and number of interconnection agreements

Note:
The interconnection agreements in the former Yugoslav Republic of Macedonia were concluded after direct negotiations between the two operators.

5. Reference unbundling offer (RUO)

The local loops of the telephony network that connect individual subscribers with the nearest switch have particular regulatory significance. They often represent half of the investment in the telephony networks and although competitive access technologies are emerging, they represent a facility that is particularly difficult to duplicate. For this reason, it is often considered an essential facility that must be capable of being shared by alternative operators in order to enable efficient competition.

In addition, new transmission technologies have enabled the local loop to carry digital data at broadband speeds and competitive access to this resource has been deemed as an indispensable instrument to accelerate the growth of broadband access.

In the EU, this topic was deemed sufficiently important to justify the adoption[8] of a "Regulation on unbundled access to the local loop"[9] in 2000, which also set out a requirement for the publication of a reference offer. The regulation has subsequently been replaced by a corresponding requirement in the Access Directive[10].

The existence of a reference unbundling offer is thus an indication that local loop unbundling has been introduced and that the local loop facilities of the incumbent operator is being made available to alternative operators under non-discriminatory terms and conditions.

There are many different technical alternatives for how local loop unbundling can be implemented. The two main alternatives are:

1. Full unbundling, whereby the alternative operator takes full control over the local loop.
2. Shared unbundling, whereby the alternative operator typically gets access to the xDSL channel, while the incumbent operator keeps the normal telephony channel.

In addition, there is another option for access to the local loop based on bitstream, whereby the incumbent operator hands over the digital traffic over the xDSL channel according to an agreed standard.

Each of these main alternatives can be implemented in different ways and there can be different solutions as to how and where the traffic is handed over from the incumbent to the alternative operator.

Only Romania has local loop unbundling in place and can demonstrate that more than 4,000 loops have been unbundled. In Bulgaria, it has been a legal requirement since the beginning of 2005, but there are no practical results yet.

Other countries and geographic units have adopted legal requirements for local loop unbundling, but have not yet started practical implementation. This is the case for Bosnia & Herzegovina, Croatia and the former Yugoslav Republic of Macedonia. Kosovo and Turkey have established planning dates for its introduction.

In the other countries and geographic units, local loop unbundling has not yet been decided.

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[8] A regulation can be adopted quite quickly if there is agreement between the European Commission, the Council and the Parliament. When adopted, it is directly applicable at the national level. This is in contrast with directives, which typically takes a year or two to be adopted, followed by a period of transposition at the national level.

9 REGULATION (EC) No 2887/2000 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2000 on unbundled access to the local loop

[10] Art. 9.4 of the Access Directive (2002/19/EC)

Country	RUO legally compulsory	When is RUO expected to become compulsory	Status of RUO (Number of unbundled loops)	Does RUO include bitstream access via xDSL?	Number of loops with bitstream access by alternative operators
Albania	No	Not decided	-	-	-
Bosnia & Herzegovina	Yes	-	-	-	-
Bulgaria	Yes	Compulsory since 01.01.2005	0	No	0
Croatia	Yes	June / July 2005	-	-	-
Romania	Yes	July 2004	4161 xDSL lines	No	-
Serbia & Montenegro - *Montenegro*	No	Not defined yet	0	Not defined yet	0
Serbia & Montenegro - *Serbia*	No	Not decided			
Serbia & Montenegro - *Kosovo*	No	2007			
The former Yugoslav Republic of Macedonia	Yes	05.09.2005	-	-	-
Turkey	Will be required from October 1, 2005	-	-	-	-

Table 36 - Reference unbundling offer (RUO) of fixed incumbent operator

Note:
Montenegro: The development of a RUO framework during 2005 is foreseen in the business plan of the Agency for Telecommunications.

6. National roaming

When a country decides to increase its number of mobile operators, it is not unusual to provide some regulatory assistance to the new entrant by requiring the already established operators to allow national roaming on their networks. Otherwise, it would be very difficult for the new operator to get customers before achieving a degree of coverage comparable to the other operators.

National roaming requirements are not intended to be a permanent solution and normally have some conditions attached, such as:

- achievement of a minimum level of network coverage before national roaming is permitted;

- a maximum period during which the roaming is allowed;
- charges to be paid for the roaming services.

The table below shows that Bulgaria, Croatia, Kosovo and Turkey have such national roaming requirements in place.

Bosnia & Herzegovina also has national roaming requirements, but for a different reason. Their mobile operators operate regionally, and the national roaming requirement is intended to ensure that the regional operators have national coverage. This is a requirement that has a political as well as a telecommunications regulatory dimension.

Similarly, special national roaming requirements exist in the country of Serbia and Montenegro to facilitate national communications.

Country	National roaming requirements	Practical implementation
Albania	National roaming not required	3G networks not yet licensed
Bosnia & Herzegovina	National 2G operators must have national roaming with each other to ensure national coverage	3G networks not yet operational
Bulgaria	Licensed UMTS operators (having a 2G network with national coverage are obliged to provide national roaming for a new operator having reached network coverage by population of 20% and having granted data transfer speed 144 Kbit/s.*	3G networks not yet operational
Croatia	2G operators are obliged to provide national roaming for new 2G operators for at least three years after the new operator has reached a coverage of at least 20% of the population.	3G networks are not yet operational
Romania	Not regulated	-
Serbia & Montenegro - *Montenegro*	Not defined yet	3G networks are not yet operational
Serbia & Montenegro - *Serbia*	1. Mobtel: National roaming is provided between Mobtel (2G mobile operator) and Telekom Serbia (2G mobile operator) within the territory of Kosovo only. National roaming on the country level is in place with both mobile operators in Montenegro	Both operators have 3G (UMTS) trial systems in bigger cities (Belgrade, Novi Sad, Nis) using temporarily issued licenses for one frequency u 3G band for six months.
Serbia & Montenegro - · *Kosovo*	2G operators must provide roaming for new 3G operators for a period of 3 years after start of operation and/or regional operators must have national roaming agreement with each other to ensure national coverage	2.5G and 3G networks are not yet operational

Country	National roaming requirements	Practical implementation
The former Yugoslav Republic of Macedonia	No	3G networks are not yet operational
Turkey	2G operators are required to satisfy reasonable, economically proportionate and technically feasible roaming requests of other operators working in the same field for permitting the use of the customer equipment of the requesting operator on their telecommunication system.	3G networks are not yet operational. There is no roaming agreement between 2G operators.

Table 37 - National roaming requirements for 2G operators

7. Rights of way

Turkey is in the process of establishing a legal framework for Rights of way. All the other geographic units have in place frameworks, which establish non-discriminatory rights of way for operators of public telecommunications networks.

However, most of the frameworks do not provide very convincing and operator friendly solutions for network builders. When compared with some of procedures available in countries in Western Europe, it appears that the solutions suffer from:

- decentralised procedures requiring many different local and regional approvals;
- lack of clearly stated time limits for approval procedures;
- lack of efficient expropriation procedures applicable to public networks.

Country	Does legal framework provide for		
	non-discriminatory rights of way?	easy procedures for access to public land	procedures for access to private land
Albania	Law no 8618 dated. 14.6.2000 Article 12: "The right to use public and private property"	Public land is used by public operators upon application to regional authorities	It is not an TRE responsibility
Bosnia & Herzegovina	Yes, under condition to apply for construction permission before Municipal Authority and that telecommunication infrastructure corridors are planned in Environment Plan for that Municipality.	If construction permission is obtained, the operator may use public land.	The Law prescribed procedure must be applied to access private land. If public interest is established, the expropriation may be applied, otherwise the operator must have permission of the landowner.

Country	Does legal framework provide for		
	non-discriminatory rights of way?	**easy procedures for access to public land**	**procedures for access to private land**
Bulgaria	Yes, according to the Telecommunications Act public operators have the right of way through public and private properties and access to private property. This provides a sound legal framework but it is not efficient because there is no adequate compliance with the Urban Development Act (UDA) and relevant secondary legislation.	According to the TA, the concrete parameters for execution of rights of way shall be determined by an order of the regional governor, respectively of the mayor of the municipality.	The Telecommunications Act does not provide for expropriation. The rights of way must be agreed between the operator and the landowner. If no agreement, the decision is with the mayor of the municipality in compliance with the provisions of the UDA. However, this law only provides rights for landlords, not for operators.
Croatia	Yes	Yes, Law on telecommunications Article 21 provides for use of public land after obtaining a central approval from the state administration that manages public resources.	Yes Expropriation procedures are available

Country	Does legal framework provide for		
	non-discriminatory rights of way?	**easy procedures for access to public land**	**procedures for access to private land**
Romania	Yes, for access to public property Art. 26 par.(2) of Government Emergency Ordinance No. 79/2002 includes a non-discrimination clause	Yes. Art. 23 par.(1) of Government Emergency Ordinance No. 79/2002 establishes that public property can be used when certain public interest conditions are met for installing private or public Electronic Communication Networks. Art. 27 of Government Emergency Ordinance No. 79/2002 sets a time limit of four months for negotiations after which the courts will decide.	Yes Art. 23 par.(2) of Government Emergency Ordinance No. 79/2002 establishes that private land can be used if: • there is insignificant impact on the private property, or • there are already installations and an additional installation will have insignificant impact; • the work does not contravene town or county planning; • agreement by the parties or through court decision Art. 27 of Government Emergency Ordinance No. 79/2002 sets a time limit of four months from application to the proprietor after which the courts will decide.
Serbia & Montenegro: *Montenegro*	Yes All public network operators have non-discriminatory rights of way established by law (Chapter VI of Telecommunications Law of 2000)	Yes Public land may be used by public operators upon application to appropriate authorities	No No expropriation procedure is defined by the Law
Serbia & Montenegro: *Serbia*	The New TA specifies that all public network operators have non-discriminatory rights of way	Yes	Yes Article 87 of the New Telecom Act provides legal support for access to private land.
Serbia & Montenegro - · *Kosovo*	Yes All public network operators have non-discriminatory rights of way established by law	Yes Public land may be used by public operators upon application to appropriate authorities	Yes Expropriation procedures may be used

Country	Does legal framework provide for		
	non-discriminatory rights of way?	easy procedures for access to public land	procedures for access to private land
The former Yugoslav Republic of Macedonia	Yes All public network operators have non-discriminatory rights of way established by law	Yes State land may be used by public operators upon application to appropriate authorities	Yes Expropriation procedures may be used
Turkey	No – there is no legal framework for rights of way. The issue is included in the Work Plan for 2005.	-	-

Table 38 - Rights of way

E. Regulations – Universal service

The information in this section has April 1, 2005 as its reference date except where a different date is mentioned.

1. Scope

In Serbia, the definition of the scope for universal service is a task to be carried out by the national regulatory authority, which is not yet in place.

The other geographic units have defined a scope of universal service that corresponds with the requirements of the EU acquis, with the exception that Albania and Turkey have only set out general requirements that do not include specific details for access to networks and telephony services. There is an intention to define the scope of universal service more specifically at a later stage.

Country	Network access	Voice telephony service access	Emergency services	Payphones	Common subscriber directories	Directory enquiry service	Legal base for disabled users
Albania	NA**	NA**	Yes*	Yes*	Yes*	NA **	Yes
Bosnia & Herzegovina	Yes	Yes	Yes	Yes	Yes	Yes	See note
Bulgaria	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Croatia	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Romania	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Serbia & Montenegro - *Montenegro*	Yes Secondary legislation under preparation	Yes	Yes	Yes	Yes	Yes	See note
Serbia & Montenegro - *Serbia*	Defined in law, not yet applicable	Defined in law, not yet applicable	Defined in law, not yet applicable	Defined in law, not yet applicable	-	Defined in law, not yet applicable	Yes
Serbia & Montenegro - · *Kosovo*	Yes	Yes	Yes	Yes	Yes	Yes	See note
The former Yugoslav Republic of Macedonia	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Turkey	No	No	Yes	Yes	Yes	No	Yes

Table 39 - Scope USO

Notes:
Albania: There is no practical implementation
Bosnia and Herzegovina – Special conditions for disabled users have been included in a document on

universal service, which is not yet approved.
The final column of this table identifies whether or not the national telecommunications act includes provisions that are intended to assist disabled users. The following regimes are in place:
Bosnia and Herzegovina: the current arrangement includes special economic and technical conditions for disabled users. The monthly subscription fee includes 100 pulses free of charge. There are also pay phones especially adapted for disabled users.
Bulgaria: According to Art. 93 of the Telecommunications Act, the "provision of access to fixed voice telephone services under special conditions and/or provision of terminals, where appropriate, for the disabled or underprivileged people" is one of the elements of the universal telecommunications service.
Croatia: The legal requirement[11] is that "the telecommunications infrastructure and telecommunications equipment shall be designed, produced, installed and constructed in such a way as to also enable access and availability of public telecommunications services to disabled people".
Montenegro: The primary law has an enabling provision that requires secondary legislation by the Ministry. This is expected to be adopted in the fourth quarter 2005.
Kosovo: According to the Law on Telecommunications, Section 21, TRA may establish additional conditions for authorizations, based upon class or category of services, which may include, special arrangements for disabled people. Under Section 49, TRA is also authorized to adopt secondary legislation on the scope of USO, which may include specific measures for persons with disabilities.
Turkey: According to Law No 4502 there are special provisions for special needs of the disabled. In the current Turkish framework, this provision is not seen as part of the universal service.

2. Financing

Few of the geographic units have implemented compensation schemes for universal service cost in practice. Only Romania has done so, while Bulgaria is prepared to start the procedures with compensation of costs incurred in 2005.

The universal service cost compensation scheme in Romania has some innovative characteristics that merit additional comments.

- The contributions from the operators are constrained so that small operators with revenue less than €3 million do not have to pay. Larger operators pay 0.8% of turnover[12] in 2004 and 0.5% from 2005 to 2010. However, given that the contributions must not exceed a threshold of €2 million in 2005 (and €3 million in 2006), the actual percentage applied to all contributors is calculated according to the formula: threshold/largest turnover[13].

- The funds collected are used in particular to subsidise the establishment of telecentres in rural communities where no telecommunications exist. Each telecentre shall include at least two computers with operational access to the Internet, one facsimile machine, one

[11] Art. 11 of the Telecommunications Act of 2003 as amended in 2005.

[12] The turnover calculation is defined to exclude revenues obtained from the interconnection and roaming services provided on the wholesale market to the mobile telephony operators from outside Romania for their users while roaming in a Romanian network,

[13] If the percentage applied to the largest turnover overcomes the threshold of 2 millions euros for 2005 and 3 millions of euros for 2006, then the percentage (the 0,5%) is diminished to an amount which applied to the largest turnover would not overcome the threshold. Therefore, this new percentage is calculated by dividing the threshold to the largest turnover (the outcome will be less than 0,5%) and is applied to all the contributors to the Universal Service Fund, taking into account the principle of non-discrimination.

uninterruptible power supply (UPS) device and two telephones. The assignment of operators for the establishment of telecentres is based on competitive bidding.

- Mobile operators are eligible to receive compensation for the provision of universal service undertakings. Moreover, the mobile operator "Orange Romania", the winner of the of the first round of auctions, was designated as universal service provider for the provision of access to the public telephone network, at a fixed location, by means of telecentres.

Moving on to other countries and geographic units, Croatia, Montenegro, Kosovo and the former Yugoslav Republic of Macedonia have adopted legislation that will permit them to introduce compensation schemes in the future. Turkey is in the process of developing a new law that will include universal service cost compensation and expects to adopt this law during 2005.

Only Croatia, Montenegro, Romania and the former Yugoslav Republic of Macedonia have implemented the universal service provisions in such a way that the law keeps the door open for participation in the provision of universal service by mobile operators.

NB. According to Article 8 and Recital 8 in the Universal Service Directive, mobile networks may be used for the provision of universal service. This could potentially reduce the cost of universal service provision.

Albania, Bosnia & Herzegovina and Serbia do not have legislation that enables cost compensation for universal service providers.

Table 40 below provides the status on whether cost compensation schemes are stipulated in the law and whether it is actually used in practice. It also provides an overview of the eligibility of mobile operators to provide universal service to a fixed location. In addition, the table also provides information on the existence of a legal provision on "play or pay". Where such a provision exists, there is an opportunity for an operator to invest in universal service provision instead of paying a cost compensation to another operator.

Country	USO cost compensation scheme stipulated by law	Compensation scheme applied in practice	Eligibility of mobile operators	Legal provision for play or pay
Albania	No	No	No	No
Bosnia & Herzegovina	No	No	No	No

Country	USO cost compensation scheme stipulated by law	Compensation scheme applied in practice	Eligibility of mobile operators	Legal provision for play or pay
Bulgaria	Yes Art. 104 – 112 of the Telecommunications Act	Planned for 2005. BTC provides USO without compensation until 31.12.2004. Recovery scheme may be implemented if BTC applies for its proven US net costs for 2005. The first application for recovery of the US net costs for 2005 has to be submitted by June 30, 2006 (Art. 111 of TA).	No	No
Croatia	Yes	No	Yes	No
Romania	Yes According to Art. 13 par.(2) of Law No. 304/2003, the details of the cost compensation scheme is decided by the NRA	Yes	Yes	No
Serbia & Montenegro - *Montenegro*	Yes (Draft version of rulebook)	No	Yes	Yes
Serbia & Montenegro - *Serbia*	Not in the existing legal framework. In New TA: Yes	No	No	
Serbia & Montenegro - · *Kosovo*	Yes	No	Yes	Yes
The former Yugoslav Republic of Macedonia	Yes	No	Yes	No

Country	USO cost compensation scheme stipulated by law	Compensation scheme applied in practice	Eligibility of mobile operators	Legal provision for play or pay
Turkey	New legislation planned for 2005	No	No	No

Table 40 - USO cost recovery scheme and application of the mechanism in practice

3. Quality of service

Article 11 of the Universal Service Directive provides a requirement for NRAs to ensure that operators with SMP publish their quality of service (QoS) achievements according to standardised[14] QoS parameters, definitions and measurement methods. The following Table 41 explains the various obligations on QoS that exist. It looks specifically at the existence of QoS obligations, the standards to be followed as well as the information on the publication of the measurements.

The information indicates that QoS obligations exist in most countries and geographic units and that the ETSI EG 201 standard is followed. However, there is little evidence of these measurements being made available to consumers, as was the intention of the Universal Service Directive.

Country	NRA sets out QoS to SMP and other operators	SMP operators measure QoS according to	Measurements for most recent year published by NRA/SMP operator	Last publication in the national Official Journal (or other)
Albania	Yes	ETR 138/1994 OFTEL –Append. C ITU-T E426 WTDR-1994	Yes, based on licence conditions	No publication
Bosnia & Herzegovina	Yes	ETSI EG 201	No	No publication
Bulgaria	Yes	ETSI EG 201	No	n/a
Croatia	SMP and other operators	ETSI EG 201 769-1	No	No publication
Romania	Yes	There are no special obligations for SMP operators	No obligation to publish	-

[14] The standards are set out in Annex III to the Universal Service Directive. This annex specifies ETSI EG 201 769-1 version 1.1.1 (April 2000)

Country	NRA sets out QoS to SMP and other operators	SMP operators measure QoS according to	Measurements for most recent year published by NRA/SMP operator	Last publication in the national Official Journal (or other)
Serbia & Montenegro - *Montenegro*	Yes (Draft version of rulebook)	ETSI EG 201 (Draft version of rulebook)	Yes (Draft version of rulebook)	No publication yet
Serbia & Montenegro - *Serbia*	NRA not yet operational	Community of YPTT technical requirements	No obligation to publish	
Serbia & Montenegro - · *Kosovo*	Yes	ETSI EG 201	No obligation to publish	No publication
The former Yugoslav Republic of Macedonia	Yes	ETSI EG 201 (by-law document in preparation)	No obligation to publish	No publication
Turkey	Yes, For fixed line operators having SMP and for all mobile operators	ETSI EG 201 for fixed line operators; Concession Agreement and ETSI EG 2001 for mobile operators	Not yet, but obligation to publish sufficient and up to date information by operators is set out with the new QoS Ordinance	Ordinance on QoS went into force on March 3, 2005. It requires operators to publish the related information by six months period. So, no report prepared yet.

Table 41 - Application of Quality of service

Notes:
Albania: ETSI EG 201 is under discussion.
Romania: According to ANRC President's Decision No. 138/2002 some minimal quality requirements were imposed for the provision of the following electronic communications services:
- Publicly available telephony service;
- Leased lines services;
- Electronic communications services provided on the ISDN network;
- Electronic communications services provided through networks using IP protocol

The other table on QoS provides the actual results of the key measurements. These indicators provide useful information on the technical status of the network.

Some independent observers have questioned whether all the QoS information has been provided according to the ETSI standards. For example, some of the supply times may be a theoretical figure. It is not clear how the calculation has been carried out for subscribers that are on a waiting list or not easily connectable.

It would have been interesting to report on the time required to change from one operator to another. This indicator is not yet explicitly defined as a QoS requirement in the majority of countries and geographic units. This is perhaps understandable in view of the early stage of competition. (Croatia reports that the change of operator should take five days when number portability is implemented.)

However, with these reservations, the information provides a very wide range of performance characteristics.

Country	Supply time for initial connection	Fault rate per access line per year	Fault repair time (hours: minutes)	Unsuccessful call ratio	Call set-up time (seconds)
Albania	Not reported	0.060	1:30	0.27% for local calls 0.27% for national calls 0.41% for international calls	Not reported
Bosnia & Herzegovina	5 – 19 days It depends on technical possibilities	0.210 – 0.230	56	0.5 – 0.84% for local calls 0.83 – 1.09% for long distance calls 0.84 – 2% for international calls	2.00
Bulgaria	3.8 months	0.070	3:05	0.55%	2.30
Croatia	18 calendar days	0.140	16	2.31% for local calls in fixed network 0.64% for local fixed to mobile calls 3.39% for international calls	0.27
Romania	38 days for 95% of requests 48 days for 99% of requests	0.1035	8:75 for 80% of access line cases	1.2% for local calls 3.5% for national calls 9.3% for international calls	1.97 local calls (average) 2.58 national calls (average) 11.05 international calls (average)
Serbia & Montenegro - *Montenegro*	Normally 1-2 days max. 7 days, if technical conditions are fulfilled	N/A	4	0% for local N/A for long distance	0.2 sec local calls
Serbia & Montenegro - *Serbia*	15 days (if technically possible)	0.300	61	1.01% for local calls, 5.7% for long distance calls	1.50
Serbia & Montenegro - · *Kosovo*	6.4 days	0.003	24	0.2%	0.50

Country	Supply time for initial connection	Fault rate per access line per year	Fault repair time (hours: minutes)	Unsuccessful call ratio	Call set-up time (seconds)
The former Yugoslav Republic of Macedonia	5 days for answering the subscriber request 98.63% 7 days for instalment after signing the contract 99.26%	0.098	94.94% of submitted faults are repaired within 1 working day	*For local calls: 0.29% *For long distance calls: 2.6% *For international calls: 0.02%	0.40 to 0.60 Fixed to fixed 5.00 to 6.00 sec fixed to mobile
Turkey	3 days	Urban area: 0.219 Rural area: 0.489	Urban area 17.51 Rural area 41.39	For international outgoing traffic: 8% For international incoming traffic: 3%	2:00

Table 42 - ETSI standardised QoS indicators (1-5) of fixed incumbent operator

Notes:
Albania: Fault rate per access line – is defined as in ETSI ETR 138 (July 1994) article 5.1). Unsuccessful call ratio – is defined as in ETSI ETR 138 (July 1994) article 5.2)
Bosnia and Herzegovina: The indicators are given as a range when they vary between the three incumbent operators.
The former Yugoslav Republic of Macedonia: *Unsuccessful call ratio is defined as total number of calls not completed for local/national/international traffic on all exchanges x 100 /Total number of calls for local/national/international traffic on all exchanges.
The information in this table has January 1, 2005 as its reference date.

F. Telephony market structure

The information presented in this section has January 1, 2005 as its reference date.

1. Fixed network ownership

The breakdown of the ownership structure for the fixed incumbent operators is given in Table 43 below. The only countries that have completely privatised the incumbent operator are Bulgaria (although the State has retained a 'golden share') and Montenegro. The Bulgarian privatisation was completed in June 2004 when 65% was sold to Viva Ventures, a subsidiary of the US private equity fund Advent International and in January, 2005 the State offered 20% of the shares on the Bulgarian stock exchange.

In Croatia, Romania, and the former Yugoslav Republic of Macedonia, the State has less than a 50% holding. Deutsche Telekom is the strategic partner in Croatia (51%) and the former Yugoslav Republic of Macedonia (via Magyar Telekom (51%)) and Hellenic Telecommunications Organisation (OTE), Greece is the strategic partner in Romania with 54.01%.

In Albania, the incumbent operator, Albtelecom, is 100% state owned and the Ministry of the Economy performs the 'ownership function'.

In Bosnia & Herzegovina, there are three incumbent operators: BH Telecom (Sarajevo), which is 90% State owned (the Federal Ministry of Transport and Communications performs the ownership function) and 10% has been floated on the national stock exchange; Telecom Srpske (Banja Luka), which is 65% state owned (the Ministry of Traffic and Communications of Republika Srpska performs the ownership function) and 20% has been floated on the national stock exchange, 10% is held by a pension fund and the remaining 5% is held by a restitution fund; and Hrvatske Telekomunikacije (Mostar), which is 62.76% state owned and Hrvatske Telekomunikacije Zagreb and Hrvatska Posta Zagreb own 30.29% and 6.95% respectively.

In Serbia, the State owns 80% of Telecom Serbia and OTE owns the remaining 20%. JP PTT Serbia, the organisation that holds the shares in Telecom Serbia also holds a significant stake in Mobtel, which competes with Telecom Serbia's mobile operations.

In Kosovo, UNMIK is responsible for the 100% state ownership of PTK through the Kosovo Trust Agency (KTA). The KTA is a provisional body established by UNMIK regulation 2002/12.

In Turkey, the State owns 100% of Turk Telekom, but privatisation activities are ongoing.

Country Name of operator	State ownership Ownership share	Strategic partner Name of partner Ownership share	Investors Name (if known) Ownership share	Public Ownership share (Stock Exchange)
Albania • Albtelecom sh.a	Ministry of Economy 100%	No	No	0%

Country Name of operator	State ownership Ownership share	Strategic partner Name of partner Ownership share	Investors Name (if known) Ownership share	Public Ownership share (Stock Exchange)
Bosnia and Herzegovina: • BH Telecom d.d. Sarajevo	Federal Ministry of Transport and Communications 90%	No	No	10%
• Telekom Srpske a.d. Banja Luka	Ministry of Traffic and Communications of Republika Srpska 65%	No	Pension fund 10% Restitution fund 5%	20%
• Hrvatske Telekomunikacije d.o.o. Mostar	Federal Ministry of Transport and Communications 62.76%	HT- Hrvatske Telekomunikacije d.d. Zagreb 30.29%	Hrvatska Pošta d.d. Zagreb 6.95	-
Bulgaria	Ministry of Transport and Communications - golden share	Viva Ventures 65%	-	34.78%
Croatia • HT- Hrvatske Telekomunikacije d.d. (Croatian Telecom Inc.)	Government 42% (from February 17, 2005)	Deutsche Telekom 51%	-	-
Romania • S.C. ROMTELECOM S.A.	Ministry of Communications and Information Technology 45.99%	OTE Greece 54.01%	-	-
Serbia & Montenegro - *Montenegro* • Telecom Montenegro	Government of Montenegro 51.12%	No strategic partners 0%	Privatisation investment funds 20.02%	28.86%
Serbia & Montenegro - *Serbia* • Telecom Serbia a.d.	Public enterprise of PTT traffic "Serbia" owns 100% of JP PTT Srbija which owns 80% of the operator	Hellenic telecommunications organization a.e. (OTE) 20%	-	-
Serbia & Montenegro - · *Kosovo*	UNMIK through Kosovo Trust Agency(KTA) 100%	None	None	None

Country Name of operator	State ownership Ownership share	Strategic partner Name of partner Ownership share	Investors Name (if known) Ownership share	Public Ownership share (Stock Exchange)
The former Yugoslav Republic of Macedonia • A.D. Makedonski Telekomunikacii	Ministry of Transportation and Communication 47.125%	Deutsche Telekom through Matav 51%	International Finance Corporation –IFC 1.875%	None
Turkey • Turk Telekom (Türk Telekomünikasyon A.Ş.)	State Owned Treasury 100%	None	None	None

Table 43 - Ownership structure of fixed incumbent operators

The ownership structure is also presented in the figure below.

