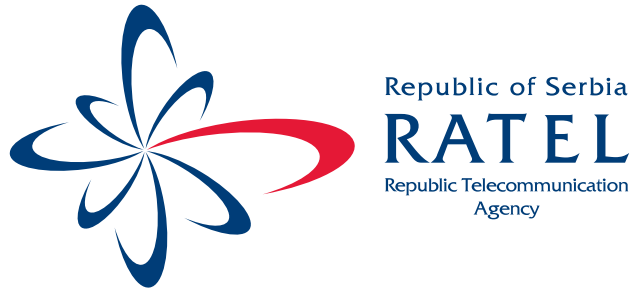




REPUBLIC OF SERBIA
REPUBLIC TELECOMMUNICATION AGENCY

AN OVERVIEW

OF TELECOM MARKET IN
THE REPUBLIC OF SERBIA IN 2008



An Overview of Telecom Market in the Republic of Serbia in 2008

Belgrade, 2009



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A WORD OF INTRODUCTION

Pursuant to the Telecommunications Law, the Republic Telecommunication Agency (RATEL) has been bestowed the task of telecom market regulation in the Republic of Serbia, in order to provide conditions for creation of an open market and further development of the telecommunications sector, as well as the fulfilment of public interests declared in the following documents:

- 1 Telecommunications Law ("Official Gazette of RS", nos. 44/03 and 36/06),
- 2 Strategy for the Development of Telecommunications in the Republic of Serbia from 2006 until 2010 ("Official Gazette of RS", no. 99/06),
- 3 Strategy for the Development of Information Society in the Republic of Serbia ("Official Gazette of RS", no. 87/06),
- 4 National Strategy for the Economic Development in the Republic of Serbia 2006-2012, passed by the Government of the Republic of Serbia in November 2006 ,
- 5 Memorandum on the Budget and Economic and Fiscal Policy for 2009 with Projections for 2010 and 2011 ("Official Gazette of RS", nos. 92/08 and 113/08),
- 6 Action Plan pertaining to the Strategy for the Development of Telecommunication in the Republic of Serbia from 2006 until 2010, adopted by the Government of the Republic of Serbia in December 2008.

According to the abovementioned documents, the telecom sector is the basis for the development of other industries and, therefore, it is supposed to, directly, provide for the development of the information society in line with the standards adopted in the EU.

RATEL was established as an autonomous and independent organization, in charge of telecom market regulation. Accordingly, guided by the declared principles of lawfulness, competence, impartiality and transparency, RATEL endeavours to perform, in a timely manner, the principal task within its authority, which is to ensure an unhindered development of the telecom market in the Republic of Serbia, so that the following regulatory conditions are fulfilled:

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- creating a free and open market, where all participants are guaranteed equal treatment,
- streamlining the activities of all telecom market participants towards creating the conditions for the development of information society,
- placing the interest of the telecom service users in foreground,
- rational and efficient usage of all scarce resources,
- harmonization of the regulations, standards, technical provisions and practice with the relevant EU regulation.

Telekom market regulation in the Republic of Serbia has contributed to the stabilization of the state of affairs and it has brought about risk reduction for the investments of the national and foreign operators. Such conditions have enabled an unhindered market development, resulting in a constant increase in the revenues from the telecom services in the Republic of Serbia. Significant changes have taken place in the telecom market, since the establishment of the Republic Telecommunication Agency and the beginning of the monitoring and analysis of that market.

In its 2009 Framework Plan, pursuant to the 2009-2010 Action Plan pertinent to the Strategy for the Development of Telecommunications, the Republic Telecommunication Agency set out specific tasks organized into the following segments:

- enhancement of the telecom sector,
- market analysis and monitoring,
- organization and development of the Agency,
- cooperation with other institutions and organizations.

Since telecommunications are a rather dynamic sector, it is hard to predict the pace and directions of the future development with certainty. The issues that should absolutely be taken into consideration, since these will most certainly pose serious challenge for the further development of the telecommunications in Serbia in the next two or three years are as follows:

- 1 maintaining the achieved trend of telecom development in the conditions of the world economic crisis,
- 2 efficient usage of the existing telecom infrastructure, and further investment in its development and modernization,
- 3 creation of conditions for an accelerated development of broadband access and Internet application,
- 4 efficient usage of the frequency spectrum and digital switchover,
- 5 liberalization and privatization within the telecom sector.

In view of the achievements made in the previous period, the Republic Telecommunication Agency is very proud to have managed to carry out the entrusted work professionally and competently, in rather difficult circumstances, characterized by frequent obstructions. There has been a remarkable progress in each segment of the sector, so that all market participants should be satisfied: the government with the development achieved in the telecom market, which also boosted other production and public sectors; the operators for which the marked opening meant new opportunities for development and higher revenues; and, finally, the users who have a vast choice of high quality services at lower prices. Naturally, we are bound to continue with the work in order to achieve yet better results in the telecom sector and reach the level of development such as to keep pace with the European average.

Chairman of the Managing Board

Prof. Dr. Jovan Radunović



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1. RATEL'S ACTIVITIES IN 2008

Having in mind the powers and duties of RATEL to provide the conditions for creating open market and introducing competition in the telecom sector, and considering the results achieved since the establishment of RATEL, it may be stated that 2008 was a year of intense activities focused on the creation of the conditions for further liberalization and development of the telecom market, whose effects will be evident in the year ahead.

With the intention of making available the data that reflect the situation in the telecom sector of the Republic of Serbia, RATEL publishes every year a market overview for the previous year. Thus, in mid 2008, "An Overview of Telecom Market in the Republic of Serbia in 2007" was published. Just like the publications for 2005 and 2006, the purpose of this document was to provide a useful source of information to the telecom operators, relevant public authorities, scientific institutions, investors and users.