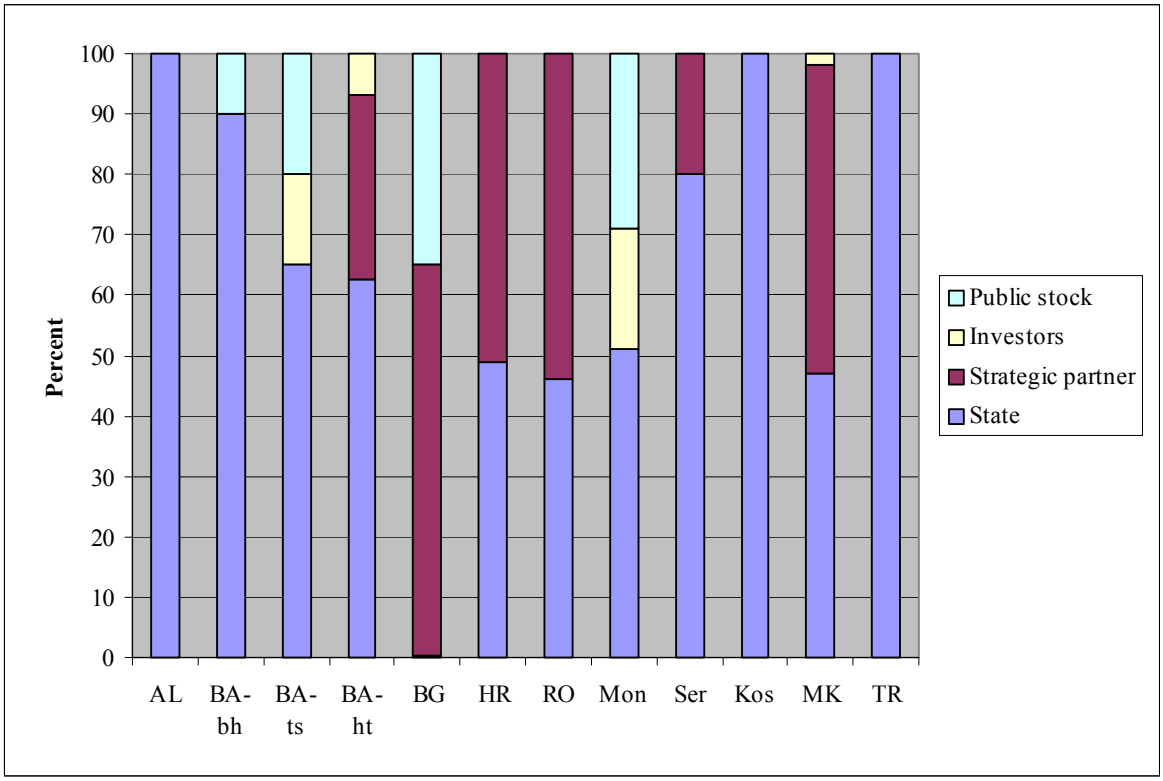


Figure 6 - Ownership structure of fixed incumbent operators

2. Financial ratios for incumbent operators

The most common financial ratios used when looking at the performance of telecommunications operators are the "Return on Capital Employed (ROCE)" which is the net profit before interest and taxes divided by the total capital employed, the "Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA) margin" which is the EBITDA divided by operating revenues, and the "Earnings Before Interest and Taxes (EBIT) margin" which is the EBIT divided by operating revenues.

In all countries where the ROCE figure has been provided except Romania, it is higher than the inflation rate. It should be noted that the ROCE figures for the operators are not directly comparable.

Practically all of the EBITDA figures are in the 30-50% range, which can be considered normal for a telecommunications operator. Exceptions to this are Hrvatske Telekom., Mostar (21.08%) and a correspondingly low EBIT margin of 4.69%; Telecom Montenegro (21.20%) and an EBIT margin of 10.80%. The exceptionally high EBITDA of 80% for Kosovo (EBIT 75.20%) is questionable.

Country	ROCE in%	Inflation rate in%	EBITDA margin in%	EBIT margin in%	Average number of employees (see note 3)	Number of fixed lines per employee
Albania:						
• Albtelecom	9.90	2.90	40.86	25.09	2,473	116
Bosnia & Herzegovina:						
• BH Telecom d.d. Sarajevo	19.16	1.80	49.30	34.10	3,056	175
• Telekom Srpske a.d. Banja Luka	15.50		45.19	26.04	2,721	119
• Hrvatske Telekomunikacije d.o.o. Mostar	1.24		21.08	4.69	1,221	103
Bulgaria		6.20				
• BTC	22.20		40.96	29.03	17,251	160
Croatia		2.10				
• Hrvatske Telekom	9.20		36.40	19.30	7,299	230
Romania		9.30				
• RomTelecom	5.00		36.00	12.00	18,382	236
Serbia & Montenegro – *Montenegro*						
• Telecom Montenegro	5.90	1.50	21.20	10.80	1,168	161
Serbia & Montenegro – *Serbia*		13.70				
• Telecom Serbia	7.30		17.90	14.60	12,340	259
Serbia & Montenegro - · *Kosovo*						
• PTK	Unknown	2.00	80.00	75.20	570	180
The former Yugoslav Republic of Macedonia		-0.5				
• Makedonski Telekom.	7.80		35.8	17.40	3,005	198

Country	ROCE in%	Inflation rate in%	EBITDA margin in%	EBIT margin in%	Average number of employees (see note 3)	Number of fixed lines per employee
Turkey		13.8				
• Turk Telekom.	10.5		36.8	20.6	58,084	343

Table 44 - Rate of return of fixed incumbent operators

Notes.
Kosovo: The ROCE in Kosovo is currently unknown because of uncertainties about the cost of fixed assets, depreciation related to these and the allocation of costs to facilities. The ROCE figure is expected to be available during the 3rd quarter of 2005.
The inflation rate for Bulgaria (6.20%) is the average for 2004. There are two inflation rates used in Montenegro: one is the CPI (1.5%) and the other is the RPI (4.3%). The inflation rate used in Croatia is the CPI.
The number of employees given for Bulgaria is the number of employees on December 31, 2004. The number of employees for Romania is as at January 1, 2005, i.e. 18,382 while the average number of employees in 2004 was 19,048.
The number of fixed lines per employee for Bulgaria is based on the number of lines and employees on December 31, 2004.
The number of fixed lines per employee is the number of active lines, as opposed to the installed capacity.

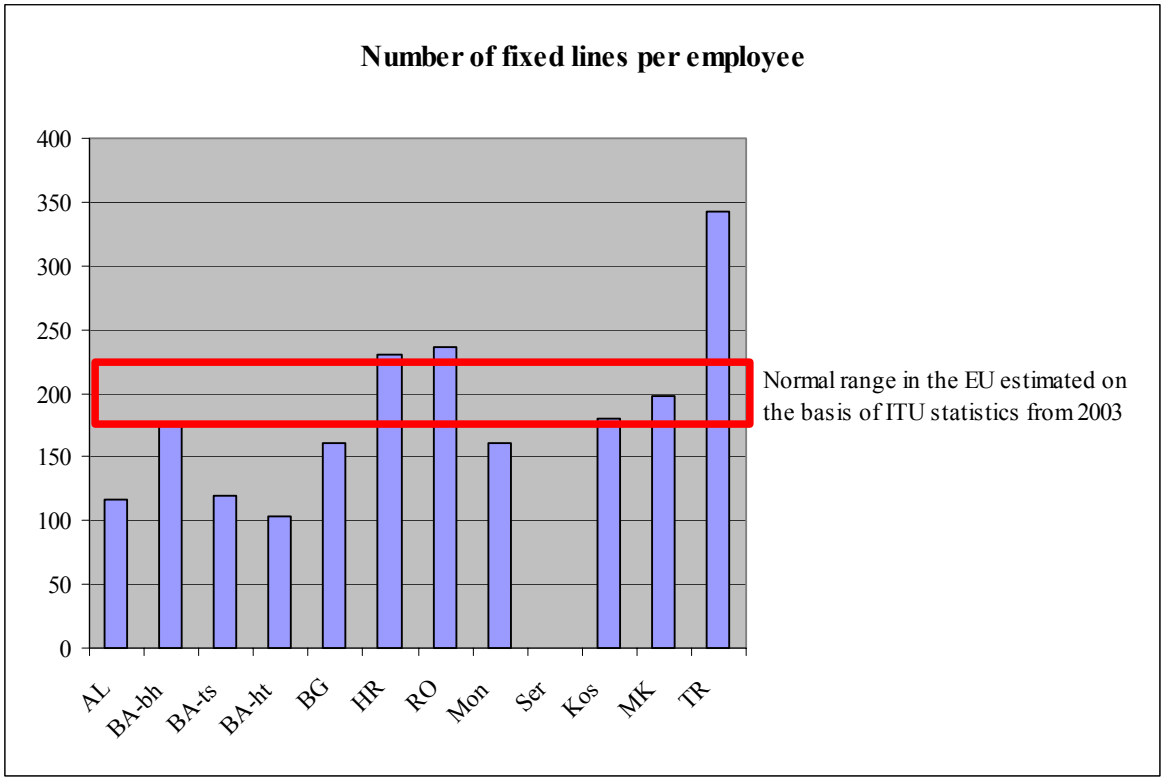


Figure 7 – Number of fixed lines per employee

Note:
The 10th Implementation Report from the European Commission does not provide an EU average for the number of fixed lines per employee. Information on this indicator may be inferred from ITU statistics, but the information does not provide a definitive value. Based on different assumptions, the ITU statistics from 2003 indicate that the average number of active lines per employee in the EU Member States is in the range from 189 to 223.

3. Fixed network penetration

The fixed line penetration rates per 100 population are given in the table below. The weighted average penetration in these countries is 28%. In general, the penetration rates are lower than the overall EU25 average of about 45%[15]. However, they compare more favourably with the new EU Member States as the weighted EU10 average is 31%.

15 Weighted average for EU25 from the Commission Staff Working Document Review of the Scope of Universal Service in Accordance with Article 15 of Directive 2002/22/EC. According to the same document, the weighted average penetration for EU15 was 48%.

A consequence of limited penetration rates in fixed line will be a limitation in the number of households that could eventually subscribe to broadband services provided over fixed telephone lines.

Country	Analogue	Digital	ISDN	Total	Per 100 pop
Albania	6,757	265,000	2,800	274,557	8.78%
Bosnia & Herzegovina / BH Telecom	77,486	841,708	37,282	956,476	24.71%
Bulgaria	1,796,678	914,334	15,788	2,726,800	35.13%
Croatia	0	1,549,184	130,254	1,679,438	37.82%
Romania	1,003,006	3,367,690	20,193	4,390,889	20.26%
Serbia & Montenegro - *Montenegro*	360	184,200	5,195	189,755	30.60%
Serbia & Montenegro - *Serbia*	704,505	1,802,240	34,128	2,540,873	33.89%
Serbia & Montenegro - · *Kosovo*	53,721	48,170	308	102,199	5.20%
The former Yugoslav Republic of Macedonia	0	579,933	14,589	594,522	29.21%
Turkey	604,863	20,397,327	19,330	21,021,520	29.28%

Table 45 - Fixed lines per 100 inhabitants year end 2004

Notes:
Albania: Population information has been taken from Instat's website
Bosnia & Herzegovina: ISDN: BR = 23,182 and PR = 7,050
Bulgaria: BR = 13,822 and PR = 983
Croatia: BR = 124,342 and PR = 2,956
Romania: BR = 16,579 and PR = 1,807
Montenegro: BA = 5,061 and PR = 67
Serbia**:** BR = 31,892 and PR = 1,118
Kosovo: BR = 218 and PR = 45
The former Yugoslav Republic of Macedonia: BR = 13,691 and PR = 449
Turkey: BR = 8,654 and PR = 5,338

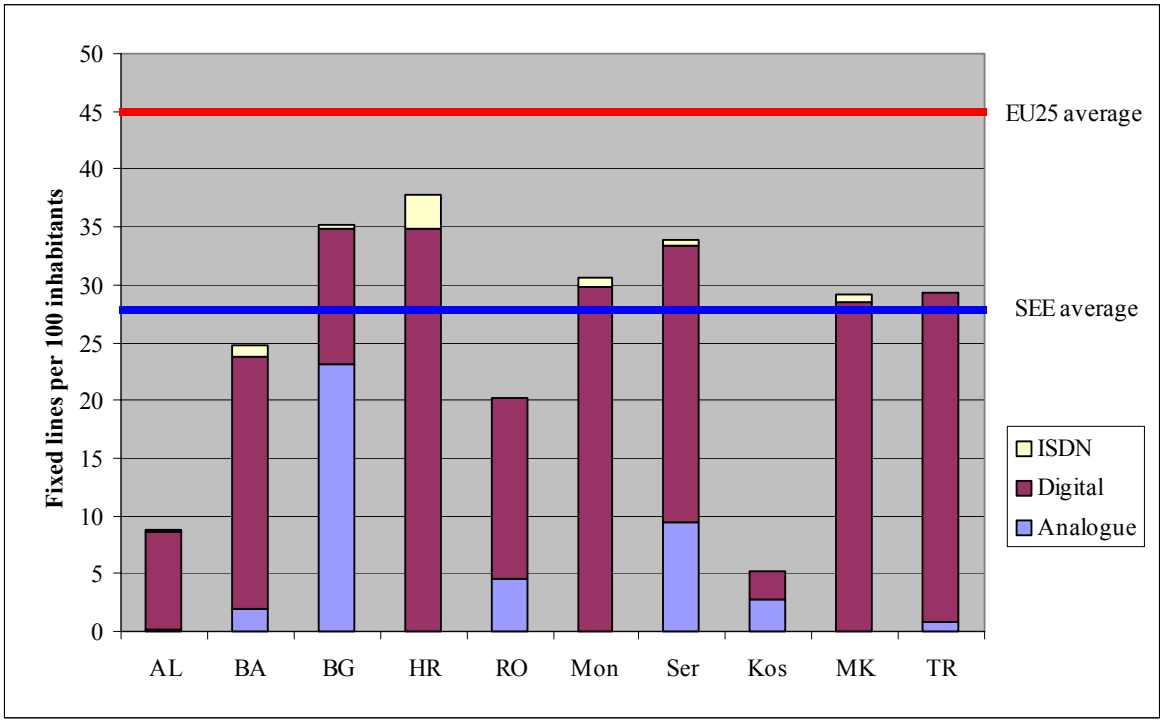


Figure 8 - Fixed lines per 100 inhabitants

Notes:
The EU25 average is from the Commission Staff Working Document Review of the Scope of Universal Service in Accordance with Article 15 of Directive 2002/22/EC.
The SEE average is the weighted average for the countries and geographic units calculated on the basis of the information in Table 45 above.

Figure 8 shows the percentage of fixed lines per 100 inhabitants broken down into ISDN, Digital and Analogue lines. It can be seen that Bulgaria is significantly analogue. The consequences of low digitisation rates are the inability to utilise xDSL services and other value added services.

The digitalisation of the fixed networks is crucial for the provision of value-added services and for increasing the quality of service for customers. The data presented in the chart below is calculated on the number of digital fixed lines, including ISDN channels, to the total number of fixed lines.

All countries are making progress in the digitalisation of their networks. Croatia and the former Yugoslav Republic of Macedonia are 100% digital since January 2003 and January 2004 respectively. In Albania, the rural operators (12.4% of the total network) are 100% digital.

The largest increase (13%) is noted in Bulgaria although the total percentage of the digitalised network is low at 35%. Bulgaria is digitalising the major cities before rural areas and its digitalization rate is expected to continue to grow significantly. According to Bulgaria's pre-accession negotiation commitments and to the terms of the BTC license it should reach 50-55% by the end 2005 and 75–81% by the end 2007.

Country	1.1.2002	1.1.2003	1.1.2004	1.1.2005
Albania	92.50	94.40	97.50	97.60
Bosnia & Herzegovina	65.00	78.80	85.27	89.93
Bulgaria	14.00	19.00	26.00	34.00
Croatia	98.00	100.00	100.00	100.00
Romania	65.00	72.00	74.00	77.00
Serbia & Montenegro - *Montenegro*	87.00	92.50	98.00	99.80
Serbia & Montenegro - *Serbia*	51.40	53.21	64.87	67.35
Serbia & Montenegro - *. Kosovo*	22.00	42.00	45.00	47.00
The former Yugoslav Republic of Macedonia	91.00	96.00	100.00	100.00
Turkey	88.70	90.02	90.77	97.12

Table 46 - Digitalisation rate of fixed networks in percent

Note:
The former Yugoslav Republic of Macedonia – Source is Maktel annual reports.

Figure 9 shows the extent to which networks have been digitalised and the considerable progress that has yet to be made in Bulgaria, Kosovo, Serbia and Romania. The figures for previous years in Bulgaria have been recalculated on the basis of recent data for the number of lines, provided by the incumbent (ratio of total number of digital lines (including ISDN subscriptions) to total number of lines (number of analogue lines and number of digital lines, including ISDN subscriptions). Apparently, there have been inconsistencies in the information provided by the incumbent over the last few years so the information previously given in the IBM Monitoring reports is incorrect.

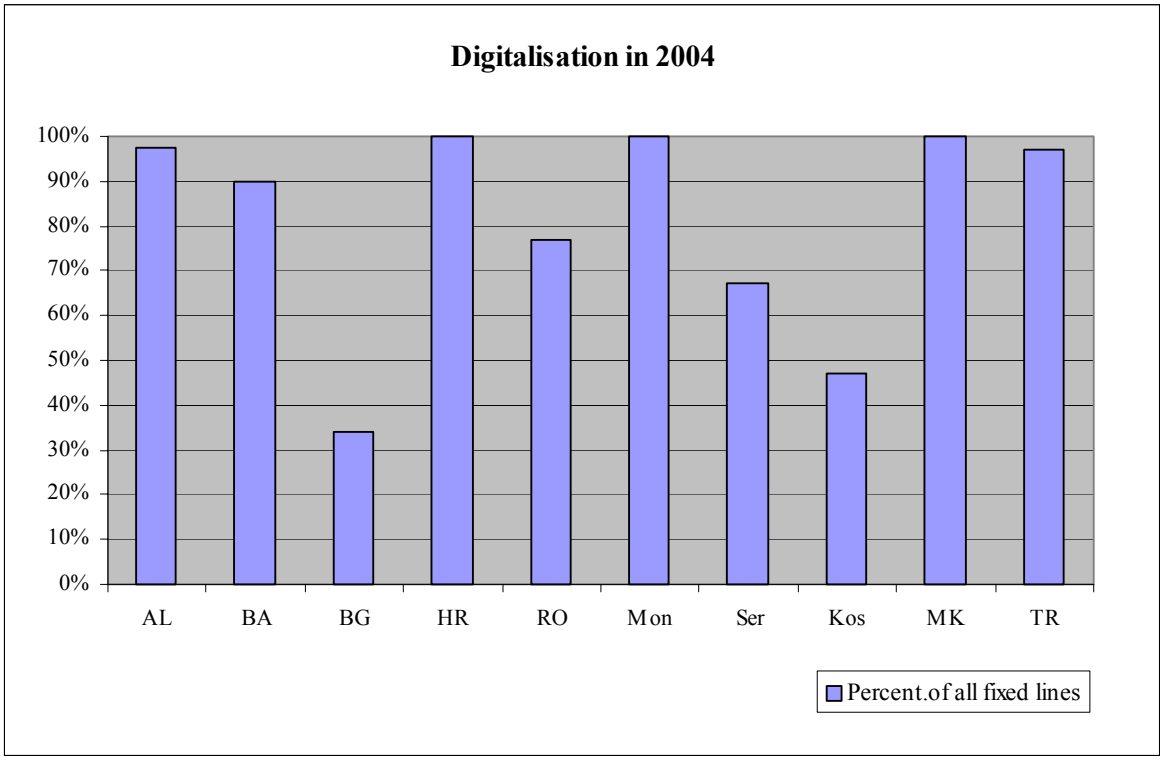


Figure 9 - Digitalisation rate of fixed networks in percent

Party and group lines are those lines that serve two or more customers. These lines are a potential barrier to Local Loop Unbundling and, as far as customers are concerned, inhibit the use of value added services, especially xDSL and as such are an inhibitor to reliable internet access and usage.

Three countries have no party lines (Croatia, the former Yugoslav Republic of Macedonia and Turkey). The number of party lines in Bulgaria has been steadily decreasing over the last few years (47.8% in June 2002 vs. 37% in January 2005). These reductions could be a direct result of Bulgaria's network digitalisation. However, group and party lines still represent a significant proportion of the fixed lines in Bulgaria.

In Kosovo, it is a condition of PTK's licence that all party lines be removed by December 31, 2006.

In Serbia, there are about 480,000 party lines and these are mainly in the larger cities.

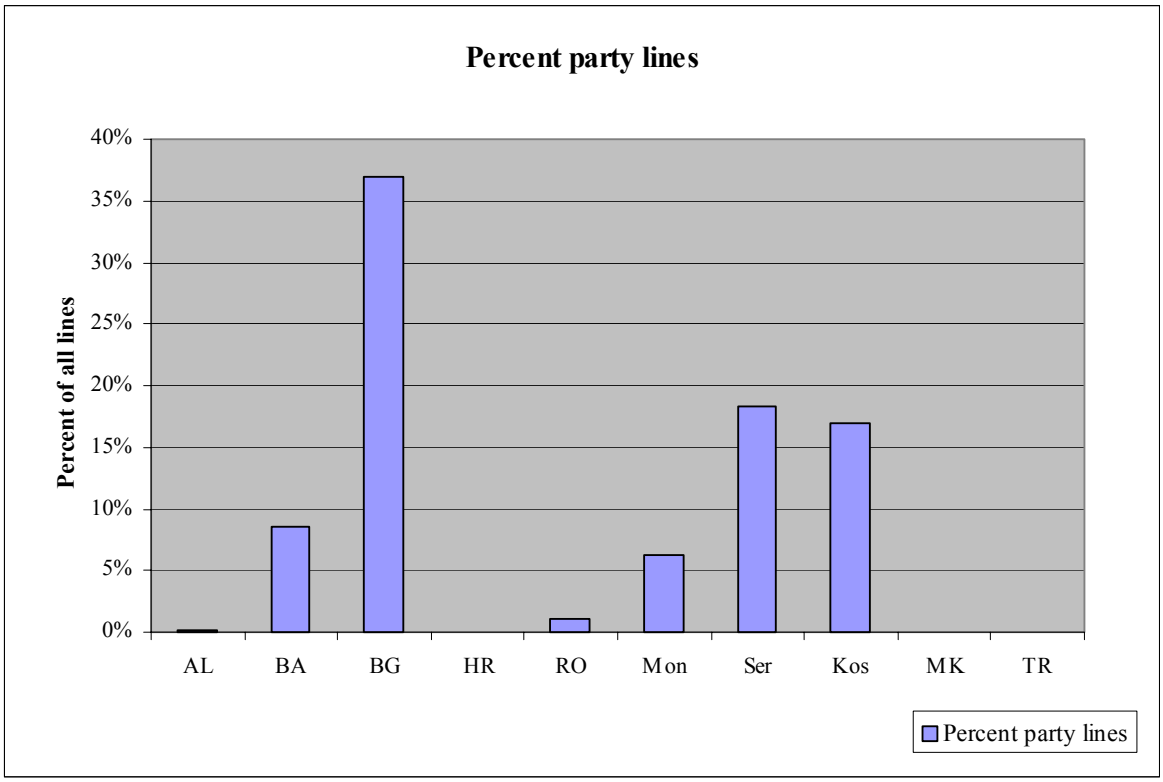


Figure 10 - Presence of party and group lines in fixed networks

Note:
Montenegro. Data from May 2005. According to Telecom Montenegro Inc

In general, alternative operators have a very low percentage of the total number of fixed lines except in Albania where 12.4% of all lines are operated by alternative operators that have invested in their own fixed network infrastructure. However, these are considered to be 'Rural Operators' and do not provide services at a national level in competition with other operators.

At the end of 2004, there was only one licensed alternative operator in Bulgaria that had declared that it had started operating a fixed network using digital lines and offering services but the total number of lines in service is currently statistically insignificant.

In Romania, alternative operators accounted for about 1.17% of the total lines. These operators had invested in their own fixed network infrastructure. In addition, there were 15,731 subscribers to alternative operators using carrier selection codes or providing prepaid access to their networks through non-geographical numbers.

There are no alternative operators in Montenegro or the former Yugoslav Republic of Macedonia.

Country	Analogue lines / analogue switches	Analogue lines / digital switches	ISDN lines	Total number of lines	Percentage of lines of alternative operators
Albania	0	34,185	0	34,185	12.45%
Bosnia & Herzegovina	-	-	-	-	-
Bulgaria	na	na	na	43	0.00%
Croatia	-	-	-	-	-
Romania	1,214	49,839	206	51,259	1.17%
Serbia & Montenegro - *Montenegro*	0	0	0	0	0.00%
Serbia & Montenegro - *Serbia*	?	?	?	0	0.00%
Serbia & Montenegro - · *Kosovo*	-	-	-	-	-
The former Yugoslav Republic of Macedonia	-	-	-	-	-
Turkey	-	-	-	-	-

Table 47 - Number of fixed lines of alternative operators and percentage of these lines in relation to the total number of fixed lines

Note:
Romania: BR = 75 and PR = 131.

4. Mobile service penetration

In all countries, the penetration rate for mobile services exceeds that of the fixed line penetration rates. In Albania, Bulgaria, Montenegro, Serbia, Kosovo, Romania and the former Yugoslav Republic of Macedonia the mobile penetration rates are more than double that of fixed lines.

Country	1.1.2002	1.1.2003	1.1.2004	1.1.2005	Fixed sub.lines per 100 pop in year 1.1.2005
Albania	12.00	26.00	34.00	38.61	8.78
Bosnia & Herzegovina	11.78	19.65	28.68	34.22	25.16
BH Telecom d.d. Sarajevo	6.35	9.87	14.57	16.88	
Telekom Srpske a.d. Banja Luka	4.08	7.39	10.56	13.07	
Hrvatske Telekomunikacije d.o.o. Mostar	1.35	2.39	3.55	4.27	
Bulgaria	19.00	33.00	45.00	61.00	35.13
Croatia	39.08	52.71	57.45	63.99	37.81
Romania	18.00	24.00	32.47	47.12	20.25
Serbia & Montenegro - *Montenegro*	53.30	67.40	62.70	77.9	30.60

Country	1.1.2002	1.1.2003	1.1.2004	1.1.2005	Fixed sub.lines per 100 pop in year 1.1.2005
Serbia & Montenegro – *Serbia*	23.95	32.14	43.80	56.98	33.89
Telekom Srbija	10.95	18.14	23.80	30.98	
Mobtel	13.00	14.00	20.00	26.00	
Serbia & Montenegro - · *Kosovo*	9.50	13.50	15.20	16.00	5.20
The former Yugoslav Republic of Macedonia	10.87	18.00	29.88	49.02	29.21
Mobimak	10.87	18.00	25.73	36.94	
Cosmofon	0.00	0.00	4.15	12.05	
Turkey	27.50	33.50	39.40	48.90	29.28

Table 48 - Mobile penetration

In Albania, pre-paid cards are counted for as subscribers if they are active within the last six months. In Bosnia & Herzegovina, there are 3 mobile (GSM) incumbent operators in B&H: 1. BH Telecom – GSMBH, 2. Telekom Srpske – MOBI´S, 3. HT Mostar – ERONET. In Bulgaria, both GSM operators have a 12-month period of activity for pre-paid cards after their last activation or recharge. In Croatia, pre-paid card subscribers are dropped after 9 inactive months. In Montenegro and Serbia pre-paid card subscribers are dropped after 12 inactive months.

In Serbia, the figures for Mobtel are calculated for the territory of Serbia excluding the Kosovo and Metohia regions. The reference for the population data is the population census report from 2002 issued by the Statistical office of the Republic of Serbia. However, if the Kosovo region is included then the penetration rate is 10%. Because of the census boycott in Kosovo, figures have been obtained by an estimation of the population data. Pre-paid subscribers are dropped after 420 inactive days (13 months).

In Serbia, the figures for Telekom Serbia include Kosovo and Metohia. 84% of territory and 94% of population are covered with more then 600 BTS (in 2000 it was 112 BTS). Pre-paid card subscribers are dropped after 11 months. In the 12th month, only incoming calls are permitted and in the 13th month, a customer can reactivate a number by paying the applicable subscription fee at the time of renewal.

The penetration figure for Kosovo only applies to PTK/VALA900 the only licensed mobile operator in Kosovo. For the other 'illegal' mobile operator in Kosovo, Mobtel, there are no published subscriber figures.

A pre-paid subscriber in Romania has to be active within the last twelve months in order to be counted as one.

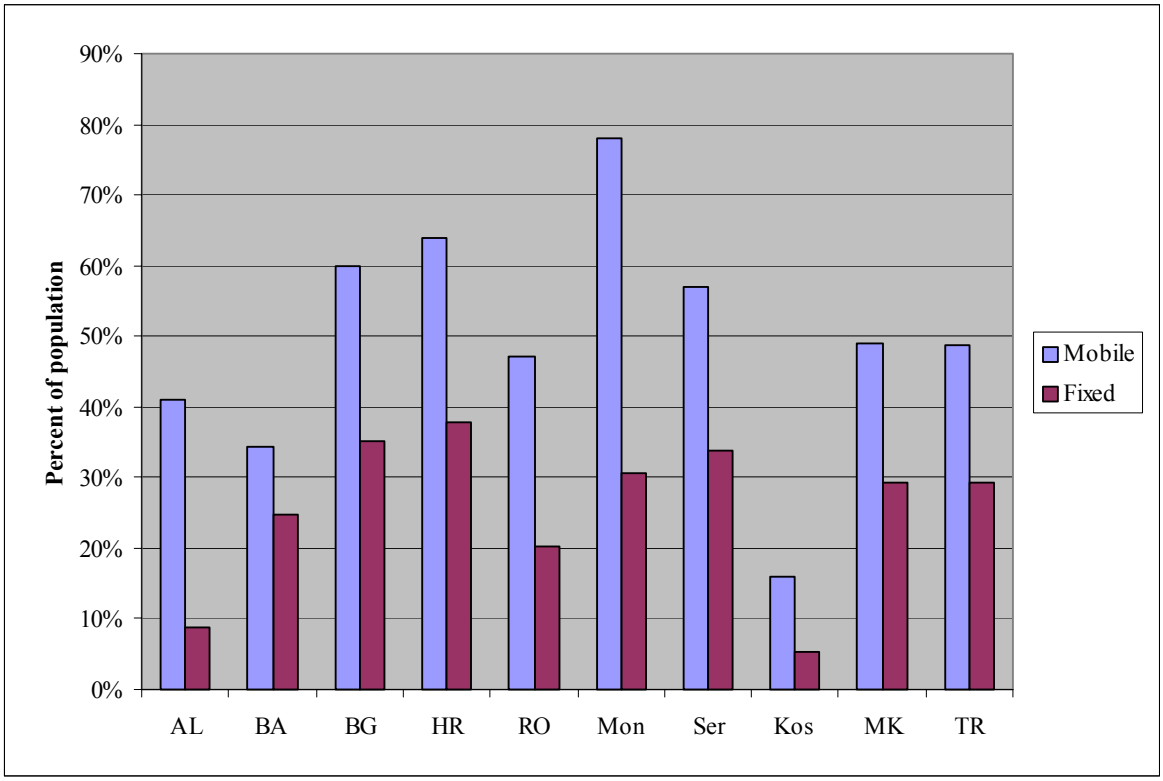


Figure 11 - Mobile and fixed penetration

5. Payphones

The number of payphones per 1,000 population is shown in the following table. There is quite a wide variation from 0.45 in Kosovo to 2.76 in Croatia, which represents one payphone per 362 inhabitants in Croatia and one payphone per 2,222 inhabitants in Kosovo.

In general, the figures have been essentially static over the last few years. However, small increases are noted in Croatia, Serbia, and Kosovo. Small decreases are noted in Bosnia & Herzegovina, Montenegro and Romania.

Country	1.1.2002	1.1.2003	1.1.2004	1.1.2005
Albania	0.35	0.46	0.47	0.47
Bosnia & Herzegovina	0.75	0.78	0.79	0.77
Bulgaria	2.50	2.73	2.70	2.65
Croatia	-	2.83	2.74	2.76
Romania	1.90	2.37	2.41	2.38
Serbia & Montenegro - *Montenegro*	1.54	1.70	1.54	1.29

Country	1.1.2002	1.1.2003	1.1.2004	1.1.2005
Serbia & Montenegro - *Serbia*	0.60	1.00	1.30	1.40
Serbia & Montenegro - · *Kosovo*	0.27	0.35	0.43	0.45
The former Yugoslav Republic of Macedonia	-	0.98	1.04	1.03
Turkey	1.04	1.07	1.08	1.08

Table 49 - Number of payphones per 1,000 population

G. Telephony tariffs – retail

The reference date for the information in this section is April 1, 2005.

One of the main objectives of a telecommunications policy based on competition is to provide all kinds of users, consumers as well as business organisations, improved telecommunications offerings in terms of price, quality and choice.

Telephony retail prices represent one of the most important indicators whereby the results can be judged. In a traditional monopolistic environment, fixed monthly charges and local call tariffs were typically priced significantly below cost in an effort to make telephony affordable to the majority of consumers. Because they had monopoly rights, the operators could compensate for the revenue loss by charging exorbitant prices for long distance and international calls. Such calls were primarily used by business, so the pricing method constituted a transfer from business to consumers.

This tariff principle becomes untenable in a competitive environment, where new entrants will concentrate on the high profit areas and stay out of the unprofitable ones. The pressure on long distance and international calls has been further augmented by advances in technology that has greatly reduced the impact of distance as a cost element.

The need for tariff rebalancing is thus evident. However, even if necessary, it can be a painful experience for many consumers, and it is a process that typically requires several years. In order to soften the rebalancing consequences for consumers, it is fairly normal to differentiate tariffs for business and consumer users. Differentiation takes place most often for monthly rentals, but can also be implemented for call units.

At the end of the process, business and most consumers will pay less for their total communications bill and/or consume more communications services.

However, some consumers, typically low-income families, may experience that their total communications bill go up because of tariff rebalancing. It is therefore common to protect such users with special low-income tariff packages. These tariff options typically have monthly rental prices way below normal tariffs. The package also typically includes a limited number of free or cheap call units. Once this quota has been exhausted, the user will have to pay tariffs that are significantly more expensive than the normal tariff. The tariff option is thus unattractive for normal consumers, but may meet the basic communications needs of a low-income family.

This section on retail telephony tariffs presents indicators that relate to these topics in order to enable a reader to form an assessment of the tariff situation in each of the countries and geographic units.

1. Basic information about tariffs

Table 50 provides some basic information about tariffs. It presents the status of rebalancing, primarily as it is assessed by the NRAs. Furthermore, it presents what type of tariff regulation exists for telephony services.

The table indicates that only Croatia and Kosovo consider that tariff rebalancing has been completed. Bosnia and Herzegovina expects to complete its tariff rebalancing by the end of 2005. Albania should also be close to completion of its tariff rebalancing plan.

The other countries and geographic units, except Serbia, are still in a rebalancing process. Serbia is a special case where there has been little rebalancing activity. Rebalancing requests from the incumbent operator have been refused on a political level in order to contain inflation.

Country	Status of tariff rebalancing (target date if established)	Type of tariff regulation	Public notice before tariff change
Albania	Ongoing	Cost based methodology.	According to the law on Telecommunications, article 64, the operator should make them public through mass media at least 15 days before the new tariffs come into force
Bosnia & Herzegovina	Yes, to be completed 2nd part of 2005	The rules and NRA approval*	1 month
Bulgaria	Ongoing	Price cap model + cost orientation and NRA (CRC) approval for regulated prices of BTC, as SMP on the markets of fixed voice telephony networks and fixed voice telephony services and leased lines for the following services: • fixed voice telephony service; • interconnection; • the minimum set of leased lines; specific access; • LLU; • shared usage of premises and equipment.	7 days
Croatia	Yes	NRA approval + price cap	30 days
Romania	Ongoing (no target date established)	NRA approval	30 days
Serbia & Montenegro - *Montenegro*	Target date: 2010	NRA approval	8 days

Country	Status of tariff rebalancing (target date if established)	Type of tariff regulation	Public notice before tariff change
Serbia & Montenegro - *Serbia*	Little or no tariff rebalancing	Political control	8 days if nomenclature and general conditions are not changed. . If nomenclature or general conditions are changed, 30 days after publishing in Official Gazette those changes
Serbia & Montenegro - · *Kosovo*	Yes	NRA approval	Before the entry into force
The former Yugoslav Republic of Macedonia	No	Price cap	No
Turkey	No	Price Cap	Before the entry into force

Table 50 - Basic information about tariffs

The next table presents the different charging mechanisms used by the incumbent operators. Traditionally, telephone calls have been measured by pulses. Each pulse would carry a certain price, and the time between each pulse would vary between different types of call. Pulse counting was a relatively simple way to collect traffic data using electromechanical counters. Most advanced telephone operators, using modern digital switches, have replaced pulse based traffic measurements by a time-based method, often measuring time down to each second. This method of measuring traffic provides more flexibility in the construction of tariffs.

Since subscribers will on average pay for a half period more than they consume, the shorter time intervals is in the interest of the subscribers.

Bulgaria, Croatia and Montenegro, Romania and the former Yugoslav Republic of Macedonia use time based charging. For Croatia, however, the charging period was as long as sixty seconds when the information was collected on April 1, 2005.

Country	Charging system	Length of call unit	Setup-cost
Albania	Pulse based	Length of call unit applied in peak time is **120 seconds**, and **180 seconds** applied in off-peak time. These are the call units applied for local calls.	2.35 **eurocent** for calls toward the mobile operators There are no set-up charges for all other calls. However, the fact that the first 120 second period is three times as expensive as the subsequent periods means that there is a de facto initial charge of 1.56 eurocent
Bosnia & Herzegovina • *BH Telecom d.d. Sarajevo*	Pulse based	In seconds **Different length of pulse for local calls, national calls (Zone I, Zone II, Zone III, Zone IV, Zone V, Zone VI) and international calls.** **Local calls:** ***180 sec.*** **National calls:** **Zone I**: between exchanges inside the same node area: ***45 sec.*** **Zone II**: between exchanges of different node areas inside the same network group: ***36 sec.*** **Zone III**: between exchanges of different network groups the distance to 100 km: ***30 sec***. **Zone IV**: between exchanges of different network groups the distance from 100 km to 200 km: ***18 sec.*** **Zone V**: between exchanges of different network groups the distance from 200 km to 400 km: ***15 sec***. **Zone VI**: to mobile networks: ***15 sec***. **Internationals calls:** **Ia Zone (Croatia):** ***6.327 sec.*** **I Zone (Serbia and Montenegro):** ***2.109 sec.*** **II Zone:** ***1.665 sec.*** **III Zone :** ***1.333 sec.*** **IV Zone:** ***1.126 sec.*** **V Zone*****: 0.831 sec.***	No charge

Country	Charging system	Length of call unit	Setup-cost
• *Telekom Srpske a.d. Banja Luka*	Pulse based	**Different length of pulse for local calls, national calls and international calls.** **Local calls** (traffic within the same network group): ***180 sec.*** **National calls** (traffic between different network groups): ***12 sec.*** **To mobile networks:** ***7 sec.*** **International calls:** **Ia Zone (**Serbia end Montenegro): ***9 sec.*** **Ib Zone:** ***1.9 sec.*** **Zone (Europe I):** ***1.2 sec.*** **Zone(Europe II):** ***0.95 sec.*** **Zone (World*****): 0.72 sec***	No charge
• *Hrvatske Telekomunikacije d.o.o. Mostar*	Pulse based	**Different length of pulse for local calls, national calls and international calls.** **Local calls** (traffic within the same network group): ***120 sec.*** **National calls** (traffic between different network groups): ***36 sec.*** **To mobile networks:** ***25 sec.*** **International calls:** **Ia Zone** (to fixed networks Croatia)**: 7** ***sec.*** **Ib Zone (**to mobile networks Croatia): ***5 sec.*** **I Zone:** ***2.16 sec.*** **II Zone:** ***1.79 sec.*** **III Zone:** ***1.42 sec.*** **IV Zone:** ***1.20 sec.*** **V Zone*****: 0.80 sec.***	No charge
Bulgaria	Time based (digital switches) Pulse based (analogue switches)	Seconds	5.62 eurocent for local and national long distance calls
Croatia	Time based	National calls: 60 seconds Fixed to mobile and international calls: 15 seconds Per second billing introduced and available since April 1, 2005	No charge
Romania	Time based	60 seconds	No charge
Serbia & Montenegro - *Montenegro*	Time based	n.a.	No charge

<table>
<tr><th>Country</th><th>Charging system</th><th>Length of call unit</th><th>Setup-cost</th></tr>
<tr><td>Serbia & Montenegro – Serbia</td><td>Pulse based</td><td>It depends on the type of call (local, long distance, international)</td><td>No charge</td></tr>
<tr><td>Serbia & Montenegro - · Kosovo</td><td>Pulse based</td><td>
<table>
<tr><td>Zones</td><td>Tariff 1</td><td>Tariff 2</td><td>Units</td></tr>
<tr><td>National</td><td>On peak (€)</td><td>Off peak(€)</td><td>1</td></tr>
<tr><td>Local</td><td>0.04/3min</td><td>0.02/3min</td><td>3min/6min</td></tr>
<tr><td>Zone I</td><td>0.04/1min</td><td>0.02/1min</td><td>60/120 s</td></tr>
<tr><td>Zone II</td><td>0.06/min</td><td>0.03/min</td><td>40/80 s</td></tr>
<tr><td>Zone III</td><td>0.12/min</td><td>0.06/min</td><td>20/40 s</td></tr>
<tr><td>Vala900</td><td>0.16/min</td><td>0.08/min</td><td>15/30 s</td></tr>
<tr><td>Mobtel</td><td>0.30/min</td><td>0.16/min</td><td>8/15 s</td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td>International</td><td></td><td></td><td></td></tr>
<tr><td>Zone I</td><td>0.45/min</td><td></td><td>5332 milliseconds</td></tr>
<tr><td>Zone II</td><td>0.55/min</td><td></td><td>4360 milliseconds</td></tr>
<tr><td>Zone III</td><td>0.65/min</td><td></td><td>3692 milliseconds</td></tr>
<tr><td>Zone IV</td><td>1.2/min</td><td></td><td>2000 milliseconds</td></tr>
<tr><td>Zone V</td><td>1.4/min</td><td></td><td>1712 milliseconds</td></tr>
<tr><td>Zone VI</td><td>1.7/min</td><td></td><td>1412 milliseconds</td></tr>
<tr><td>Zone VII-</td><td>1.95/min</td><td></td><td>1232 milliseconds</td></tr>
</table>
</td><td>0.04</td></tr>
<tr><td>The former Yugoslav Republic of Macedonia</td><td>Time based</td><td>20 seconds</td><td>No charge</td></tr>
<tr><td>Turkey</td><td>Pulse based</td><td>Depends on type of call (international, national, local etc.)
Pulse length for local calls: 1 minute</td><td>No charge</td></tr>
</table>

Table 51 - Call charging system and initial charge application

Note:
Romania: All tariffs for fixed telephony in Romania are quoted by the incumbent operator in euro. Similarly, the rates by the mobile operators are quoted in US dollars. In both cases, the values are recalculated to the local currency according to the exchange rate applicable on the day of the invoices are issued.

2. Monthly subscription fees

Table 52 provides information on the monthly rental price for the fixed network for residential subscribers in nominal euro with value added tax included.

The prices in many of the tariff schemes include some free calls or call units. In order to compare prices between countries, these price differences have to be taken into account.

The corresponding graph is constructed in such a way that it shows both the net monthly cost (after deduction of the value of the free call units) as well as the value of the free call units. The total height of the column thus corresponds with the nominal monthly charge.

The graph, which also includes the level of the average EU monthly charge, clearly demonstrates the very low level of the monthly charges. Albania, Bosnia & Herzegovina, Montenegro and Serbia have particularly low charges. In Serbia, the value of the free call units exceeds the monthly subscription cost.

Croatia in particular, but also Bulgaria, Romania, the former Yugoslav Republic of Macedonia and Turkey have made more progress with tariff rebalancing, but also these countries have monthly charges at a level that is typically about half the average level in the EU.

In addition, Table 52 provides information on special tariff schemes for low-income subscribers. The incumbent operators in Bulgaria, Croatia, Kosovo and Turkey operate such schemes. In addition, two of the incumbent operators in Bosnia & Herzegovina, BH Telecom d.d. Sarajevo and Telekom Srpska a.d. Banja Luka, operate special low tariff schemes for families of soldiers that died in the war, disabled veterans, blind people and other disabled people.

Country	Standard monthly rental	Nominal value of call units included in standard monthly rental	Low level package monthly rental	Nominal value of call units included in low level monthly rental
Albania	1.57	There are no "free" call units included in monthly rental	There is no low level package of monthly rental applied.	There are no call units included.
Bosnia & Herzegovina • *BH Telecom d.d. Sarajevo*	1.64	100 pulses of 180 second duration represent a value of 1.33 + VAT	0.26* *special social category	50 pulses of 180 second duration represent a value of 0.67 + VAT
• *Telekom Srpske a.d. Banja Luka*	2.30	80 pulses of 180 second duration represent a value of 1.22 + VAT	1.15* *special social category	300 pulses of 180 second duration represent a value of 4.575 + VAT
• *Hrvatske Telekomunikacije d.o.o. Mostar*	1.64		0.26* *special social category	0.00

Country	Standard monthly rental	Nominal value of call units included in standard monthly rental	Low level package monthly rental	Nominal value of call units included in low level monthly rental
Bulgaria	5.37 residential standard telephone line 5.11 residential party standard telephone line	40 minutes local calls (20 impulses) included represents a value of 1.056 + VAT	Package "Economical usage of telephone services for residential subscribers": 3.32 Package "Limited usage of telephone services for residential subscribers": 1.59	Package "Economical usage of telephone services for residential subscribers": 30 minutes local calls (15 impulses) included represents a value of 0.792 + VAT Package "Limited usage of telephone services for residential subscribers": 20 minutes local calls (10 impulses) included represents a value of 0.528 + VAT
				Package "Usage of telephone services for residential subscribers – disabled people I group, for one definite telephone line": 120 minutes local calls (60 impulses) included represents a value of 3.168 + VAT

Country	Standard monthly rental	Nominal value of call units included in standard monthly rental	Low level package monthly rental	Nominal value of call units included in low level monthly rental
			Package "Usage of telephone services for social and health institutions*, for one fixed telephone line": 1.79 * *determined annually till 30th January by lists of the relevant ministries*	Package "Usage of telephone services for social and health institutions*, for one fixed telephone line": 600 minutes local calls (300 impulses) included represents a value of 15.84 + VAT
			All packages are approved by CRC. Consumption above the units included in the plan is usually charged much higher compared to the standard calling plan.	
Croatia	7.82	1.30 applicable to all traffic	5.87 available to anyone, 120 minutes of national traffic included, higher prices thereafter	60 minutes of national traffic anytime + 60 minutes of national traffic on Sundays represents a value of 2.70 + VAT
Romania	6.4	including 50 on-net local minutes in peak time and 10 on-net national minutes in off-peak time, on incumbent network – representing a value of 1.85 + VAT	4.9	no minutes included
Serbia & Montenegro - *Montenegro*	2.56	No "free" call units included	1.92 For two-party lines	No "free" call units included
Serbia & Montenegro - *Serbia*	2.56	150 pulses representing a value of 0.63+ VAT	For a two-party line, the monthly line rental charge is 25% lower than standard	150 pulses representing a value of 0.63 + VAT
Serbia & Montenegro - · *Kosovo*	3.5	1.6	NA	NA
The former Yugoslav Republic of Macedonia	5.79	no	3.59	no

Country	Standard monthly rental	Nominal value of call units included in standard monthly rental	Low level package monthly rental	Nominal value of call units included in low level monthly rental
Turkey	5.62	-	3.52	100 pulses representing a value of 4.21 + VAT

Table 52 - Standard and low-level monthly line rental charge of fixed incumbent operator for residential users in nominal euro

The next figure provides a graphical representation of the standard monthly rental in Table 52 above. It also displays the value of the free call units. It is constructed in such a way that the total height of the column represents the nominal value of the monthly rental. The top burgundy coloured segment represents the value of the free call units calculated on the basis of what a call unit costs after the free units have been exhausted.

It will be seen that for Serbia, the value of the free call units exceeds the monthly rental price.

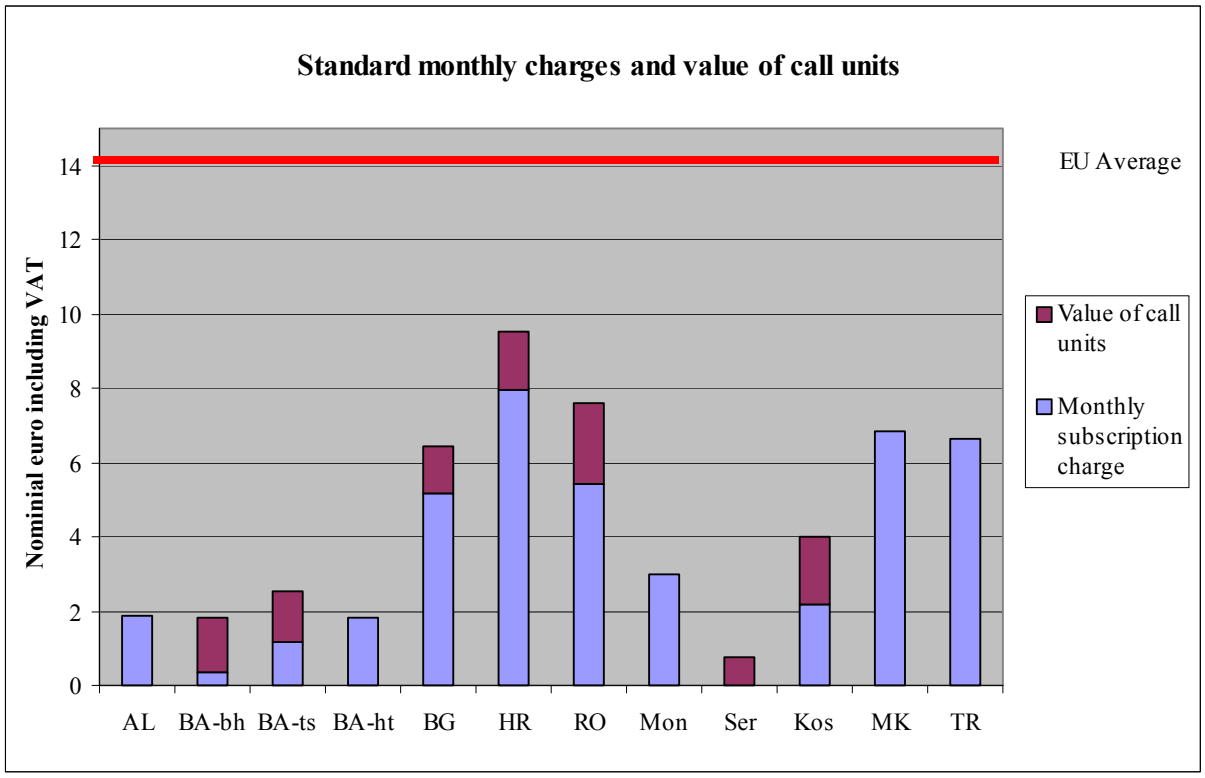


Figure 12 – Normal monthly rental and low tariff monthly rental

Note:
The EU average is taken from the 10th Implementation Report from the European Commission.

Figure 13 below shows how a low rental option compares with the normal monthly subscription charges. Not all countries have a low rental option. Bosnia and Herzegovina is indicated on the chart as not having a low rental option because their special tariff scheme for war victims is not generally available for low-income families.

The value shown in the figure is the nominal price paid by the subscriber. In several of the tariff schemes, the monthly rental includes a number of free call units. The value of the free call units (see Table 52) is not presented in the graph. For Serbia and Turkey, the value of the free call units, when evaluated at the normal call charges, exceeds the nominal monthly rental.

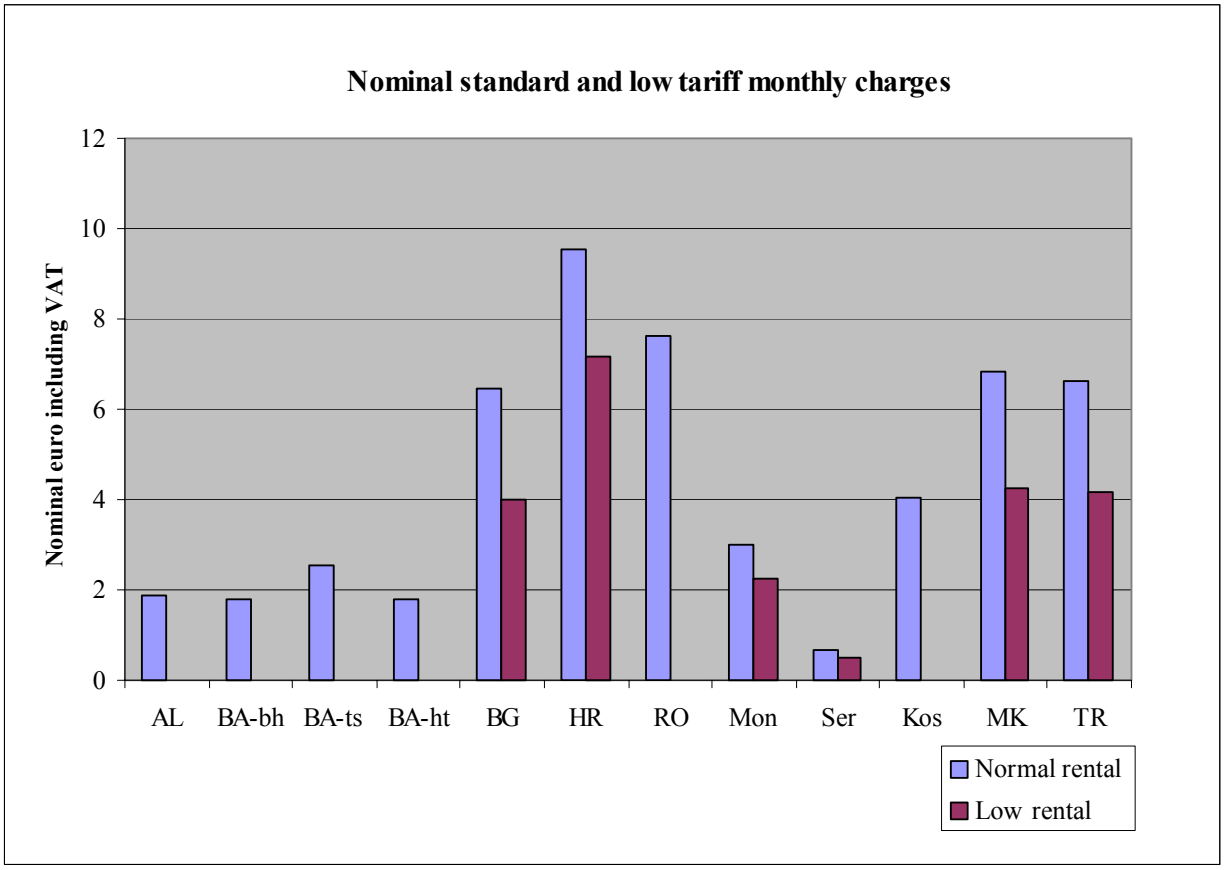


Figure 13 - Standard and low-level monthly line rental charge of fixed incumbent operator for residential users in nominal euro

Table 53 provides similar information for business subscribers as Table 52 for residential subscribers. The difference is that the prices for business subscribers are without value added tax and, except for Montenegro, which has a low tariff option for two-party lines. There are no low tariff schemes.

The graph should be interpreted in the same way as the graph for residential subscription cost. For each country, there can be two cost elements, one for the net monthly cost (after deduction

of the value of free call units), and the free call units. The total height of the column then represents the nominal monthly charge.

The graph demonstrates that the gap between the EU average and the charges in the geographic units being studied is considerably less for business subscriptions than for residential subscriptions. Nevertheless, the countries with the relatively highest rates, such as two operators in Bosnia & Herzegovina, Bulgaria, Croatia, Romania and the former Yugoslav Republic of Macedonia have charges at the level of about two thirds of the EU average. The other geographic units, Albania, the third operator in Bosnia & Herzegovina, Montenegro, Serbia, Kosovo and Turkey have charges that are less than half the EU average. Serbia's charges are particularly low and are less than 4% of the EU average.

Country	Monthly rental	Value of call units
Albania	6.27	0.00
Bosnia & Herzegovina		
BH Telecom d.d. Sarajevo	10.22	1.33
Telekom Srpske a.d. Banja Luka	4.65	0.00
Hrvatske Telekomunikacije d.o.o. Mostar	10.22	0.00
Bulgaria	8.44	0.00
Croatia	9.12	0.00
Romania	8.00	0.00
Serbia & Montenegro - *Montenegro*	4.09	0.00
Serbia & Montenegro - *Serbia*	0.53	0.00
Serbia & Montenegro - · *Kosovo*	3.50	1.60
The former Yugoslav Republic of Macedonia	11.41	0.00
Turkey	5.62	0.00

Table 53 - Standard line rental charge of fixed incumbent operator for business users in nominal euro

Note:
Bulgaria has higher monthly rentals for lines that are connected to a PABX.

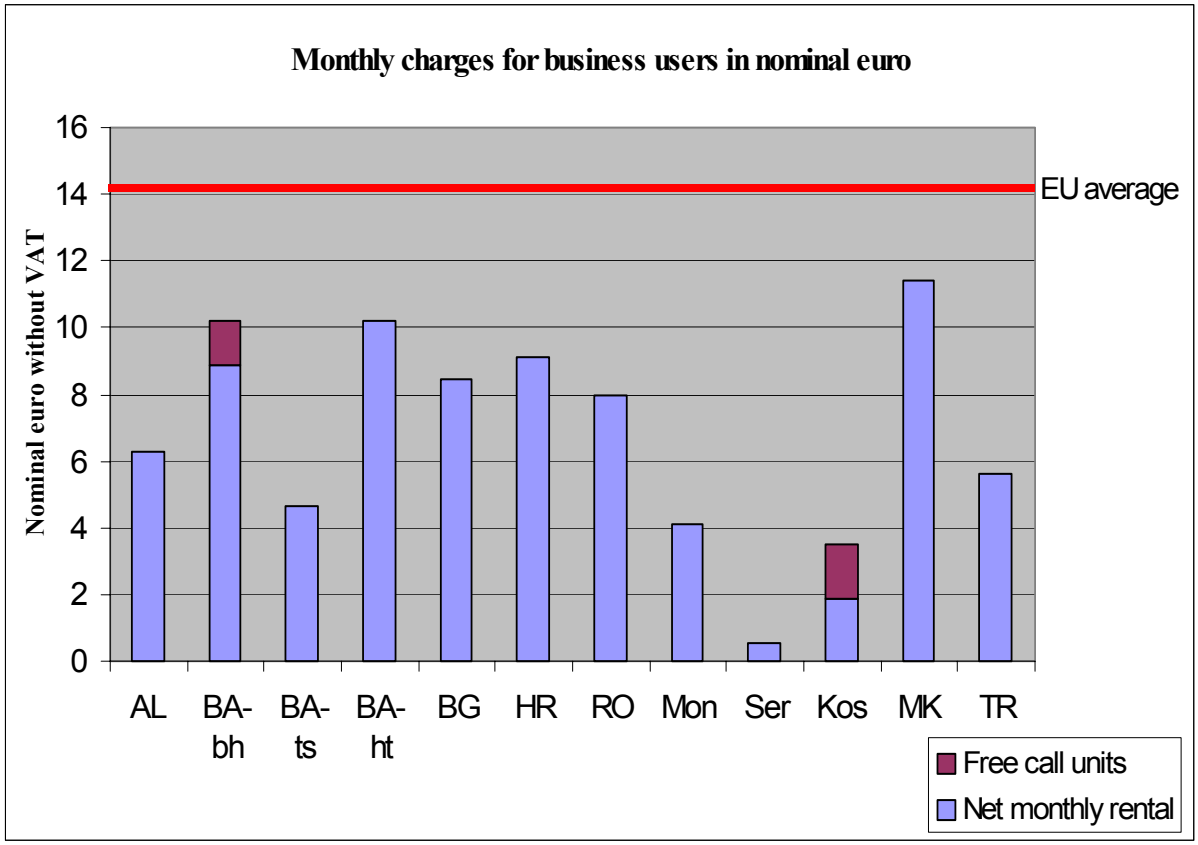


Figure 14 - Standard line rental charge of fixed incumbent operator for business users in nominal euro

Note:
The EU average is taken from the 10th Implementation Report from the European Commission, December 2004.

3. One time installation costs

Figure 15 below shows the one-time costs for installation and connection of residential as well as business subscriptions. The installation costs represent the cost of a new installation in a location that has not been connected before. The connection cost is the cost for the connection of an existing subscriber line to a new subscriber, for example, when a new family takes over an apartment where the previous occupant was already connected.

Some countries also provide special reconnection tariffs that apply when a subscriber is disconnected for failure to pay the subscription fee. These types of reconnection tariffs are not reflected here.

The geographic units fall into three cost categories:

1. Albania, two of the operators in Bosnia & Herzegovina, and Kosovo have installation prices above 100 euro.

2. Bulgaria, Croatia, Montenegro and Serbia have installation costs between 35 and 100 euro.

Romania, the former Yugoslav Republic of Macedonia and Turkey have installation costs below 25 euro. Turkey's installation cost is particularly low at only €3.67 ex VAT.

In the figure below, both residential rates and business rates are provided without value added tax in order to enable a fair comparison. In most countries and geographic units, the one time installation costs are nominally the same for residential and business subscribers.

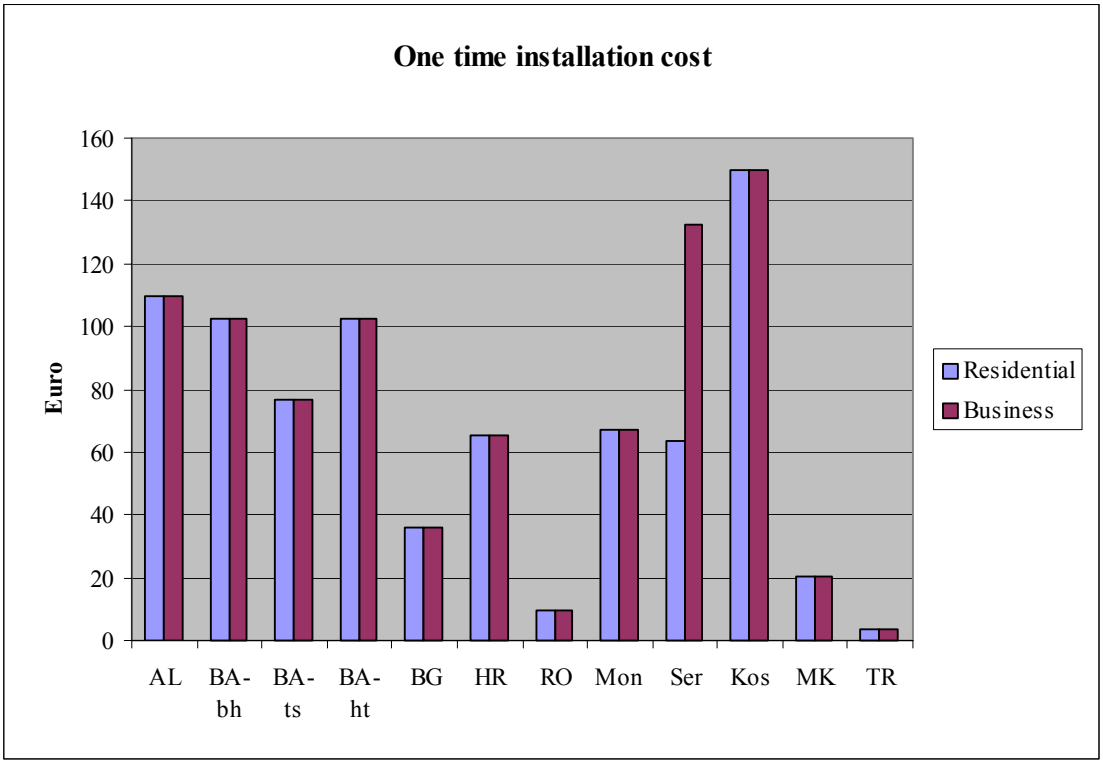


Figure 15 - One time installation cost for residential and business users without VAT

4. Access cost

Figure 16 below requires some special explanation. It is intended to demonstrate the status of tariff rebalancing and to give an indication of the degree to which the tariff scheme creates a tariff deficit.

The cost of connecting to the local network of an operator is normally paid for by a combination of the one-time installation costs and the fixed monthly charges. In order to combine these two revenue elements into a single indicator, the monthly charges (without VAT) have been discounted and added to the one time installation charge.

This discounted sum of installation cost and monthly charges can also be represented by a single monthly charge that when discounted produces the same amount. This "fictitious" monthly access charge would then include the one-time installation elements.

Such a calculation has to make certain assumptions. For the calculations in this report, it has been assumed that:

- the discount factor is 8% per year;
- the revenue stream for monthly subscription fees includes 18 years;
- the one-time installation cost is collected in year zero;
- the subscriber line is reconnected so that a reconnection fee is collected in year seven and year fourteen.

These indicators are compared with a constructed indicator[16] for the European average, which is based on the assumption that the one-time charges add €2 to the monthly rental. Since the average monthly rental in the EU as reported in the latest implementation report[17] from the European Commission is about €14, the corresponding constructed indicator for the EU is about €16.

The result shows that all geographic units are below the EU average. In particular, Serbia, has extremely low values both for residential and business tariffs.

In Kosovo, Turkey and to some extent Croatia, there is relatively little difference between the prices paid by residential subscribers and business subscribers.

In Albania, the former Yugoslav Republic of Macedonia and for two of the incumbent operators in Bosnia & Herzegovina the business subscribers pay more than double the price than residential subscribers do.

Only the business subscriptions in Croatia, the former Yugoslav Republic of Macedonia and for two of the incumbent operators in Bosnia & Herzegovina represent a revenue stream above two thirds of the constructed EU average.

It is difficult to draw any firm conclusion on the existence of access deficits from these indicators. In the EU Member States, there are countries with monthly rental at the EU average and above where there is still a debate over access deficits[18], but at the same time, there are new Member States with monthly rental less than half the EU average that claim that the rebalancing has been completed[19].

---

[16] The 10th Implementation report from the European Commission does not present the particular indicator that is used for this analysis. Instead, the Implementation report provides the EU average for fixed monthly charges for residential as well as business subscriptions. This indicator does not include the one-time installation charges, but nevertheless represents a useful value for comparison purposes.

[17] European Electronic Communications Regulation and Markets 2004 (10th Report) {COM(2004)759 final}

[18] Ninth EU Implementation Report.

[19] 4th Report on monitoring of EU Candidate Countries (Telecommunication Services Sector) prepared by IBM for the EU

In the figure, there are indications (a red line at the base of the bars) for those countries and geographic units that have assessed that their rebalancing has been completed. (See Table 50)

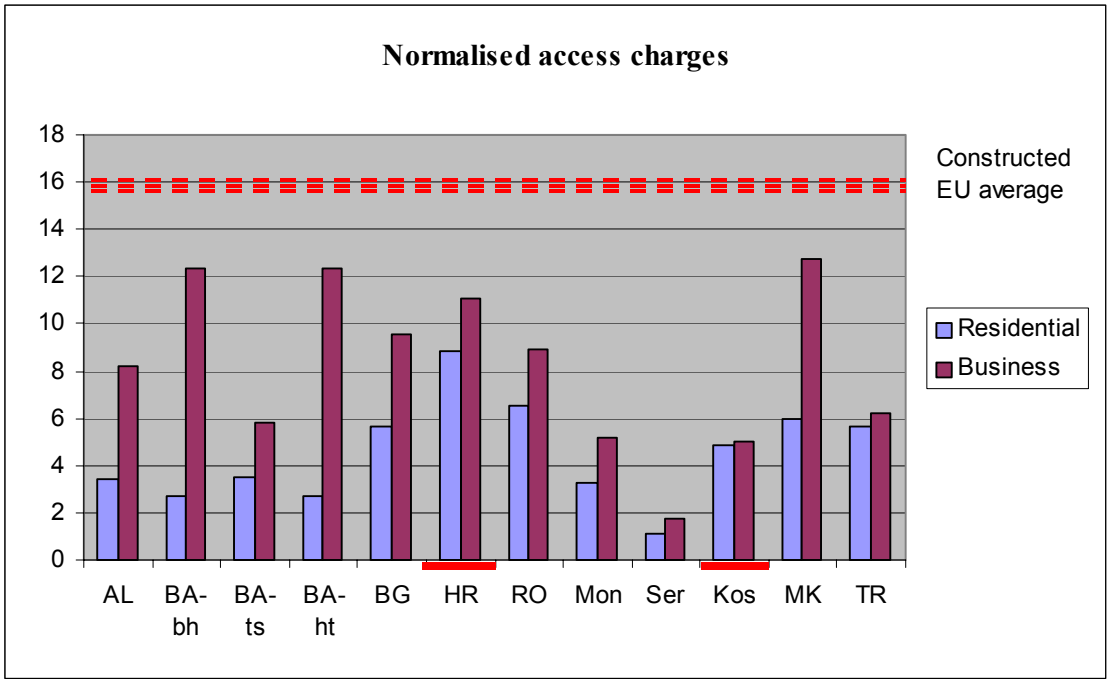


Figure 16 - Access charges

5. Local telephony tariffs

The next table provides price information for local calls including value added tax for the incumbent operator, and where competition exists, from a typical alternative operator, in peak time periods.

Some assumptions have to be made in order to produce price information that allows international comparisons:

- Where the tariff scheme includes an initial price for the establishment of the call (call-setup charge), this value is included in the price of the call.
- Where the length of a call unit is such that a three-minute call cannot be accurately priced, the time based price element is calculated based on a theoretical three-minute price. For example, where a call unit has a duration of four minutes, the price for three minutes is calculated as ¾ of the price for four minutes.
- The price calculation does not take into account the additional cost element represented by the fact that on average each call includes the cost of an additional half call unit.

The information in the table and the corresponding graph shows that short local calls in Bulgaria, Croatia, Romania and Turkey are at a level that is only slightly below the European average. Kosovo is also more or less in the same category.

Serbia, on the other hand, has an extremely low price for local calls at a level of about 5% of the European average. A three-minute local call in Serbia cost about 1/15 of the cost in neighbouring Croatia.

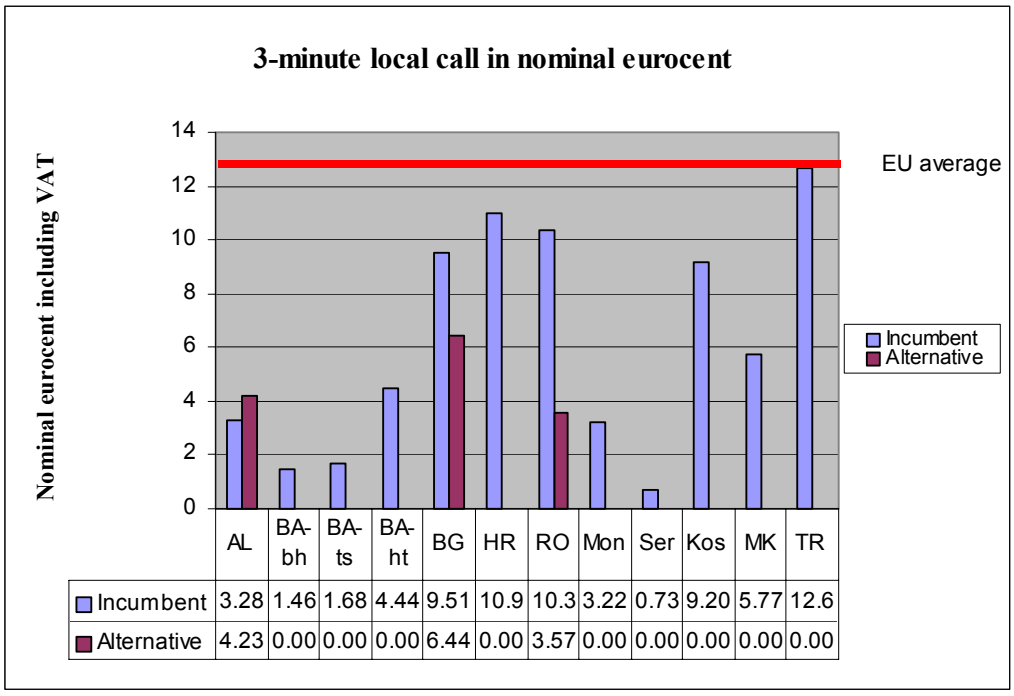
The other geographic units have tariffs that are significantly lower than the EU average.

Only Albania, Bulgaria and Romania have provided tariff information from alternative operators. In Bulgaria and Romania, the tariffs are significantly lower than those of the incumbent operator as expected in a competitive environment.

In Albania, the price of the alternative operator is higher than that of the incumbent operator. This is explained by the fact that the alternative operators provide telephony in certain rural areas rather than as a competitive alternative to the incumbent operator.

In the other geographic units, there is not yet a competitive alternative for fixed telephony.

In Albania, Montenegro and Serbia the incumbent operator has different tariffs for residential and business users. The figure presents the tariffs for the residential users.



	AL	BA-bh	BA-ts	BA-ht	BG	HR	RO	Mon	Ser	Kos	MK	TR
Incumbent	3.28	1.46	1.68	4.44	9.51	10.9	10.3	3.22	0.73	9.20	5.77	12.6
Alternative	4.23	0.00	0.00	0.00	6.44	0.00	3.57	0.00	0.00	0.00	0.00	0.00

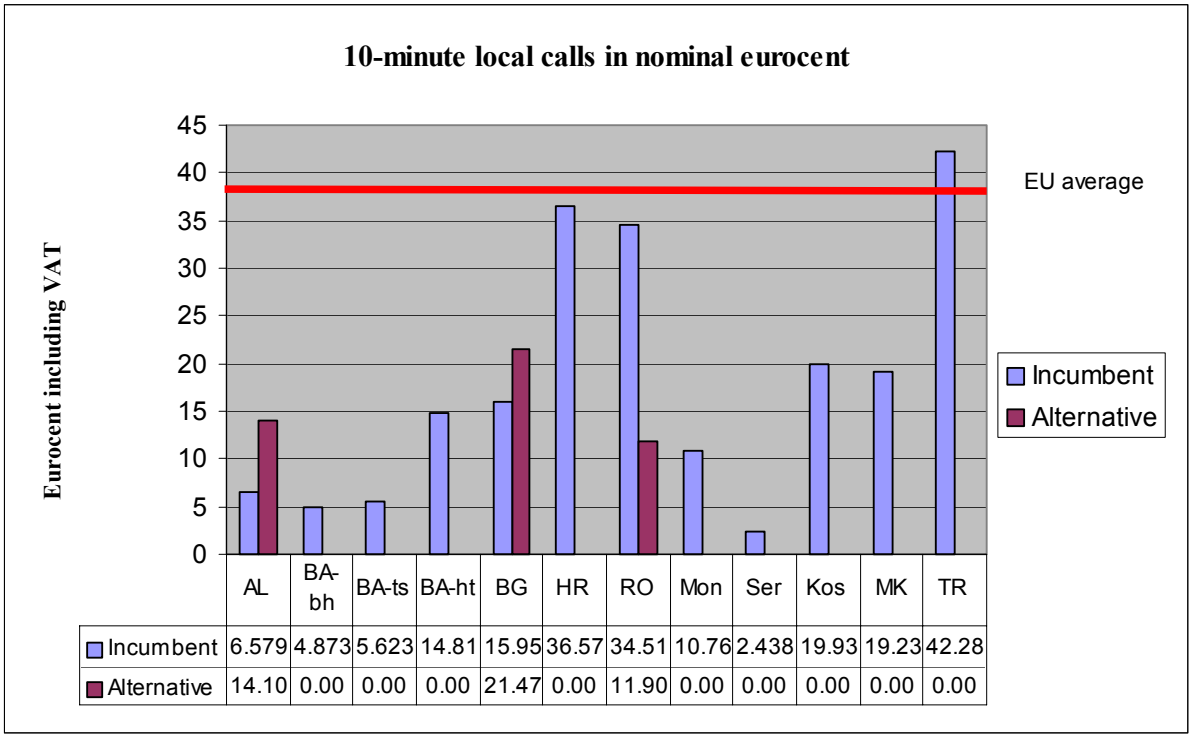
Figure 17 - Price of fixed incumbent and alternative fixed operator for a 3-minute local call in nominal Eurocents

Note:
The EU average is taken from the 10th Implementation Report from the European Commission, December 2004

The next table shows the prices for a 10-minute local call in the fixed network. This information will be different from that of a three-minute local call only to the extent that there are call set-up charges that become less significant in a longer call. Since only the incumbent operators in Albania and Bulgaria have tariff schemes with call set-up charges, these countries are presented with relatively lower prices for calls with 10-minute duration.

For both Albania and Bulgaria the call set-up cost is rather high relative to the cost per minute. In Albania, the set-up cost corresponds to the per minute cost for four minutes, and for Bulgaria the set-up cost corresponds to over seven minutes.

This means that for both these countries the cost for ten-minute local calls is considerable lower for a ten-minute call than for a three-minute call when compared against the EU average. It also means that the price charged by the incumbent operator in Bulgaria becomes more attractive for longer local calls when compared with the competitive alternative (Orbitel), which operates without set-up costs.



	AL	BA-bh	BA-ts	BA-ht	BG	HR	RO	Mon	Ser	Kos	MK	TR
Incumbent	6.579	4.873	5.623	14.81	15.95	36.57	34.51	10.76	2.438	19.93	19.23	42.28
Alternative	14.10	0.00	0.00	0.00	21.47	0.00	11.90	0.00	0.00	0.00	0.00	0.00

Figure 18 - Price of fixed incumbent and alternative fixed operator for a 10-minute local call in nominal Eurocents

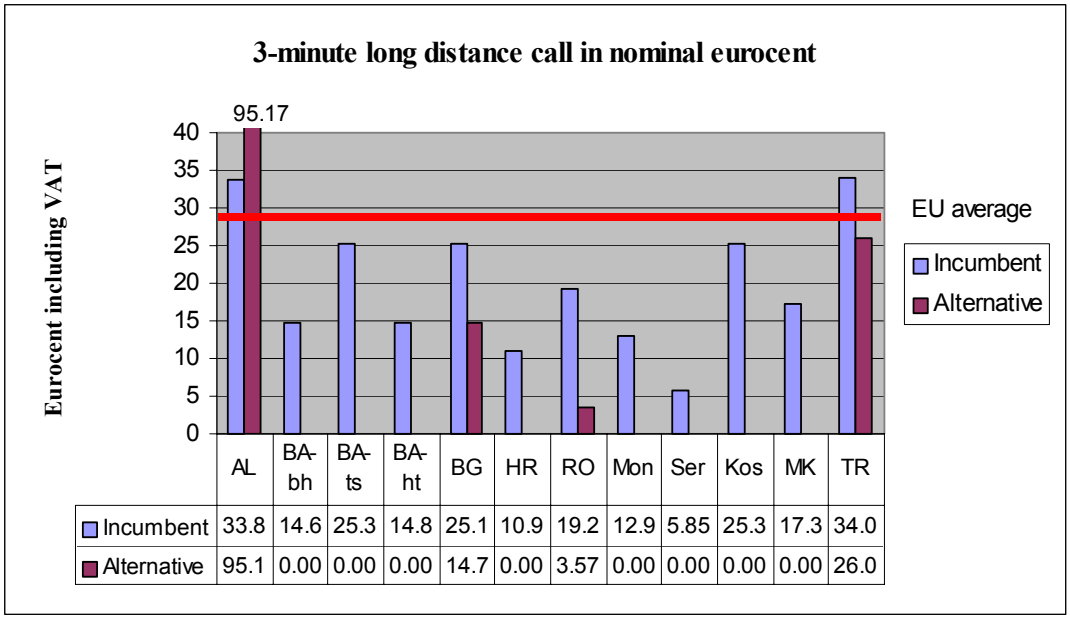
6. Long distance tariffs

The Croatian incumbent operator has a tariff scheme whereby all national calls are charged at the same rate. In other words, all national calls are charged at the rate of a local call. This means that while a three-minute local call in Croatia has a relatively high price, the price for a three-minute long distance call is relatively low compared with the other geographic unit and less than half of the European average.

Only Serbia has tariffs for national long distance calls that are lower than those in Croatia. However, this is based on the Serbian tariffs for residential users, which are lower than for business users.

A three-minute long distance call in Albania and Turkey costs slightly more than the EU average. In Bulgaria, Kosovo and for one of the operators in Bosnia & Herzegovina, the tariffs are slightly lower than the EU average.

The other two operators in Bosnia & Herzegovina and the incumbent operator in Romania and the former Yugoslav Republic of Macedonia have tariffs that are low compared with the EU average.

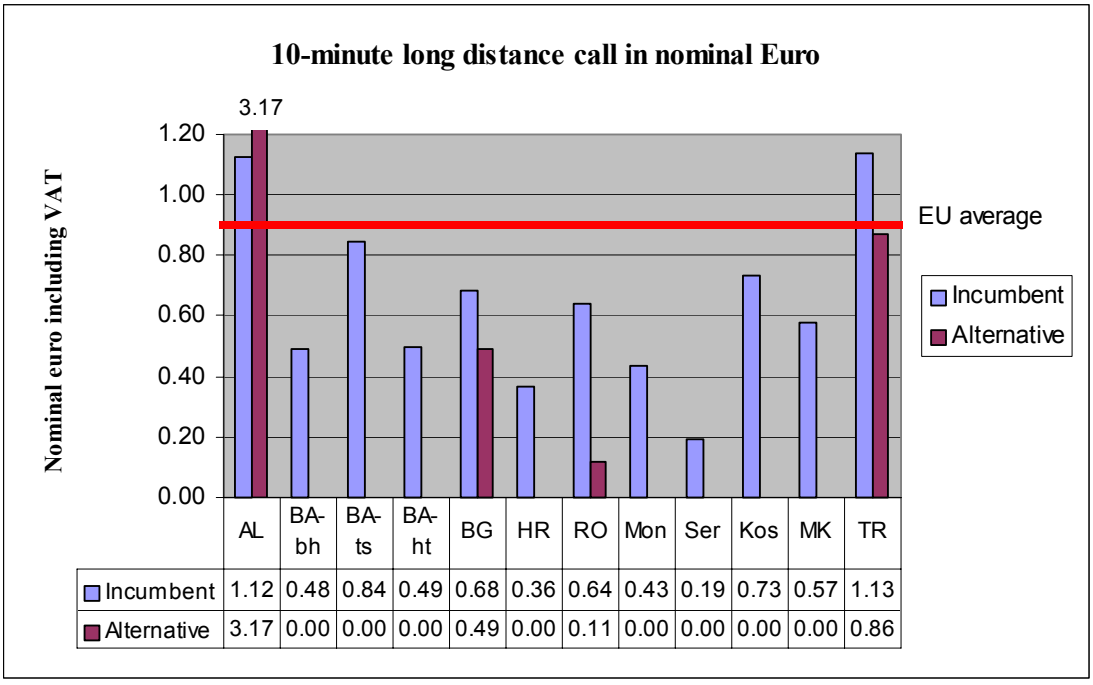


	AL	BA-bh	BA-ts	BA-ht	BG	HR	RO	Mon	Ser	Kos	MK	TR
Incumbent	33.8	14.6	25.3	14.8	25.1	10.9	19.2	12.9	5.85	25.3	17.3	34.0
Alternative	95.1	0.00	0.00	0.00	14.7	0.00	3.57	0.00	0.00	0.00	0.00	26.0

Figure 19 - Price of fixed incumbent and alternative fixed operator for a 3-minute long distance call in nominal Eurocents

Note:
Bulgaria - Price for the alternative operator, is given for long-distance calls to the networks of another fixed operator than Orbitel. Calls within the Orbitel network are free.
The EU average is taken from the 10th Implementation Report from the European Commission, December 2004

The next figure shows the prices for 10-minute long distance calls. It presents a picture that is quite similar to the previous figure for a three-minute call with some variations due to the reduced impact of call set-up charges for Albania, Bulgaria, Romania and Turkey.



	AL	BA-bh	BA-ts	BA-ht	BG	HR	RO	Mon	Ser	Kos	MK	TR
Incumbent	1.12	0.48	0.84	0.49	0.68	0.36	0.64	0.43	0.19	0.73	0.57	1.13
Alternative	3.17	0.00	0.00	0.00	0.49	0.00	0.11	0.00	0.00	0.00	0.00	0.86

Figure 20 - Price of fixed incumbent and alternative fixed operator for a 10-minute long distance call in nominal Eurocents

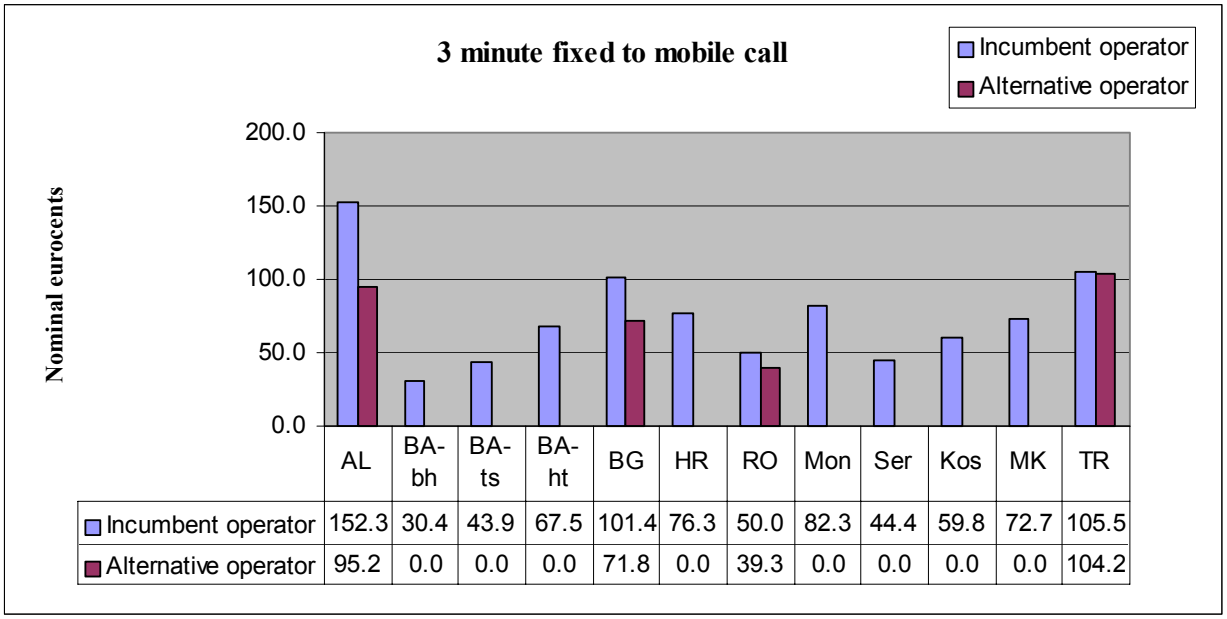
Note:
The EU average is taken from the 10th Implementation Report from the European Commission, December 2004.

7. Fixed to mobile tariffs

In almost all the countries and geographic units in this report there are more mobile than fixed subscriptions. It is therefore interesting to look at the rates for calls from fixed to mobile calls. Since these rates provide connection to mobile users wherever they are within the country or geographic unit, the rates could be compared with fixed national long distance calls rather than local calls.

Figure 21 below indicates particularly low tariffs for all three incumbent operators in Bosnia and Herzegovina. Serbia and Romania also have rather low tariffs, although they are twice the level of Bosnia and Herzegovina.

Albania has the highest rates. The other countries and geographic units have mid-range tariffs.



	AL	BA-bh	BA-ts	BA-ht	BG	HR	RO	Mon	Ser	Kos	MK	TR
Incumbent operator	152.3	30.4	43.9	67.5	101.4	76.3	50.0	82.3	44.4	59.8	72.7	105.5
Alternative operator	95.2	0.0	0.0	0.0	71.8	0.0	39.3	0.0	0.0	0.0	0.0	104.2

Figure 21 - Price of fixed incumbent and alternative fixed operator for a 3-minute long fixed to mobile call in nominal Eurocents

Notes
Albania – the alternative operator is H- Communications. The prices are for residential users. Business users pay 50% more.
Bosnia and Herzegovina – all three incumbent operators have both fixed and mobile operations. The graph shows the tariffs from a fixed operator to a mobile operator that is not a subsidiary. Tariffs for calls to its mobile subsidiary are lower.
Bulgaria – the alternative operator is Orbitel.
Serbia - the prices are for residential users. Business users pay 65% more.

8. Special cross-border tariff arrangements

The political, economical and social events in the last fifteen years in Southern and Eastern Europe, in particular on the territory of former Yugoslavia, created specific entities and territories some of which still have a provisional status. This situation is also to some extent reflected in the telecommunications tariffs as explained below.

a) Bosnia and Herzegovina

Federation of Bosnia and Herzegovina

Both operators in the Federation of Bosnia and Herzegovina have particularly favourable tariffs for calls to Croatia. These tariffs are only about 1/3 of the tariffs to the neighbouring countries of Serbia and Montenegro. Mobile telephony users also benefit from special tariffs for calls to Croatia.

The low prices for Croatia are also reflected in the prices for international leased lines.

Republika Srpska

Users in Republika Srpska have tariffs that mirror those in the Federation of Bosnia and Herzegovina, only that in this case it is Serbia and Montenegro that benefits from the special tariffs. Calls to this country cost about 1/5 of what it costs to call neighbouring Croatia.

The low prices for Serbia are also reflected in the prices for international leased lines.

b) Serbia and Montenegro

Montenegro

For a fixed telephone user, calls to Serbia and Kosovo have the status of being a special category of national long distance call. The tariff is about twice that of a national long distance call within Montenegro, but only 1/3 of the cost of an international call to a neighbouring country.

Before April 2004, calls from Montenegro to Republika Srpska in Bosnia and Herzegovina also benefited from this special tariff. After that date, all calls to Bosnia and Herzegovina have been priced as calls to other neighbouring countries.

For a mobile user, calls to Serbia have the same price as a call within Montenegro.

Serbia

For a fixed telephone user, calls to Montenegro follow the same pattern as calls in the opposite direction, i.e. it is a special category of national long distance call and priced 2.6 times higher than other domestic long distance calls.

Republika Srpska in Bosnia and Herzegovina enjoys a special status and the tariffs for calls from Telekom Srbija are actually lower than those to Montenegro. For residential users, the cost is 1/3 of the tariff for calls to other neighbouring countries and only twice the cost of a national long distance call in Serbia. For business users, the tariff is twice that of residential users.

For a mobile user, the tariffs to Montenegro and Kosovo vary with the operator:

- Telekom Srbija applies the same tariff to all mobile networks within the country of Serbia and Montenegro.
- Mobtel has one rate for national mobile calls and a different price for calls to Montenegro. With its direct interconnection with the Promonte mobile network in Montenegro it has priced cross-territory calls to this operator as well as to the fixed network in Montenegro at the same price as a national mobile-to-fixed call. These calls are more expensive than calls to Mobtel's own subscribers and subscribers of the other Serbian mobile operator.

Kosovo

A fixed telephone user in Kosovo pays a price for calls to Montenegro and Serbia, which is only twice as high as other long distance calls within Kosovo. Calls to other neighbouring countries cost about seven times more than long distance calls within Kosovo.

c) Romania

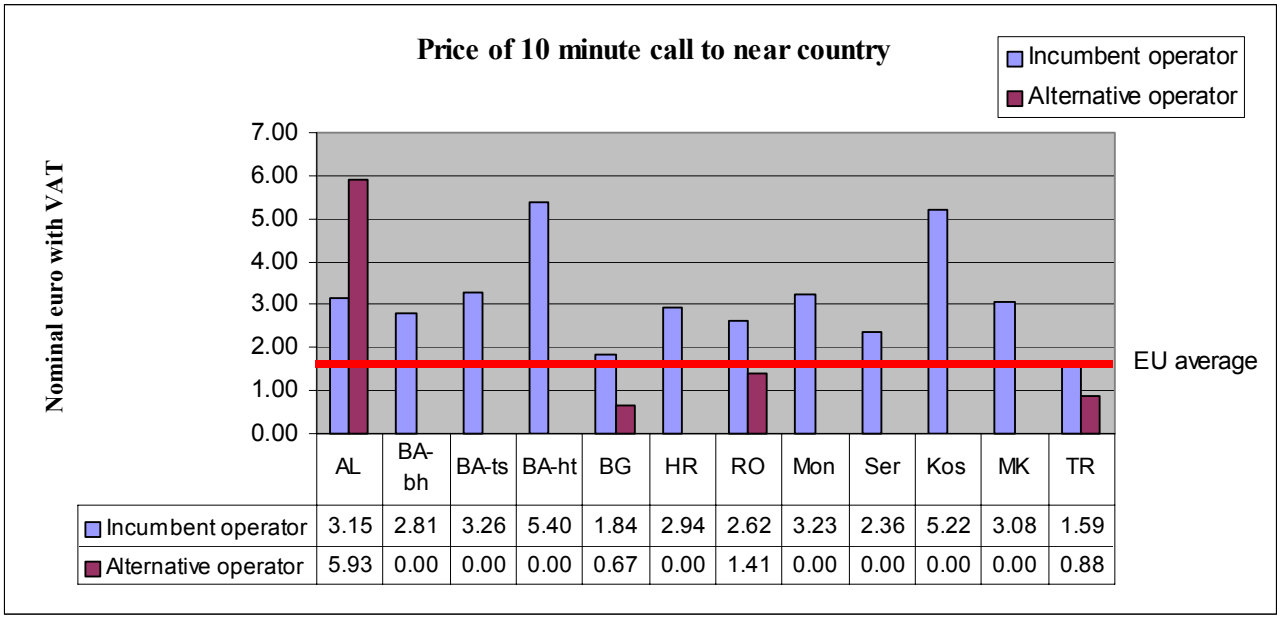
Romania has particularly low tariffs for traffic to Moldova, which are priced at 50% of the price to the next tariff zone.

9. International tariffs

As explained above, there are some special near country relationships between Bosnia and Herzegovina, Croatia, and Serbia and Montenegro. These special arrangements are not reflected in the figure below, which deals with "normal" near country long distance rates.

The international call tariffs have traditionally been expensive, but with competition and new technologies, the price has been reduced dramatically in countries with a liberal telecommunications environment.

Figure 22 below shows that Albania, Bosnia and Herzegovina, and Kosovo have tariffs that are significantly higher than the EU average. Only Bulgaria and Turkey have tariffs below the EU average. The other countries and geographic units have tariffs that are moderately higher than the EU average.



	AL	BA-bh	BA-ts	BA-ht	BG	HR	RO	Mon	Ser	Kos	MK	TR
Incumbent operator	3.15	2.81	3.26	5.40	1.84	2.94	2.62	3.23	2.36	5.22	3.08	1.59
Alternative operator	5.93	0.00	0.00	0.00	0.67	0.00	1.41	0.00	0.00	0.00	0.00	0.88

Figure 22 – Price of 10 minute call to near country

Notes:
Albania: The Incumbent Fixed Operator's tariffs apply to residential and business for calls to Greece, Italy, Kosovo, Croatia, Montenegro and the former Yugoslav Republic of Macedonia. Tariffs for the alternative fixed operator, H-Communications apply to calls Greece, the former Yugoslav Republic of Macedonia and Italy.
Bosnia and Herzegovina: As explained above in III.G.8 on cross-border tariffs, each operator has special tariffs to some countries. The tariffs to neighbouring countries that do not benefit from these special tariffs are higher by a factor of three or more. The tariff reflected in the figure represents an arithmetic average of the two near country tariffs.
Bulgaria. The price in the table above apply to Greece, Croatia, Albania, Slovenia.
Romania. The prices apply to calls to Hungary, Bulgaria and Ukraine.
The EU average is taken from the 10th Implementation Report from the European Commission, December 2004.

Figure 23 presents the corresponding information for calls to a distant European country. In this case, the UK has been chosen to represent such a country. The results indicate again that the tariffs for Bosnia and Herzegovina as well as Kosovo are significantly above the EU average. The former Yugoslav Republic of Macedonia also has significantly higher tariffs.

While Albania had very high tariffs to its neighbour countries, the price is more moderate for calls to the UK.

Bulgaria, Romania and Turkey have tariffs at or below the EU average. The other countries and geographic units have tariffs that are moderately above the EU average.

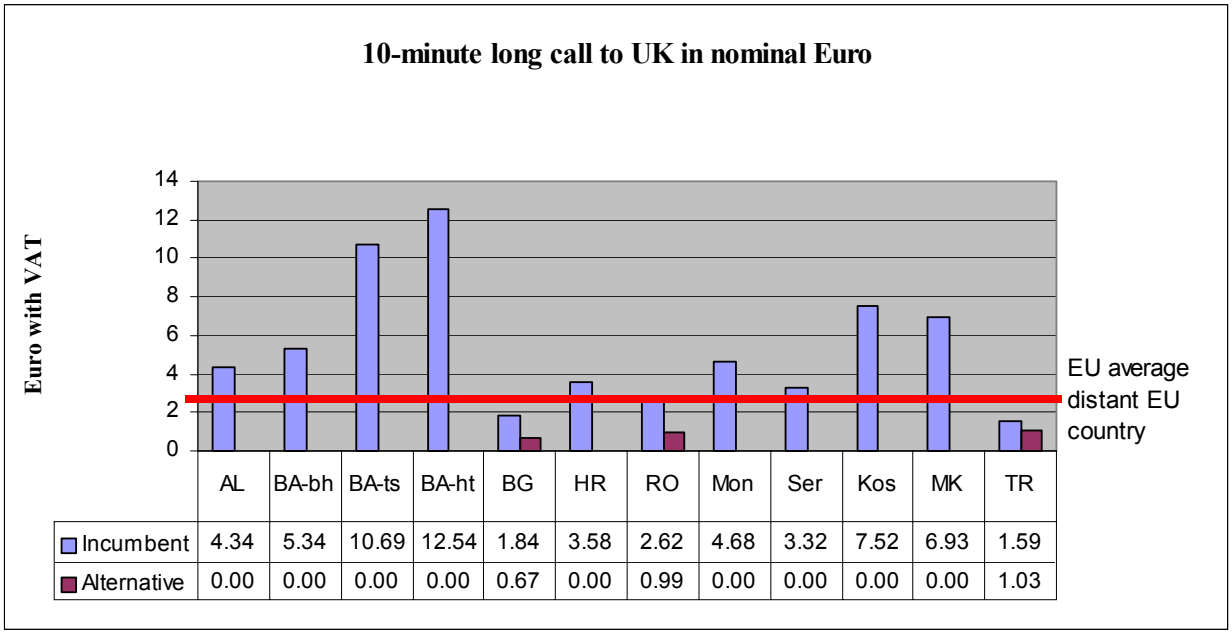
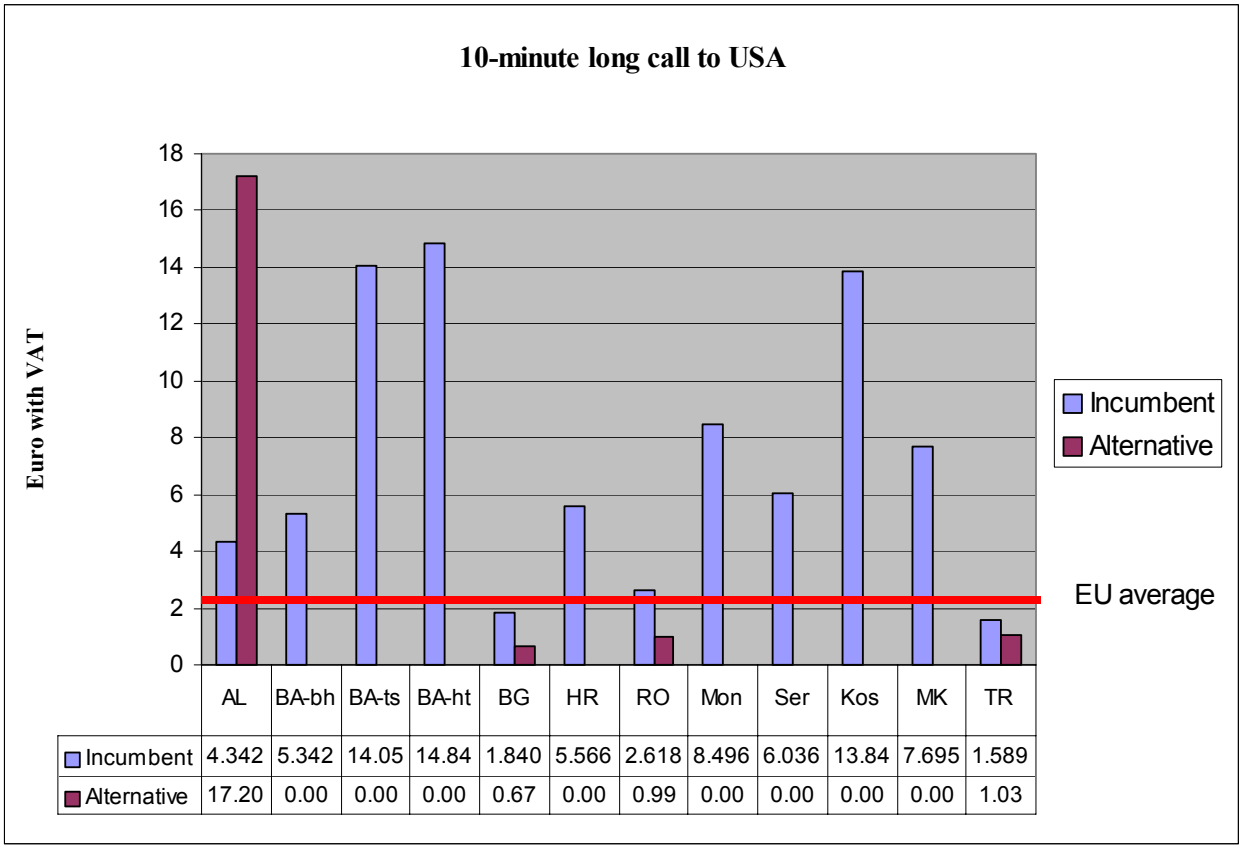


Figure 23 - Price of fixed incumbent and alternative fixed operator for a 10-minute long call to UK in nominal Euro

Notes:
Albania. The prices shown are for residential users. Prices for business users are 50% higher.
Bulgaria. Calls from the incumbent's fixed network to mobiles in UK cost the double of calls to fixed networks. For a typical alternative operator such as Orbitel, the price to a mobile user is almost four times the price of the call to a fixed network, but even so it is 30% less than the corresponding price of the incumbent operator.
Serbia. There are different tariffs for residential and business users. The price shown is for residential users.
The EU average is taken from the 10th Implementation Report from the European Commission, December 2004.

Figure 24 presents the corresponding tariffs for calls to the United States. This is a particularly interesting indicator because such calls used to be very expensive, but the combination of a high level of competition and new technologies has brought down the prices in most EU Member States so that such calls are no longer more expensive than calls within Europe.

Bulgaria, Romania and Turkey have prices that reflect this development as they are at or below the EU average. All the other countries and geographic units have prices that are significantly higher than the EU average, ranging from twice the EU average in Albania to seven times the EU average for one of the incumbent operators in Bosnia and Herzegovina. The alternative operator in Albania, from one of the rural areas, has even higher tariffs.



	AL	BA-bh	BA-ts	BA-ht	BG	HR	RO	Mon	Ser	Kos	MK	TR
Incumbent	4.342	5.342	14.05	14.84	1.840	5.566	2.618	8.496	6.036	13.84	7.695	1.589
Alternative	17.20	0.00	0.00	0.00	0.67	0.00	0.99	0.00	0.00	0.00	0.00	1.03

Figure 24 - Price of fixed incumbent and alternative fixed operator for a 10-minute long call to USA in nominal Euro

Notes:
Albania. The price shown is the residential tariff. The business tariffs are 50% higher.
Serbia. The price shown is the residential tariff. The business tariff is 65% higher.
The EU average is taken from the 10th Implementation Report from the European Commission, December 2004.

10. Leased lines

Leased lines are building blocks for alternative networks that compete, directly or indirectly, with the networks of incumbent operators. The prices are typically quite high prior to the start of network competition. When competition is introduced, there will often be competitive alternatives from other networks, such as networks belonging to energy companies that provide price pressure. In the past, such competition has probably had more effect on prices than cost orientation requirements.

In a series of figures below, the tariffs for national leased lines are presented for:

- 2 km 64 Kbit/s;
- 200 km 64 Kbit/s;

- 2 km 2 Mbit/s;
- 200 km 2 Mbit/s;
- 2 km 34 Mbit/s;
- 200 km 34 Mbit/s.

Not all operators have tariffs that correspond exactly to these categories. In that case, the closest alternative has been chosen.

All the prices are monthly retail prices without value added tax. Some of the operators also provide wholesale alternatives. The prices are for simple unstructured lines. However, for the case of the former Yugoslav Republic of Macedonia only managed lines are available and it is the price for such lines that are shown.

The figures show that Albania has prices for leased lines that are significantly higher than the other countries and geographic units as well as the EU average, except for 200 km 2 Mbit/s lines, which are "only" about 50% above the EU average.

The other countries and geographic units do not present a consistent relationship using the EU average as an indicator. For the short 64 Kbit/s lines all countries and geographic units have prices below the EU average, while for the longer distance they are only slightly above or below. In the case of Montenegro and Serbia, they are significantly lower.

For the higher speeds of 2 Mbit/s lines, the picture is more mixed. In particular, for the longer lines, there are great variations with Montenegro and Serbia having particularly low rates, and the former Yugoslav Republic of Macedonia having particularly high rates.

The 34 Mbit/s lines are not offered in all the countries and geographic units. The former Yugoslav Republic of Macedonia has particularly high rates both for short and long lines.

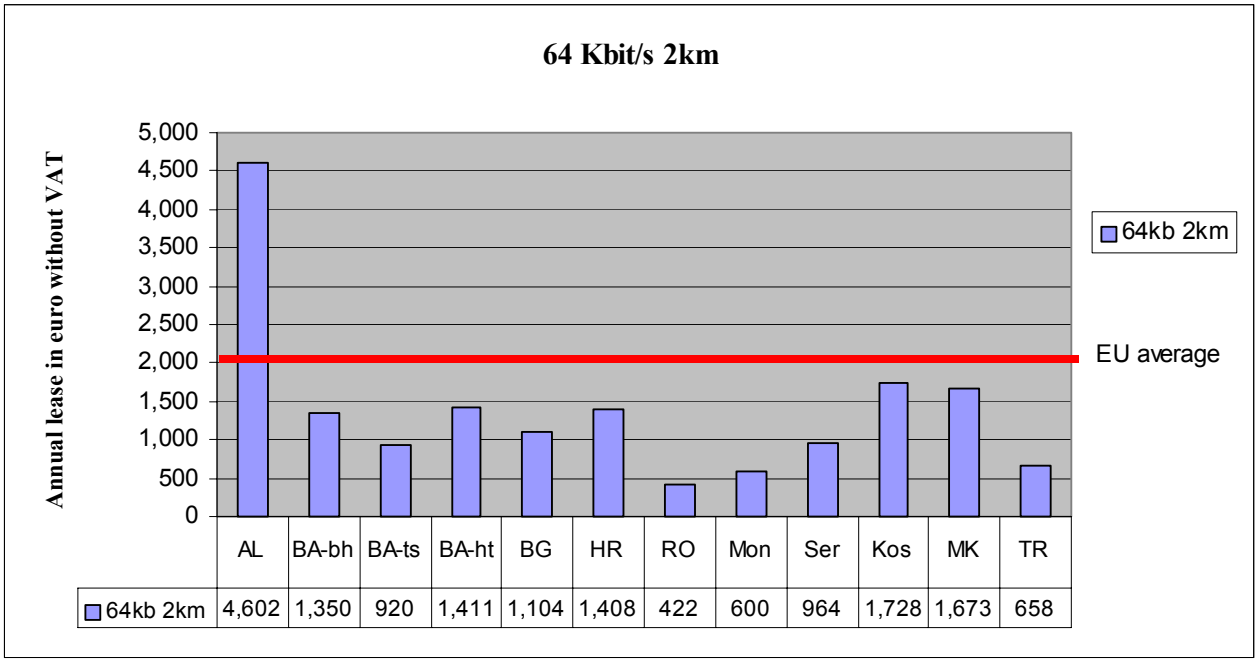


Figure 25 – Prices for national 64 Kbit/s 2 km leased lines in nominal euro without VAT

Note:
The EU average is taken from the 10th Implementation Report from the European Commission, December 2004.

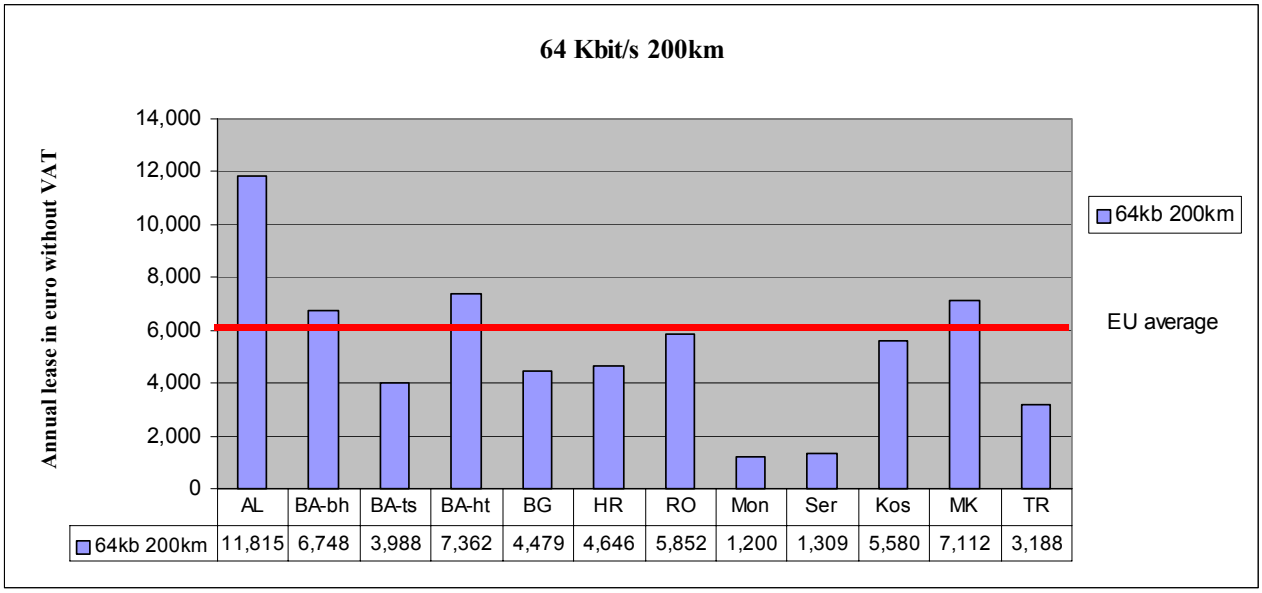


Figure 26 - Prices for national 64 Kbit/s 200 km leased lines in nominal euro without VAT

Notes:
The former Yugoslav Republic of Macedonia: 64 Kbit/s 200 km long leased lines are not used in the former Yugoslav Republic of Macedonia because of its size.
The EU average is taken from the 10th Implementation Report from the European Commission, December 2004.

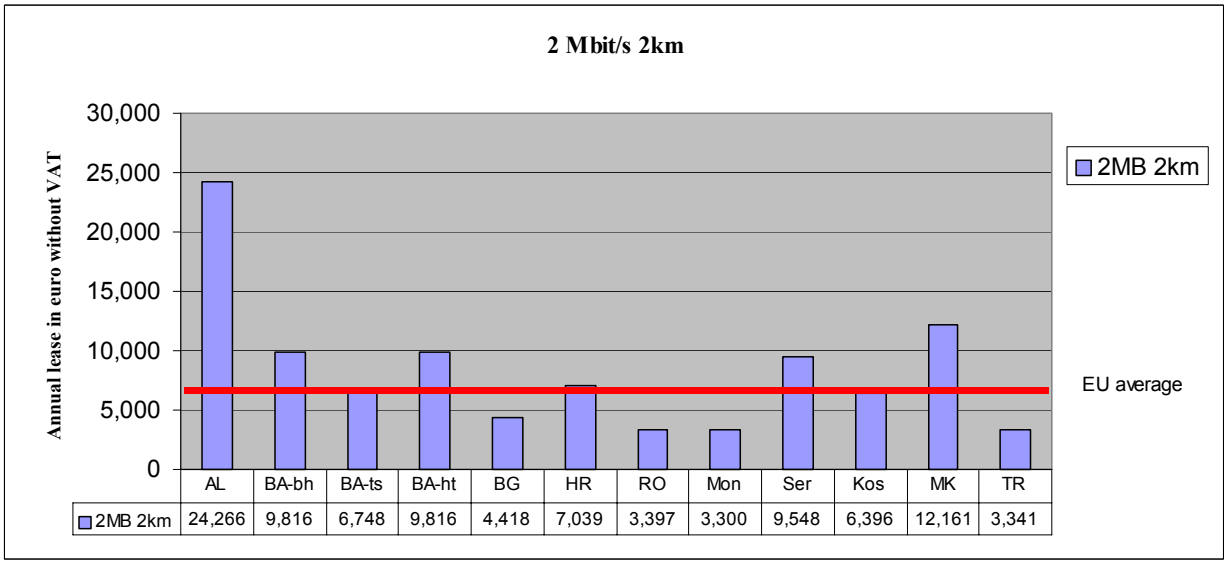


Figure 27 - Prices for national 2 Mbit/s 2 km leased lines in nominal euro without VAT

Note:
The EU average is taken from the 10th Implementation Report.

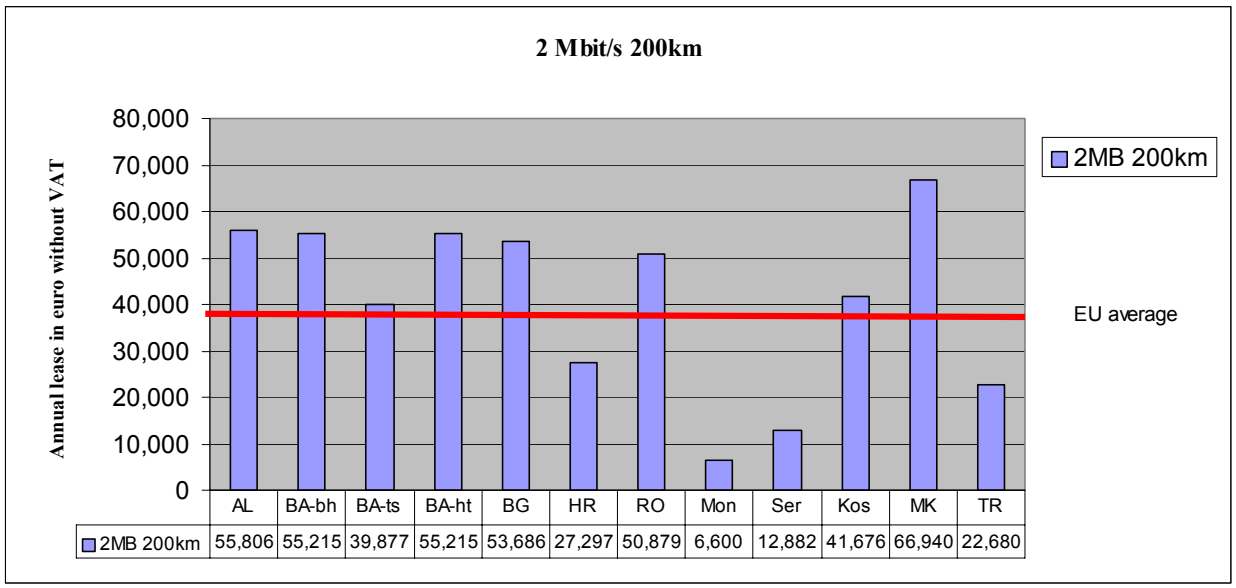


Figure 28 - Prices for national 2 Mbit/s 200 km leased lines in nominal euro without VAT

Notes:
The former Yugoslav Republic of Macedonia: 2 Mb 200 km long leased lines are not used in the former Yugoslav Republic of Macedonia because of its size.
The EU average is taken from the 10th Implementation Report from the European Commission, December 2004.

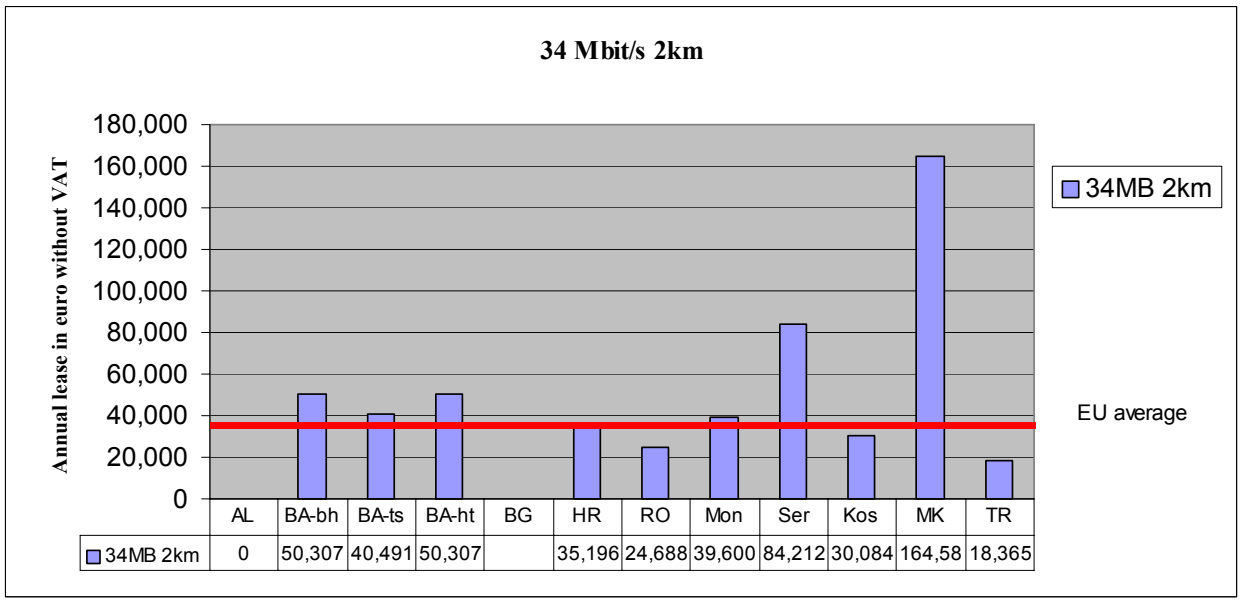


Figure 29 - Prices for national 34 Mbit/s 2 km leased lines in nominal euro without VAT

Notes:
The former Yugoslav Republic of Macedonia: 34 Mbit/s 2 km long leased lines are radio links only.
The EU average is taken from the 10th Implementation Report from the European Commission, December 2004.

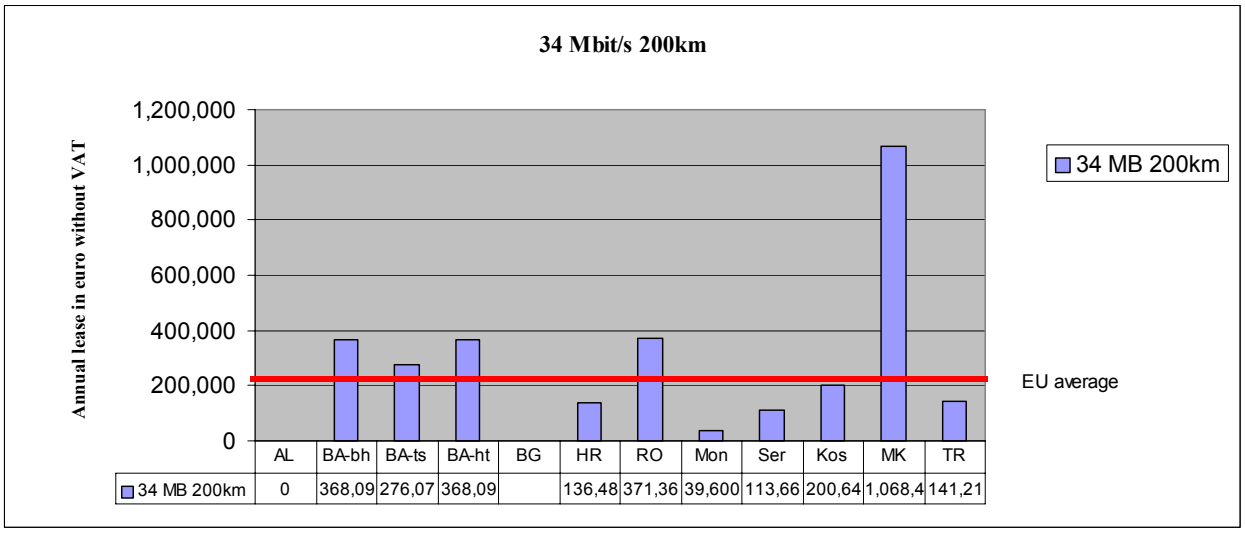


Figure 30 - Prices for national 34 Mbit/s 200 km leased lines in nominal euro without VAT

Notes:
The former Yugoslav Republic of Macedonia: 34 Mb 200 km long leased lines are radio links only.
The EU average is taken from the 10th Implementation Report from the European Commission, December 2004.

11. International leased lines

International leased lines are provided in the form of half-circuits, which are connected to another half-circuit or a transit circuit near the border. For a complete leased line, it is necessary to have at least two half-circuits, one from each of two neighbouring countries.

International circuits can be provided in the form of double routing or single routing. Double routing includes an additional element of redundancy and such lines cost more than single routing lines.

Single routing lines are only available in Bulgaria, Romania and the former Yugoslav Republic of Macedonia. The information provided in this section is therefore tariffs for double routing half-circuits for all the other countries and geographic units.

Below are four figures presenting information on monthly tariffs for international half circuits:

- 64 Kbit/s to near country;
- 64 Kbit/s to the UK;
- 2 Mbit/s to near country;

- 2 Mbit/s to the UK.

The tariffs for Montenegro are consistently extremely low when compared to the other countries and geographic units and to the EU average.

Serbia also has generally low tariffs across all categories. Romania has particularly low tariffs compared to the other countries and geographic units and to the EU average for the high-speed alternatives.

At the other end of the scale, one of the incumbent operators in Bosnia and Herzegovina has consistently very high tariffs.

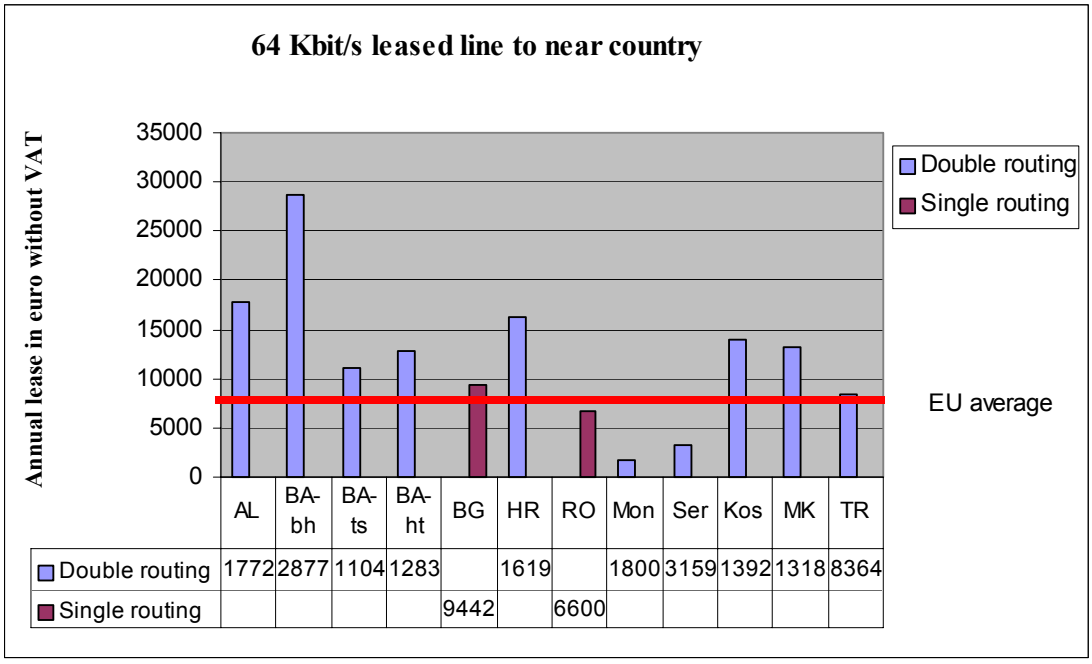
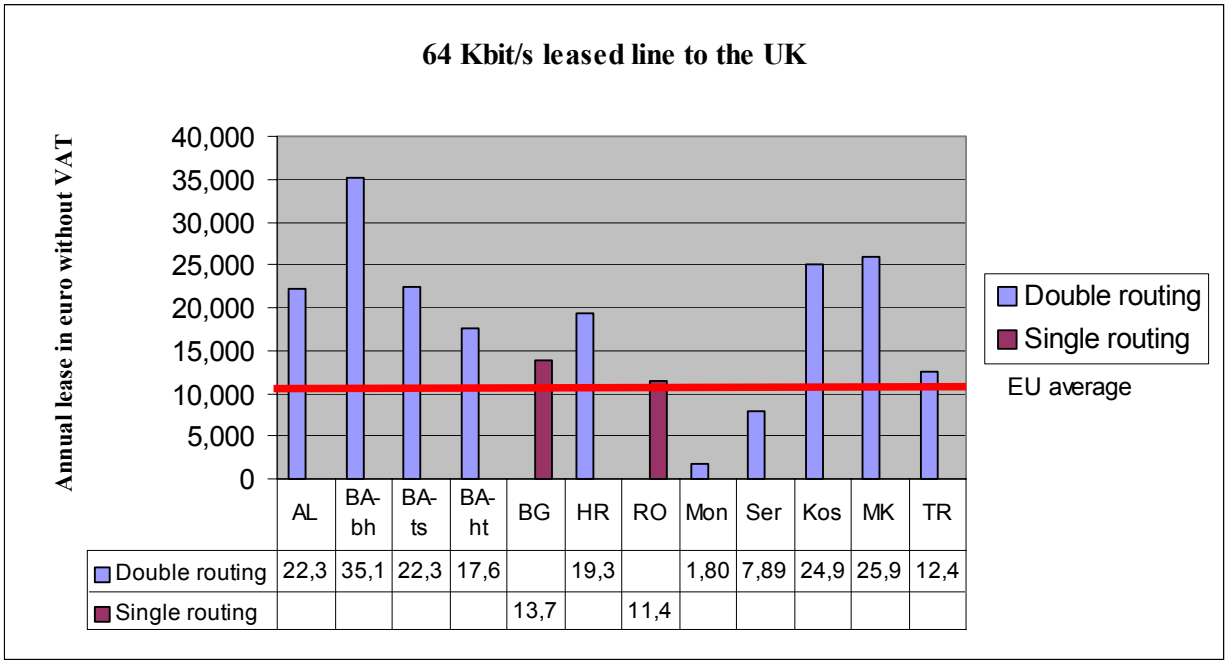


Figure 31 – Prices for international 64 Kbit/s leased lines to near country in nominal euro without VAT

Notes:
Bulgaria provides prices for international leased lines in Special Drawing Rights (SDR). These values are converted to US dollars (USD) according to data in the International Monetary Funds (IMF) special bulletins. The USD value is converted to BGN according to the exchange rate announced by the Bulgarian National Bank on the starting date of the month when the service is provided.
Turkey quotes prices in SDR.
The EU average is taken from the 10th Implementation Report from the European Commission, December 2004.



	AL	BA-bh	BA-ts	BA-ht	BG	HR	RO	Mon	Ser	Kos	MK	TR
Double routing	22,3	35,1	22,3	17,6		19,3		1,80	7,89	24,9	25,9	12,4
Single routing					13,7		11,4					

Figure 32 - Prices for international 64 Kbit/s leased lines to the UK in nominal euro without VAT

Notes:
Bulgaria provides prices for international leased lines in Special Drawing Rights (SDR). These values are converted to US dollars (USD) according to data in the International Monetary Funds (IMF) special bulletins. The USD value is converted to BGN according to the exchange rate announced by the Bulgarian National Bank on the starting date of the month when the service is provided.
Turkey quotes prices in SDR.
The EU average is taken from the 10th Implementation Report from the European Commission, December 2004.

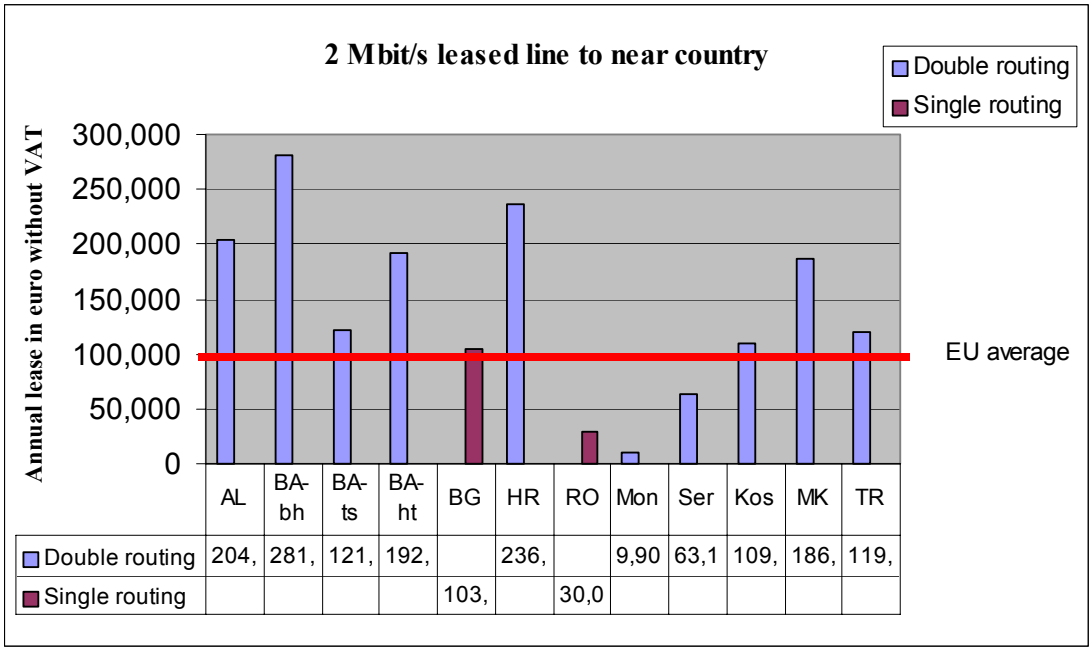


Figure 33 - Prices for international 2 Mbit/s leased lines to near country in nominal euro without VAT

Notes:
Bulgaria provides prices for international leased lines in Special Drawing Rights (SDR). These values are converted to US dollars (USD) according to data in the International Monetary Funds (IMF) special bulletins. The USD value is converted to BGN according to the exchange rate announced by the Bulgarian National Bank on the starting date of the month when the service is provided.
Turkey quotes prices in SDR.
The EU average is taken from the 10th Implementation Report from the European Commission, December 2004.

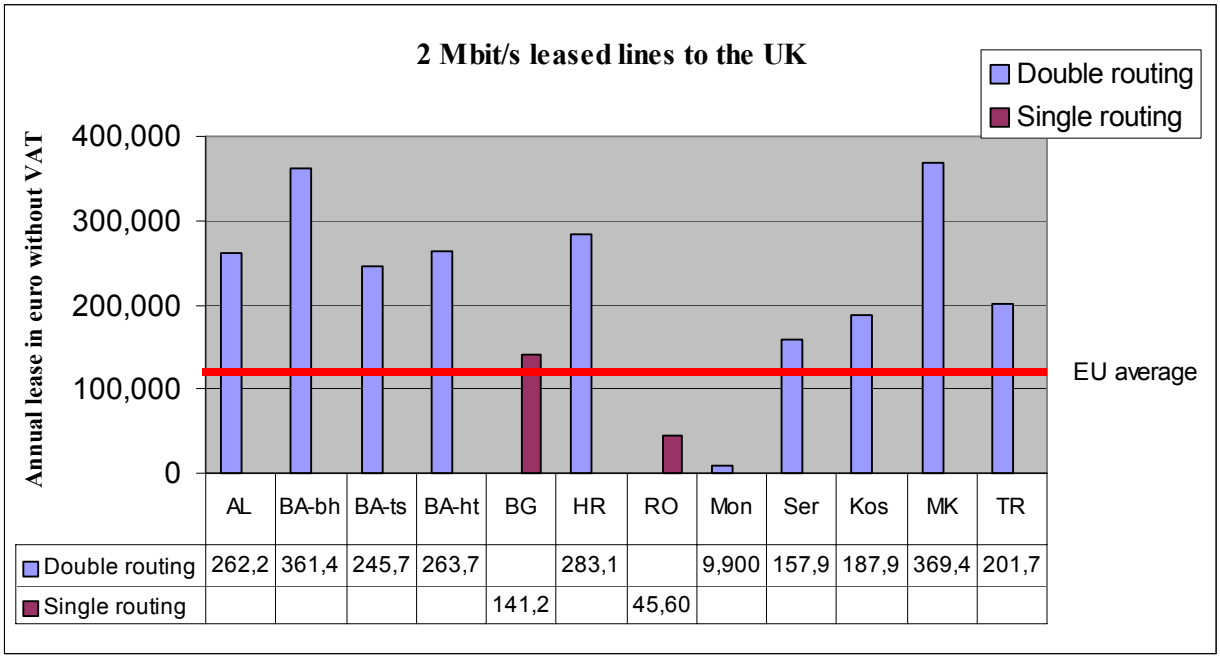


Figure 34 - Prices for international 2 Mbit/s leased lines to the UK in nominal euro without VAT

Notes:
Bulgaria provides prices for international leased lines in Special Drawing Rights (SDR). These values are converted to US dollars (USD) according to data in the International Monetary Funds (IMF) special bulletins. The USD value is converted to BGN according to the exchange rate announced by the Bulgarian National Bank on the starting date of the month when the service is provided.
Turkey quotes prices in SDR.
The EU average is taken from the 10th Implementation Report from the European Commission, December 2004.

H. Telephony tariffs – wholesale

The information in this section has April 1, 2005 as its reference date.

In the EU regulatory framework the incumbent operators are normally defined as having significant market power and as a consequence they are normally obliged to offer cost oriented interconnection tariffs to other operators through a reference interconnection offer. The regulatory situation in each country and geographic unit is presented in III.D on Regulations – Competitive safeguards.

In particular, the interconnection tariffs determine how the retail price for a call is shared between an incumbent operator and a new entrant. In a situation where the tariffs are rebalanced, there is typically a strong regulatory pressure for the incumbent operator to reduce the interconnection rates in order to provide both better conditions for competitive alternatives as well as to enable lower retail prices for the users.

In the EU Member States, benchmarking "best practices" rates played an important role in creating a downward pressure on prices. Today, interconnection rates in the EU are fairly consistent with relatively small variations around the EU average. The exceptions are four of the new Member States, where the interconnection rates are twice or more than the EU average.

The EU average therefore presents a quite meaningful comparative indicator.

1. Fixed network interconnection charges

Country	Peak		Off peak	
	Setup (eurocent)	Minute (eurocent)	Setup (eurocent)	Minute (eurocent)
Albania	0.00	1.17	0.00	1.17
Bosnia & Herzegovina	-	-	-	-
Bulgaria	0.00	0.92	0.00	0.87
Croatia	0.20	0.94	0.20	0.47
Romania	0.00	1.15	0.00	0.90
Serbia & Montenegro - *Montenegro*	0.00	7.50	0.00	7.50
Serbia & Montenegro - *Serbia*	na	na	na	na
Serbia & Montenegro - · *Kosovo*	na	na	na	na
The former Yugoslav Republic of Macedonia	na	na	na	na
Turkey	0.00	1.92	0.00	1.92

Table 54 - Fixed-to-fixed interconnection charges for call termination on fixed network of incumbent operator – local level

Notes:
Albania. There is no difference between peak and off-peak tariffs.
Bosnia and Herzegovina. Interconnection rates are not yet established. They are expected to be available in the second half of 2005.
Bulgaria. There is also a rate for "metro interconnection", which covers a smaller region than local

interconnection.
Montenegro. There is no difference between peak and off-peak tariffs. Neither is there any difference between local, single transit and double transit tariffs.
Serbia. There is no RIO yet.
Kosovo. Interconnection charges have not been established.
The former Yugoslav Republic of Macedonia. There is no RIO yet.
Turkey. The Turkish interconnection regime operates with in-zone and out-zone tariffs rather than the normal tariffs for local, single transit and double transit. In-zone represents both local and single transit traffic, while out-zone corresponds to double transit. There is no differentiation between peak and off-peak.
The EU average is taken from the 10th Implementation Report from the European Commission, December 2004.

The local level interconnection tariffs are reasonably aligned with the EU average for most countries and geographic units where the rates have been established, although they are all higher than the EU average.

The exceptions are Montenegro, which have rates that are ten times as high as the EU average. This is partly explained by the fact that the incumbent operator in Montenegro has a single rate for all national terminations. Similarly, Turkey has also a relatively high local interconnection rate, because their corresponding in-zone tariff covers a larger geographic area than a normal local area.

The figure below illustrates the charge per minute for local termination in peak time. It also presents the corresponding information on rates for local mobile to fixed information in the same charge. More details on the mobile to fixed termination rate are presented in section III.H.2 on Mobile/fixed interconnection charges.

The expectation is that fixed-fixed and mobile-fixed termination rates would be the same and indeed, this is the case for Romania and Turkey. However Albania, Bulgaria, Montenegro and Serbia there is only a single termination rate for all mobile calls to fixed networks (according to the conditions of the approved RIO of the Bulgarian incumbent, mobile-to-fixed interconnection is realised only at the double transit level). In Croatia, there are different rates for single and local transit, but no rate for local termination.

This is the main reason why the mobile to fixed rates for local termination are considerably higher than the corresponding fixed to fixed tariff. However, in Montenegro, the mobile to fixed tariffs are lower. As explained above, Montenegro has only one rate for fixed to fixed termination.

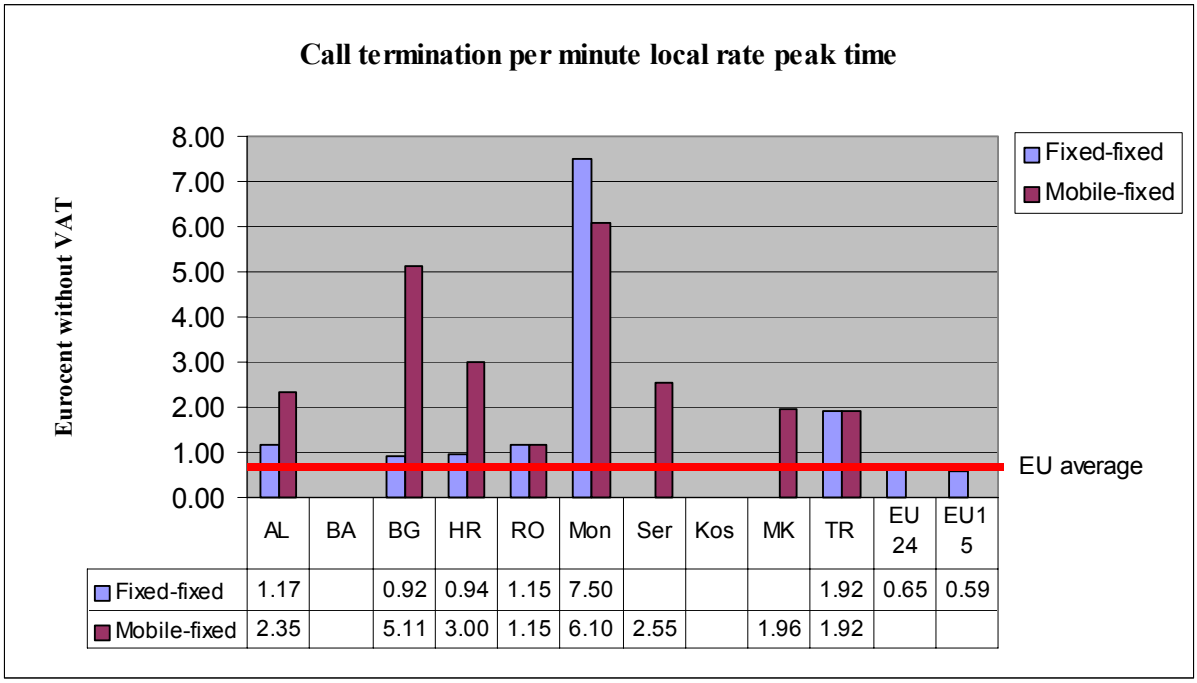


Figure 35 - Fixed-to-fixed interconnection charges for call termination on fixed network of incumbent operator – local level

Note:
Bulgaria: the mobile to fixed call termination charge is the double transit rate, which is the only rate available.

The next table presents the tariffs for single transit termination. These tariffs represent a similar situation to that of local termination. Montenegro is still higher than the EU average by a factor of 7.5. Romania and Turkey are at the same level, i.e. about twice the EU average.

Country	Peak		Off peak	
	Setup (eurocent)	Minute (eurocent)	Setup (eurocent)	Minute (eurocent)
Albania	0.00	1.21	0.00	1.21
Bosnia & Herzegovina	-	-	-	-
Bulgaria	0.00	1.69	0.00	1.59
Croatia	0.20	1.30	0.20	0.65
Romania	0.00	2.14	0.00	1.97
Serbia & Montenegro - *Montenegro*	0.00	7.50	0.00	7.50
Serbia & Montenegro - *Serbia*	na	na	na	na
Serbia & Montenegro - · *Kosovo*	na	na	na	na
The former Yugoslav Republic of Macedonia	-	-	-	-
Turkey	0.00	1.92	0.00	1.92

Table 55 - Fixed-to-fixed interconnection charges for call termination on fixed network of incumbent operator – single transit

Note:
Please see notes for Table 54

The figure below illustrates the charge per minute for single transit termination in peak time. The corresponding tariffs for mobile to fixed termination are shown in the same chart. As explained above, the expectation is that both rates should be the same. This is the case for Romania and Turkey. However, for Albania and Croatia, the mobile to fixed rates are higher, and for Montenegro, they are lower.

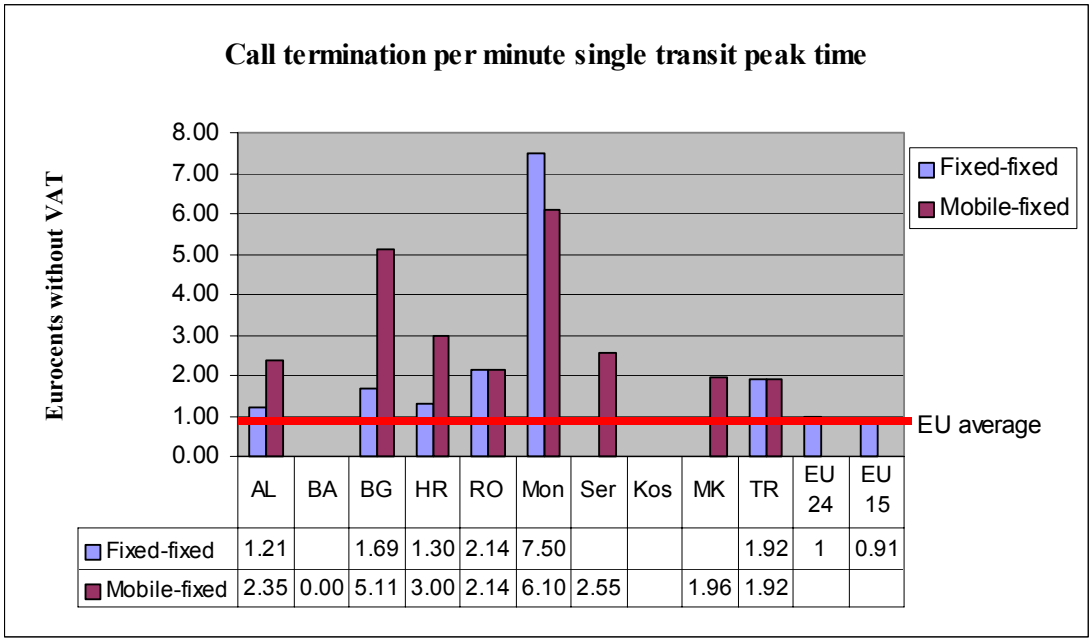


Figure 36 - Fixed-to-fixed interconnection charges for call termination on fixed network of incumbent operator – single transit

Note:
Bulgaria: the mobile to fixed call termination charge is the double transit rate, which is the only rate available.

The next table shows the corresponding information for double transit interconnection.

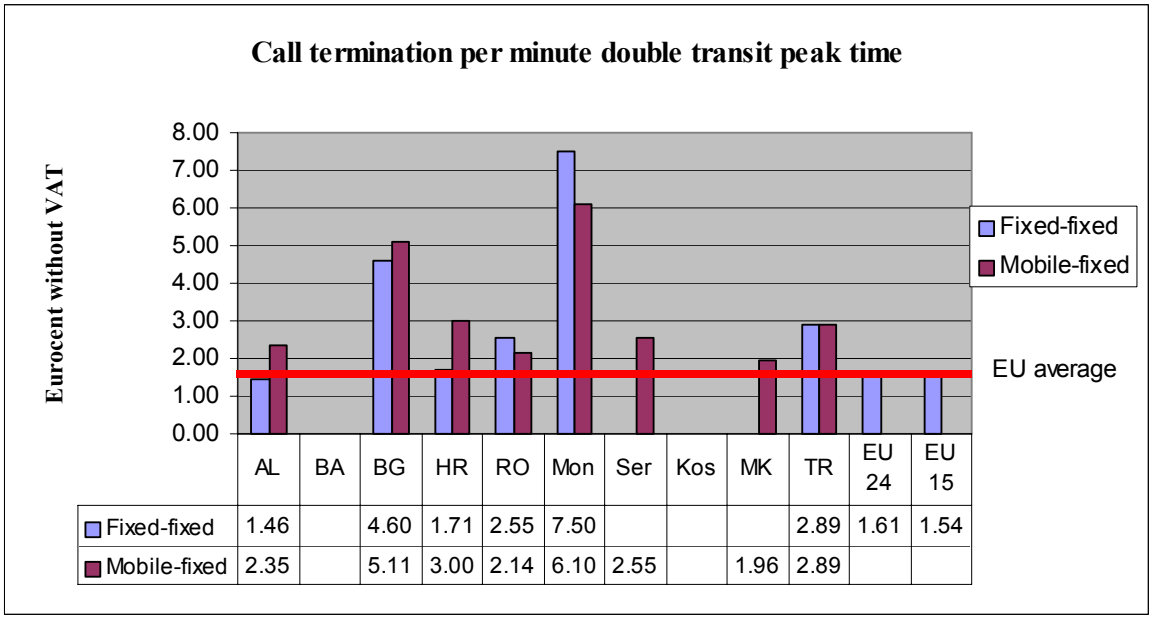
Again, the tariffs in Montenegro are significantly higher than the EU average, this time by a factor of five. Also Bulgaria and to a less extent Romania and Turkey have tariffs that are quite high compared with the EU average. Albania, on the other hand, has a tariff slightly below the EU average.

Country	Peak		Off peak	
	Setup (eurocent)	Minute (eurocent)	Setup (eurocent)	Minute (eurocent)
Albania	0.00	1.46	0.00	1.46
Bosnia & Herzegovina	-	-	-	-
Bulgaria	0.00	4.60	0.00	3.83
Croatia	0.20	1.71	0.20	0.85
Romania	0.00	2.55	0.00	2.35
Serbia & Montenegro - *Montenegro*	0.00	7.50	0.00	7.50
Serbia & Montenegro - *Serbia*	na	na	na	na
Serbia & Montenegro - · *Kosovo*	na	na	na	na
The former Yugoslav Republic of Macedonia	-	-	-	-
Turkey	0.00	2.89	0.00	2.89

Table 56 - Fixed-to-fixed interconnection charges for call termination on fixed network of incumbent operator – double transit

Note:
Please see the notes for Table 54.

The figure below illustrates the charge per minute for double transit termination in peak time. This figure also presents the mobile to fixed termination rates. As explained above, the expectation is that both tariffs should be the same, but this is only the case for Turkey. In Albania, Bulgaria and Croatia, the mobile to fixed tariffs are higher, while for Montenegro and Romania they are lower.



	AL	BA	BG	HR	RO	Mon	Ser	Kos	MK	TR	EU 24	EU 15
Fixed-fixed	1.46		4.60	1.71	2.55	7.50				2.89	1.61	1.54
Mobile-fixed	2.35		5.11	3.00	2.14	6.10	2.55		1.96	2.89		

Figure 37 - Fixed-to-fixed interconnection charges for call termination on fixed network of incumbent operator – double transit

2. Mobile/fixed interconnection charges

This section provides detailed information on the mobile to fixed interconnection rates. The charges per minute are presented graphically together with the fixed to fixed rates in the section above and are commented there. The detailed information is presented here for reference.

Country	Peak		Off peak	
	Setup (eurocent)	Minute (eurocent)	Setup (eurocent)	Minute (eurocent)
Albania	0.00	2.35	0.00	2.35
Bosnia & Herzegovina	-	-	-	-
Bulgaria	0.00	5.11	0.00	3.83
Croatia	0.00	3.00	0.00	1.56
Romania	0.00	1.15	0.00	0.90
Serbia & Montenegro - *Montenegro*	0.00	6.10	0.00	6.10
Serbia & Montenegro - *Serbia*		2.55	0.00	2.55
Serbia & Montenegro - · *Kosovo*	na	na	na	na
The former Yugoslav Republic of Macedonia	0.00	1.96	0.00	1.96
Turkey	0.00	1.92	0.00	1.92

Table 57 - Mobile-to-fixed interconnection charges for call termination on fixed network of incumbent operator – local level

Notes:
Albania. The mobile operators have the same interconnection rate for local, single transit and double transit termination.
Bosnia and Herzegovina. Interconnection tariffs will be established in the second half of 2005.
Bulgaria. Mobile to fixed interconnection only occurs on the double transit level, so it is the same rate for local, single transit and double transit.
Croatia. There is no offering for mobile to fixed termination at the local level.
Montenegro. There is a single rate that applies to local, single transit and double transit.
Serbia. There is a single rate that applies to local, single transit and double transit.
Kosovo. There is no interconnection charge between the fixed incumbent and the mobile operators.
Turkey. Call termination service on the incumbent's network is charged at two levels, in-zone and out-zone. While out-zone corresponds to double tandem call termination, in-zone can be said to contain local and single transit call termination.

Country	Peak		Off-peak	
	Setup (eurocent)	Minute (eurocent)	Setup (eurocent)	Minute (eurocent)
Albania	0.00	2.35	0.00	2.35
Bosnia & Herzegovina	-	-	-	-
Bulgaria	0.00	5.11	0.00	3.83
Croatia	0.00	3.00	0.00	1.56
Romania	0.00	2.14	0.00	1.97
Serbia & Montenegro - *Montenegro*	0.00	6.10	0.00	6.10
Serbia & Montenegro - *Serbia*	0.00	2.55	0.00	2.55
Serbia & Montenegro - · *Kosovo*	na	na	na	na
The former Yugoslav Republic of Macedonia	0.00	1.96	0.00	1.96
Turkey	0.00	1.92	0.00	1.92

Table 58 - Mobile-to-fixed interconnection charges for call termination on fixed network of incumbent operator – single transit

Note:
See notes under Table 57.

Country	Peak		Off-peak	
	Setup (eurocent)	Minute (eurocent)	Setup (eurocent)	Minute (eurocent)
Albania	0.00	2.35	0.00	2.35
Bosnia & Herzegovina	-	-	-	-
Bulgaria	0.00	5.11	0.00	3.83
Croatia	0.00	3.00	0.00	1.56
Romania	0.00	2.14	0.00	1.97
Serbia & Montenegro - *Montenegro*	0.00	6.10	0.00	6.10
Serbia & Montenegro - *Serbia*	0.00	2.55	0.00	2.55
Serbia & Montenegro - · *Kosovo*	na	na	na	na
The former Yugoslav Republic of Macedonia	0.00	1.96	0.00	1.96
Turkey	0.00	2.89	0.00	2.89

Table 59 - Mobile-to-fixed interconnection charges for call termination on fixed network of incumbent operator – double transit

Note:
See notes under Table 57.

Table 60 below presents the interconnection rates used for fixed to mobile termination. These rates apply to national termination and there is no distinction between local, single and double transit as for fixed network termination.

Most of the countries and geographic units have termination rates that are in the range of the EU average. However, Romania and Turkey have rates that are about half the EU average, and the Serbian rate is only about 1/8 of the EU average.

Country	Peak		Off-peak	
	Setup (eurocent)	Minute (eurocent)	Setup (eurocent)	Minute (eurocent)
Albania	0.00	21.93	0.00	21.93
Bosnia & Herzegovina	-	-	-	-
Bulgaria	0.00	19.48	0.00	18.71
Croatia	0.00	11.73	0.00	5.87
Romania	0.00	7.33	0.00	7.33
Serbia & Montenegro - *Montenegro*	0.00	16.50	0.00	16.50
Serbia & Montenegro - *Serbia*	0.00	2.55	0.00	2.55
Serbia & Montenegro - · *Kosovo*	na	na	na	na
The former Yugoslav Republic of Macedonia	0.00	15.50	0.00	8.12
Turkey	0.00	8.37	0.00	8.37

Table 60 - Fixed-to-mobile interconnection charges for call termination on mobile network

Notes:
Bosnia and Herzegovina. Interconnection charges will be established in the second half of 2005.
Romania. The interconnection rates are quoted in US dollars. They have been converted to euro based on the exchange rate of December 31, 2004
Kosovo. There is no interconnection charge between the incumbent fixed operator and mobile operators.

Figure 38 below presents the per minute rates for fixed to mobile termination.

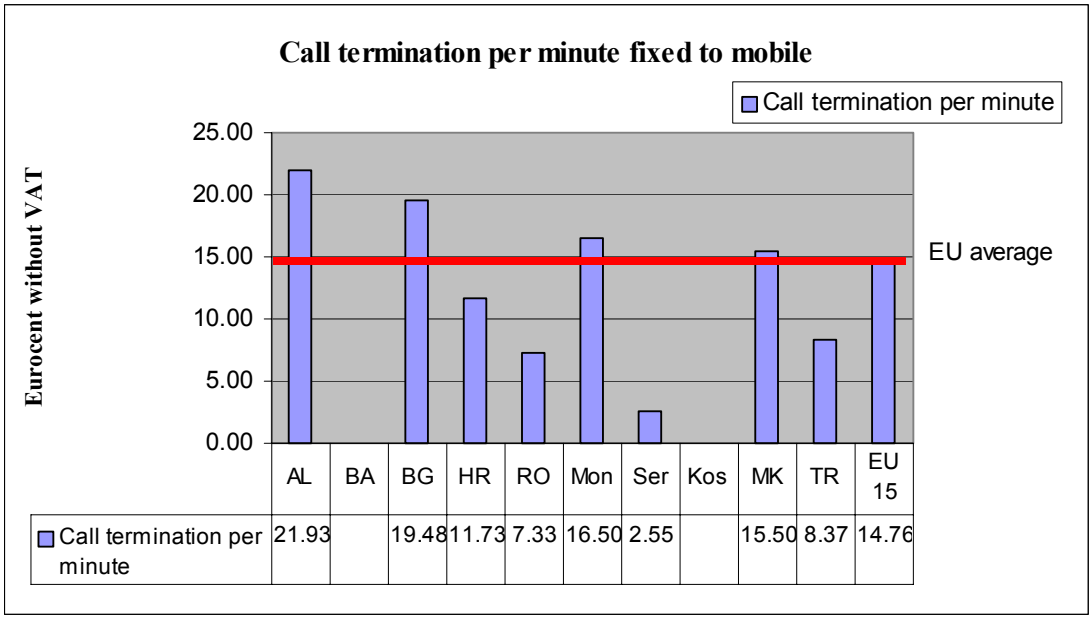


Figure 38 - Fixed-to-mobile interconnection charges for call termination on mobile network

Note:
The EU average is taken from the 10th Implementation Report from the European Commission, December 2004.

I. Internet and broadband

1. Internet user penetration

The statistics provided for Internet user penetration are based on estimates or on sample surveys. As there are differences in the age ranges, duration since a user last accessed the internet and different samples, i.e. some figures represent 'users' whereas others represent 'subscribers' direct comparisons of the figures in Table 61 is not possible. Therefore, the penetration rates should be considered as indicative only.

A report issued in September 2004[20], providing information on internet users in the CEE countries at the end of 2003 indicated that on average 21% of the population had accessed the internet at least once a week in the previous three months compared to an EU average of 38%. With these figures in mind, the usage of Internet in the SEE countries can be considered as being significantly lower than the EU average. As no distinction is made in these statistics between the frequency, or recency, of internet usage it can be assumed that the number of people that use the Internet on a regular basis, i.e. at least once a week in the previous three months) will be much lower than the figures given here.

[20] Central and Eastern Europe Information Society Benchmarks, September 2004

Country	Total number of Internet users	Internet users per 100 population	Internet users per 100 households
Albania	40,000	1.3%	5.4%
Bosnia & Herzegovina	585,000	15.1%	48.7%
Bulgaria	1,430,000	18.4%	48.9%
Croatia	1,430,000	32.2%	96.8%
Romania	2,060,464	9.5%	28.1%
Serbia & Montenegro - *Montenegro*	100,000	16.1%	52.3%
Serbia & Montenegro - *Serbia*	640,000	8.5%	25.4%
Serbia & Montenegro - · *Kosovo*	216,150	11.0%	69.5%
The former Yugoslav Republic of Macedonia	126,000	6.2%	22.2%
Turkey	10,220,000	14.2%	61.0%

Table 61 - Internet user penetration

The figure for Albania is based on an estimate for the number of people (5,000) that use an Internet café a day, the number of people that use the Internet via leased lines (250 leased lines with 15-20 users per line, i.e. 5,000 users), the number of daily dial-up users to the ISP Albtelecom (10,000 to 15,000) and subscribers to other ISPs (15,000).

For Bulgaria, the figure is an estimation, based on data for March 2005 according to the published results of a representative national study carried out by the independent agency Alpha Research, Bulgaria (http://www.aresearch.org/doc.php?en=0&id=44): 22% of the population above 18 years. The survey sampled 1,100 peopled selected on the criteria of age, gender, educational status and settlement.

In Bosnia & Herzegovina a recent statistical estimate (Living in BiH Wave 4 – Final Report) estimated the number of users to be 231,500. Another estimate carried out by RAK, based on the eEurope+ definition (someone aged between 16-74 that has used the Internet in the last 12 months) and calculating the total number of users based on the total number of subscribers suggests a much higher number: 585,000. This is calculated by taking the total number of subscribers (168,937, of which 22,000 are business subscribers) and estimating the number of residential users as being 2.5 times the number of subscribers (146,000 * 2.5 = 365,000 users) and the number of business users as being 10 times the number of business subscribers (22,000 * 10 = 220,000 users). The RAK estimate has been used in this report.

The figure for Croatia is an assumption that there are two users for every dial-up Internet subscription.

In Kosovo, the figures are based on a definition of an Internet user as being ‘someone aged 15 and over that has used or uses the Internet’.

Table 61 indicates the number of people that use the Internet on an almost daily basis according to ‘Index Kosova Media Research Company’ (a survey sample of 1,120 respondents that were representative of 95% of the population of Kosovo). If this definition were extended to include

everybody that uses the Internet (including those that use it less than once a month) then the percentage of users per 100 population would be 27.5.

In Montenegro, there are 51,000 registered Internet subscribers. The figure of 100,000 users (regardless of age) is an estimate based on the fact that more than one person may access and use the Internet for any given subscription, for example, people in the same family. Source: Annual report of the Agency for telecommunication of the Republic of Montenegro for 2004.

For Romania, the Internet user penetration data is based on a study conducted by the ANRC with the support of a research company during February 8 – 18, 2004. The target population of the research were people aged between 15 and 50 years old, from the urban area, Internet users (at home or outside the household) at least once a week in the past 4 weeks, which gives the result of 2.060.464 Internet users in urban areas. The data available at the national level refers to Internet penetration (and not Internet user penetration), which was about 5% on December 31, 2004.

In Serbia, the exact number of Internet users is not available because ISPs do not report on their user database. They are not licensed and they have no obligation to provide statistical data. They operate under the permission of the commercial court. There is no definition of Internet user in the Telecom Law. The only definition of a "user" is that it is a physical or legal entity that employs the services provided by a telecommunication system based on a subscription contract or other specified arrangement".

The figures for Turkey come from the results of an ICT usage survey carried out by the State Institute of Statistics (SIS). The percentage of people in the 16-74 age group who used the internet at least once in the last three months is 13.25, and during the last year is 13.25 + 1.33 = 14.58. The figure of 14.2 users per 100 population covers the whole population and not just those in the 16-74 age group. This survey was published in 15.10.2004 and carried out in June 2004. See the SIS website[21]. The survey covered 12,322 households. Out of these, 9,571 households and 24,462 people responded. This was done as an additional module to the Household Labour Force Survey, which is regularly done by the SIS. The figure for Internet users per 100 households is calculated by taking the year 2001 household data.

21 http://www.die.gov.tr/ENGLISH/SONIST/HHBilisim/151004/kapak.html

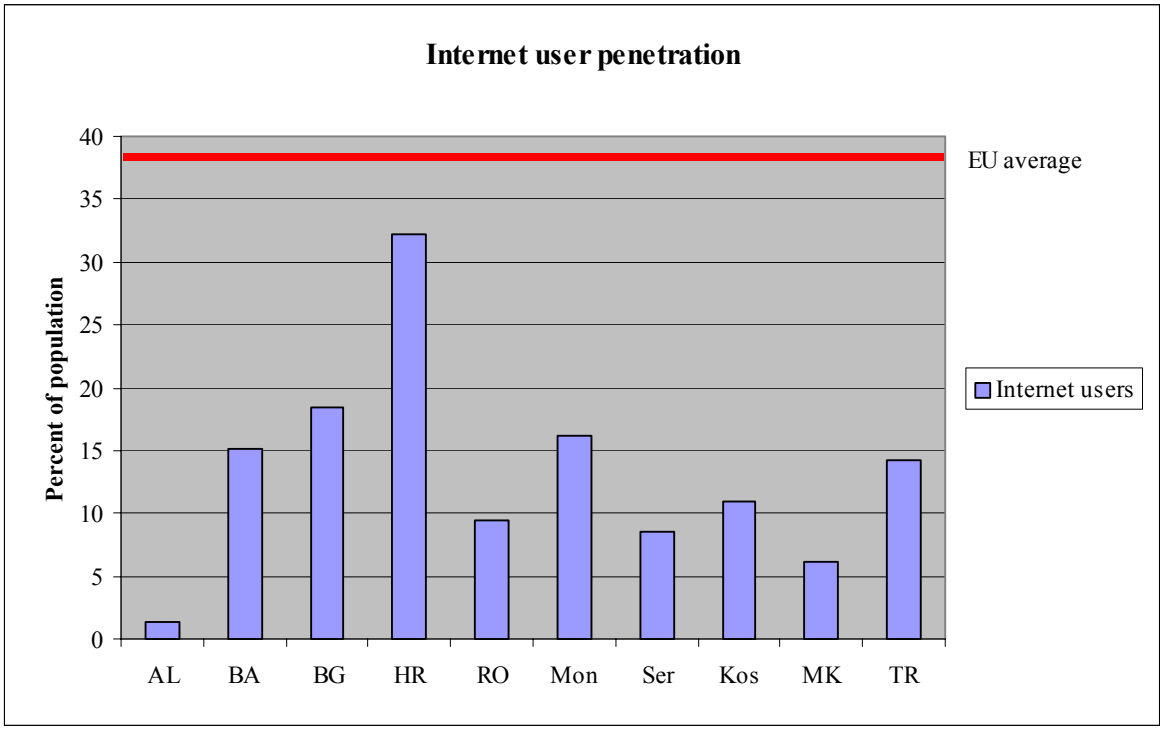


Figure 39 - Internet user penetration

Note:
The EU average is taken from Eurostat's indicator on "Share of individuals regularly using the Internet for 2004. This indicator includes all individuals aged 16 to 74 who access the Internet, on average, at least once a week, within the last three months before the survey. Use includes all locations and methods of access.

2. Internet Dial-up access cost

Access to the Internet for household users in the SEE countries is primarily via dial-up fixed lines (see Table 66) so the dial-up Internet access costs have a direct influence on the number of users and usage duration. Even though the PPP adjusted figures cannot be calculated for all countries because of a lack of data on PPPs it can be seen for a few countries that dial-up access is relatively expensive. For example, in June 2003, the figure for 40 hours peak time access in France was 5.9 euro.

Country	Nominal euro with VAT	
	ISP	PSTN usage
Albania	11.40	22.56
Bosnia & Herzegovina		
BH Telecom d.d. Sarajevo	25.37	0.00
Telekom Srpske a.d. Banja Luka	32.06	0.00
Hrvatske Telekomunikacije d.o.o. Mostar	41.17	0.00
Bulgaria	0.00	44.24
Croatia	12.56	19.08
Romania	5.16	27.13
Serbia & Montenegro - *Montenegro*	13.00	5.17
Serbia & Montenegro - *Serbia*	14.31	5.85
Serbia & Montenegro - · *Kosovo*	27.60	27.60
The former Yugoslav Republic of Macedonia	73.87	0.00
Turkey	5.49	28.88

Table 62 - Dial-up Internet access cost – 40 hours at peak time

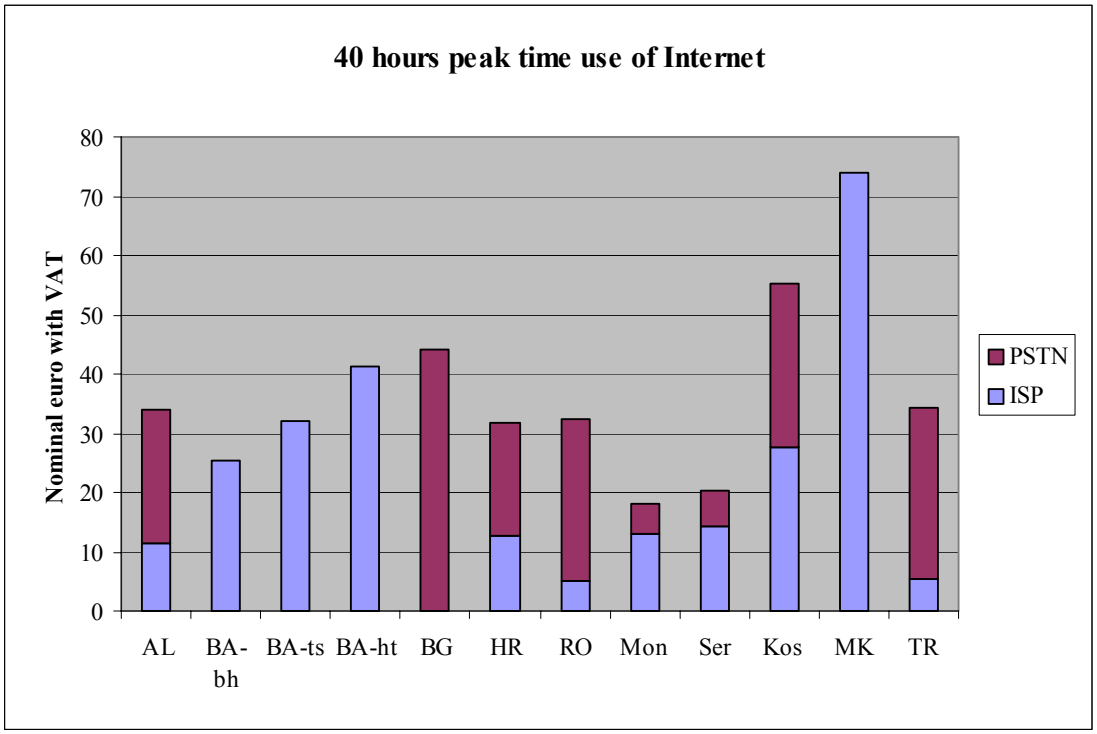


Figure 40 - Dial-up Internet access cost – 40 hours at peak time in nominal Euro

The ISP charge in Albania is the price per month for an ISP operator which is one of the biggest in the country; ABCom. There is a one-off payment set up fee of 20 Euro for installation and support. If there is a subscription for three months, the monthly payment to the ISP is 9.5 Euro, if the subscription is for six months the monthly payment is 7.5 Euro, and if the subscription is for a year then the monthly payment is reduced to 5.5 Euro.

The table above shows the case when the user uses another ISP operator other than Albtelecom. Albtelecom also operates in the market as an ISP. Albtelecom's tariffs (PSTN usage) are the same as shown above, if Albtelecom is used as an ISP. The difference between Albtelecom and other ISPs is that the user does not have to pay for the set up fee (installation) and the monthly payment. Albtelecom also applies peak and off-peak tariffs for dial-up internet access for users that use Albtelecom as an ISP. Peak tariffs are the same as shown above, while off-peak tariffs are 0.80 Lek (0.6 eurocent per minute for Residential users) and 1.20 Lek (0.9 eurocent per minute for Business users). For the payment to the PSTN, the standard tariffs are not applied but special tariffs, as indicated, are applied.

In Bulgaria, Orbitel offers connection through local points in 27 cities and towns. The pricing for Orbitel's dial-up access is shown above. Orbitel is one of the largest national ISPs.

In Montenegro, the price is for residential users, in peak-time and the ISP price is dependant only on the user's category (residential or business). The prices are those charged by Internet Crne Gore (Internet Montenegro), a subsidiary of Telecom Montenegro, which is the largest ISP in Montenegro. Both residential and business users have several tariff packages at their disposal (10, 20, 40 or 100 hours, and also unlimited monthly access), with different prices.

The figures for PSTN usage in Romania are those for Internet Special Access offered by RomTelecom (fixed incumbent). The fixed incumbent recently launched a dial-up internet service available to all its subscribers with the same tariffs all over the country, including the phone line usage and Internet access tariff.

The figure for Turkey is that of the monthly payment to the ISP.

Dial-up Internet access costs during off-peak periods are those that residential users are most likely to incur. Although, as with the information concerning peak time costs, PPP information is missing for most countries it would seem that the off-peak costs could also be considered expensive and, because the costs could represent a significant proportion of net monthly income represent an inhibiting factor to widespread Internet usage.

Country	Nominal euro	
	ISP	PSTN usage
Albania	11.40	11.28
Bosnia & Herzegovina		
BH Telecom d.d. Sarajevo	9.79	0.00
Telekom Srpske a.d. Banja Luka	8.44	0.00
Hrvatske Telekomunikacije d.o.o. Mostar	14.51	0.00
Bulgaria	0.00	19.95
Croatia	12.56	4.77
Romania	3.49	6.43
Serbia & Montenegro - *Montenegro*	7.00	1.29
Serbia & Montenegro - *Serbia*	3.58	1.48
Serbia & Montenegro - · *Kosovo*	6.90	6.90
The former Yugoslav Republic of Macedonia	18.47	
Off peak 2	8.08	
Turkey	5.49	7.22

Table 63 - Dial-up Internet access cost – 20 hours at off-peak time

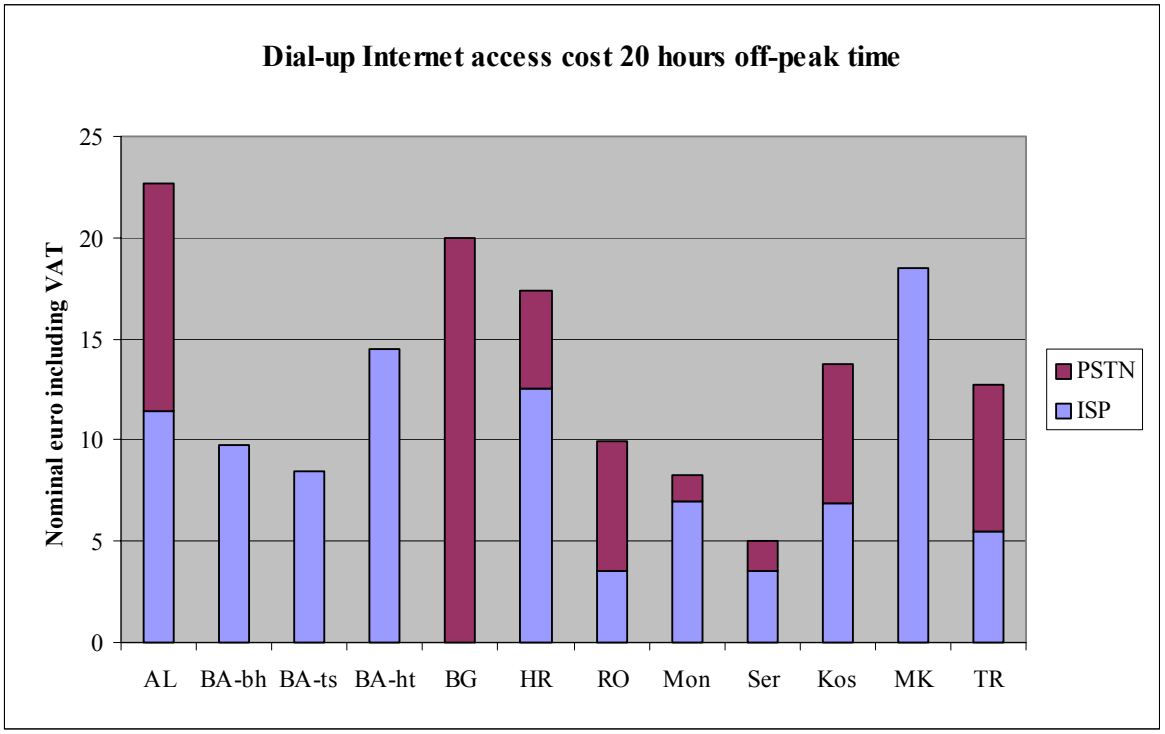


Figure 41 - Dial-up Internet access cost – 20 hours at off-peak time nominal euro

3. Broadband access

The rollout of xDSL services to customers is at a very early stage. The number of xDSL lines actually in service are less than half a percent of the total network size in most countries (except Croatia and Turkey with 1.4% and 2.15% respectively). Given that provision of services is at a very early stage, there has been significant progress in the year from January 1, 2004 to January 1, 2005. Bulgaria has gone from zero to 6,651 lines, Croatia from 2,556 to 23,423, and Turkey from 56,624 to 452,398.

Country	On 1.1.2005			All lines 1.1.2004	All lines 1.1.2003
	Residential lines	Business lines	All lines		
Albania	-	-	-	-	-
Bosnia & Herzegovina	518	392	910	93	4
Bulgaria	n.a.	n.a.	6,651*	0	0
Croatia	14,563	8,860	23,423	2,556	1,085
Romania	1,277	905	2,182	3,933	n.a.
Serbia & Montenegro: *Montenegro*	0	0	0	0	0
Serbia & Montenegro: *Serbia*	-	-	-	-	-
Serbia & Montenegro - · *Kosovo*	0	135	135	135	90
The former Yugoslav Republic of Macedonia	703	1,744	2,447	0	0
Turkey	420,141	32,257	452,398	56,624	2,999

Table 64 - Number of xDSL lines

Notes:
In Albania, xDSL services were not available at the reference date.
For Bosnia & Herzegovina the number of ADSL subscriptions is given. The normal speed ranges are: 256/64 Kbit/s, 384/64 Kbit/s, 512/128 Kbit/s, 1024/128 Kbit/ (download/upload). The only operator providing xDSL services is BH Telecom.
For Bulgaria, the total number of ADSL subscriptions with the incumbent at the end of 2004 is given but no data is available for the number of residential and business subscriptions.
In Romania, before the obligation to provide unbundled access to the local loop on the fixed incumbent was imposed, the alternative operators offered DSL lines by installing DSL equipment on analogue leased lines acquired from the fixed incumbent.
Last year, among the specific relevant wholesale markets, the ANRC identified the market for the

provision of unbundled - full or shared - access to the local loop, in which Romtelecom was designated as an operator with significant market power. Thus, with a view to creating a balance between the incentives for the new providers' market entry and stimulating infrastructure investments, by building new access networks or developing the existing ones, Romtelecom was imposed the obligation to provide unbundled access to the local loop under transparent and non-discriminatory conditions, at cost-oriented tariffs.
By regulating the local loop market with a view to ensuring the unbundled access to this loop, the ANRC expects to increase the development potential of the DSL broadband services in 2005. In addition, up to now, 5 operators concluded local loop unbundling agreements with the incumbent and two of them have published their offers by 1st of June.
In Montenegro, xDSL services were not available at the reference date.
Serbia: xDSL Services were not available in Serbia at the reference date.
The lines in Kosovo are HDSL with a speed of 2 Mbit/s.

The following table shows the number of xDSL lines per capita. Since no country has an xDSL penetration higher than 1% of population, the available data are shown as xDSL lines per million population in order not to be confused with the more normal indicator of xDSL lines per 100 population.

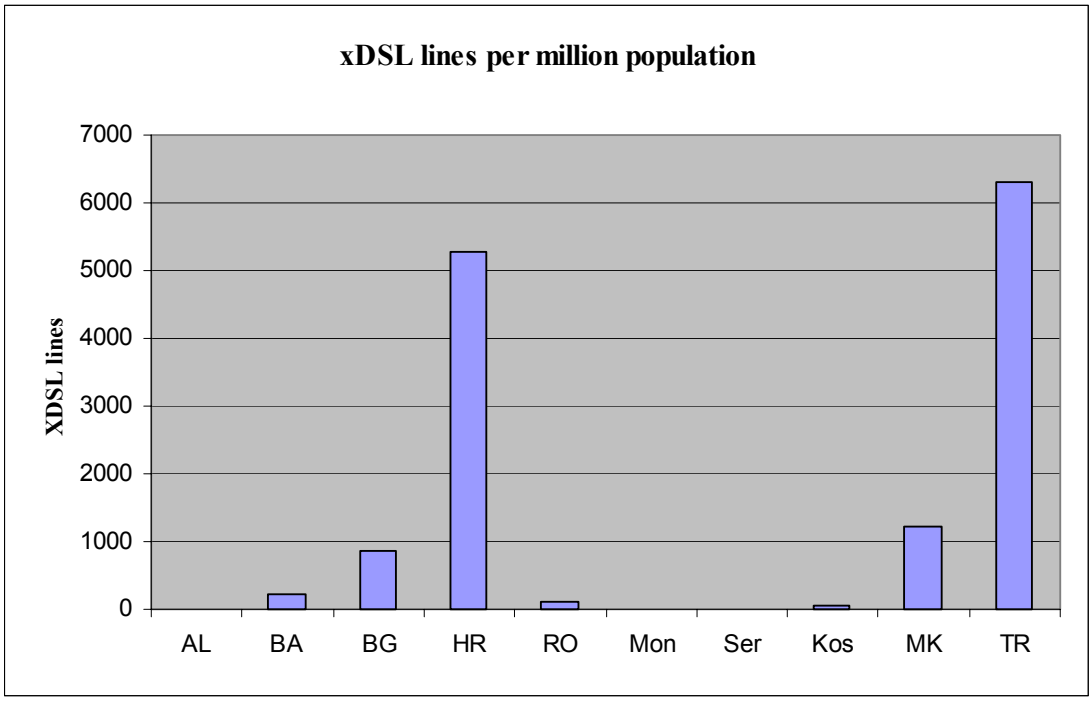


Figure 42 – xDSL lines per million population

The use of alternative technologies for broadband internet connections seems to be in the early stages as much as xDSL lines are. However, in Romania, the ratio of Cable TV to xDSL lines is about 42 to 1.

Country	Number of Cable TV subscriptions to Internet	Number of WIFI subscriptions to Internet
Albania	n.a.	n.a.
Bosnia & Herzegovina	2,394	1,397
Bulgaria	n.a.	n.a.
Croatia	3,136	317
Romania	84,197	radio broadband connections – 4,109 Other broadband connections than radio: • optical fibre connections – 4,120 • xDSL connections – 2,182 • other dedicated connections (i.e. UTP cable, satellite) – 9,657
Serbia & Montenegro: *Montenegro*	0	n.a.
Serbia & Montenegro: *Serbia*	2,000	-
Serbia & Montenegro - · *Kosovo*	400	1,800
The former Yugoslav Republic of Macedonia	-	-
Turkey	37,404	-

Table 65 - Number of broadband Internet connections with alternative technologies

Notes:
The Cable TV operators in Albania do not offer internet service. WIFI is a preferred access method for remote subscribers.
In Bosnia & Herzegovina, the normal speed range is 256 - 1024 Kbit/s.
Data has been requested from the Bulgarian ISPs, but a consistent estimation for the total number of subscriptions cannot be made because of the low response level.
WiFi access is possible in Montenegro, but there is no data about the number of users.
In the former Yugoslav Republic of Macedonia, the services are in an experimental phase.
There are more than 20 Cable TV operators in Serbia. All of them are operating without a valid license and data on the customer base is not available. Some Cable TV operators offer Internet subscriptions but no figure is available. The estimation is a couple of thousand. There are a few licensed WiFi operators but they are not officially offering Internet to the public. For the moment, they use WiFi for their Intranet.

The following table gives a breakdown of the different broadband technologies in use. The totals confirm that broadband technologies are not widely used.

Country	xDSL	CableTV	WIFI	TOTAL
Albania	-	-	-	-
Bosnia & Herzegovina	910	2,394	1,397	4,701
Bulgaria	6,651	na	na	6,651
Croatia	23,423	3,136	317	26,876
Romania	2,182	84,197	4,109	90,488
Serbia & Montenegro - *Montenegro*	0	0	0	0
Serbia & Montenegro - *Serbia*	-	2,000	-	2,000
Serbia & Montenegro - · *Kosovo*	135	400	1,800	2,335
The former Yugoslav Republic of Macedonia	2,447	-	-	2,447
Turkey	452,398	37,404	-	489,802

Table 66 - Summary of broadband Internet connections

Note:
Romania – Zapp mobile has a CDMA network with 277,461 subscriptions capable of connection speeds in access of 128 Kbit/s. These are not included in the broadband connections in Table 66 above.

The following chart presents the number of broadband Internet connections per capita. This chart is presented in terms of connections per million population.

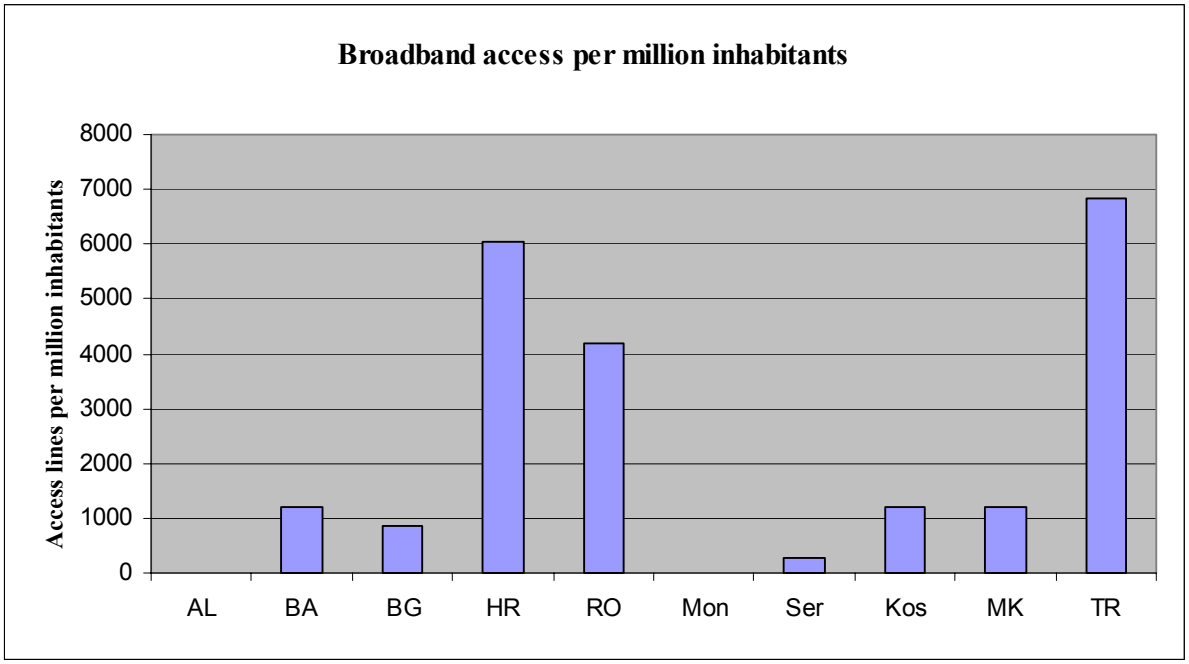


Figure 43 – Broadband access per million inhabitants

4. Competitive alternatives

Out of eight countries where information is available, the ISP of the fixed incumbent only has a significant majority market share in two countries or geographic units (Montenegro – 98% and Croatia – 77.9%). In Turkey, the incumbent's ISP has 52% of the market.

In general, it can be said that Internet subscribers do have a choice of ISP and that competition is in place. This is especially true in the larger countries (Bulgaria, Romania and Turkey).

Country	Number of ISPs		Estimate of market share of ISP of fixed incumbent operator
	National	Local	
Albania	17	9	Not available
Bosnia & Herzegovina	3	40	42%
Bulgaria	13	192	18%
Croatia	18	-	78%
Romania	515 active internet providers		1.35%
Serbia & Montenegro: *Montenegro*	2	0	98%
Serbia & Montenegro: *Serbia*	10	30	0%
Serbia & Montenegro - · *Kosovo*	3	8	20%
The former Yugoslav Republic of Macedonia	5	-	Not available

Country	Number of ISPs		Estimate of market share of ISP of fixed incumbent operator
	National	Local	
Turkey	89	-	52%

Table 67 - Number of ISPs and estimate of market share of ISP of fixed incumbent operator

In Albania, according to the law "On Telecommunication in the Republic of Albania", ISP's are classified in three groups, local, regional and national. In the table above national and regional ISPs are included in the same group, national ISPs. The market share in terms of subscribers is not reported

In Bosnia & Herzegovina, 58% of the total number of dial up subscribers are with the ISPs of the fixed incumbent operators (BH Telecom - BIHNET, Telekom Srpske – TEOL, HT Mostar – HTNET).

The figure for local ISPs in Bulgaria is a CRC estimation for 31.12.2004. No data is available for the exact number of local ISPs because ISPs in Bulgaria are free of licensing/registering. Public data transfer networks that use numbers from the National Numbering Plan (NNP) are subject to individual licensing. Public data transfer networks that do not use numbers from the NNP are subject to general licences. There are about 80 ISPs with registered or licensed data transfer networks. There are many LANs which are quite popular with residential users in Bulgaria but their number is not available.

The figure for the incumbent ISPs market share in Bulgaria is a CRC estimation of the number of Internet subscriptions. There could be overestimation or underestimation due to the fact that CRC does not collect and keep complete and consistent data from the ISPs in Bulgaria) .

In Montenegro, there are two ISP operators: Internet Montenegro and MontSky.

The data for Serbia is from a report by an ICT expert (Giovanni Maruzzelli, Gallo ECF). The incumbent operator is not an ISP

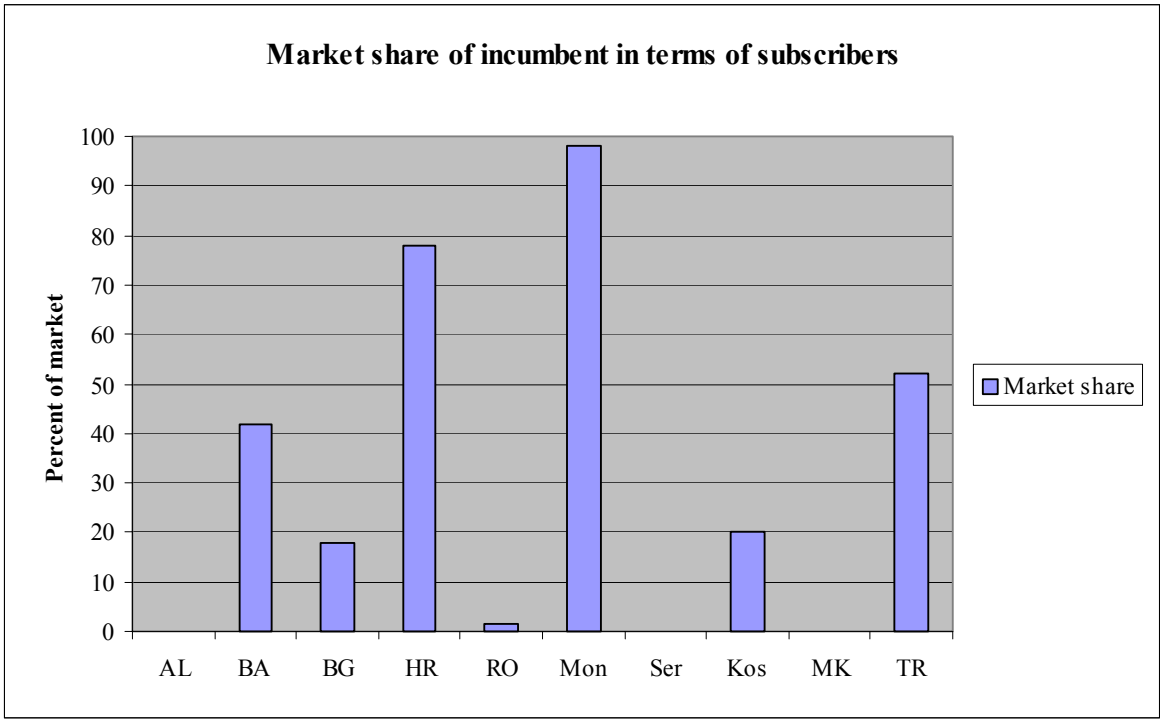


Figure 44 - Number of ISPs and estimate of market share of ISP of fixed incumbent operator