RATEL's activities accomplished in the period 1 January– 31 December 2008, which were the result of duties and tasks defined under the regulations pertinent to the telecom sector and under the 2008 Framework Business Plan, are presented below.

REGULATORY ACTIVITY

As a result of regulatory activities performed during 2008, the following bylaws were adopted:

- Rules on general terms and conditions for interconnection of public telecommunications networks (*Official Gazette of RS*, no. 53/08)
- Numbering Plan of the Republic of Serbia for Telecommunications Networks (*Official Gazette of RS*, nos. 57/08, 77/08, 105/08 and 107/08-corr.)
- Rules on terms and conditions for the issuance of authorization for public



telecommunication networks and contents of authorization (*Official Gazette of RS*, no. 94/08)

- Rules on terms and conditions and the procedure for the issuance of authorization to a public telecommunications operator for interconnection of a national telecommunications network with a telecommunications network of another country (*Official Gazette of RS*, no. 94/08)
- Rules on terms and conditions for provision of voice transmission services over the Internet and the contents of authorization (*Official Gazette of RS*, no. 94/08)
- Rules on terms and conditions for the Internet services and other data transmission services provision and on contents of authorization (*Official Gazette of RS*, no. 100/08)
- Rules on the application of the cost-accounting principle, separate accounts and reporting of a telecommunications operator with significant market power (*Official Gazette of RS*, no. 103/08)
- Rules on forms for radio-station licences (*Official Gazette of RS*, no. 111/08)

Pursuant to Article 62 of the Telecommunications Law (*Official Gazette of RS*, nos. 44/03 and 36/06, hereinafter: Law), RATEL has prepared Draft Amendments to the Radio Frequency Bands Allocation (*Official Gazette of RS*, no. 112/04) and provided it to the Ministry of Telecommunications and Information Society (MTID) for further procedures. On 18 September 2008, the Government of the Republic of Serbia passed the Decision stipulating the Plan on Amendments to the Radio Frequency Bands Allocation Plan, published in the *Official Gazette of RS*, no. 86/08.

In addition, pursuant to Article 63 of the Law, back in 2007, RATEL prepared and forwarded to the Ministry of Telecommunications and Information Society, for further procedures, the proposals for the following Allocation Plans, which were adopted and published:

- Radio Frequency Allotment Plan for GSM/DCS1800 radio system (*Official Gazette of RS*, no. 17/08);



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- Frequency Allotment Plan for Fixed Wireless Access Systems (FWA) in the 3400-3600MHz and 3600-3800MHz Frequency Band (*Official Gazette of RS, no. 17/08*);
- Radio Frequency Allotment Plan for UMTS/IMT-2000 Radio System (*Official Gazette of RS, no 17/08*).

In 2008, RATEL's Managing Board also adopted a number of separate enactments, within the scope of the powers stipulated under the Law, with the purpose of regulating the telecom market.

In order to create the conditions for the Universal Service (US) provision, whereby public voice service and adequate quality Internet would be guaranteed, the Draft Allotment Plan for Radio Systems in Frequency Band 410-420/420-430MHz was prepared in 2007 and forwarded to the Ministry of Telecommunications and Information Society.

TELECOMMUNICATIONS NETWORKS AND SERVICES

During 2008, RATEL continued with the activities fostering further liberalization of the telecom market and introduction of new services, thus promoting competition in those market areas where it had been absent, i.e. leaving room for further development of competition in the competitive areas.

In view of the fact that the necessary regulations pertinent to mobile telephony had been in place since 2007, enabling the introduction of competition, in 2008, RATEL focused the activities on mobile market analysis and monitoring of compliance with the licence conditions by the three mobile operators. Along with the introduction of new variety services for end-user, higher service coverage rate both in terms of territory and population, there has also been observed a price reduction trend, which is the result of the competition present in the mobile market.

With the purpose of providing conditions for the opening of the fixed-line market, new Numbering Plan of the Republic of Serbia for Telecommunication Networks and Rules on interconnection of public telecommunication networks were published.



Having regard to the need of competition in the Internet wholesale market, RATEL passed and published the bylaws regulating the terms and conditions for the issuance of authorizations for the Internet service provision and other data transmission services, public telecommunications networks, voice transmission service provision over the Internet, and terms and conditions for the authorization issuance procedure to a public telecommunication operator for the interconnection of a national telecommunication network with a network of another country.

Furthermore, the following activities were undertaken:

- Technical conditions for subsystems, devices, Internet network equipment and installations, cable distribution systems, fixed and mobile telecommunications networks were adopted, in view of the need to define the obligations of the operators as regards data retention and lawful interception,
- Preparation of regulation pertinent to the value added services, number portability, carrier selection and pre-selection and SMP operator designation,
- Preparation of documents and analysis of necessary conditions for local loop unbundling (LLU),
- Drawing-up of the Draft Rules on Terms and Conditions for Radio and Television Programmes Distribution Service Provision, which was put on public discussion, covers, *inter alia*, the following technologies: DTH - Direct To Home, MMDS - Multichannel Multipoint Distribution System and LMDS – Local Multipoint Distribution System,
- Mediation and arbitration between operators in dispute resolution regarding shared facilities, Internet access and leased lines, in accordance with the Principles on leased lines and facilities.

There were 40 ISP authorizations, 11 radio and television programme distribution service provision authorizations (one was for IPTV), 3 public telecommunications networks authorizations



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and 9 authorizations for VoIP service provision without using the numbers from the Numbering Plan issued during 2008. Also, 3 authorizations for international interconnection with telecommunications networks of the operators from the neighbouring countries were issued.

In 2008, RATEL began monitoring the quality of the delivered services, in particular the control of compliance with the terms and conditions stipulated under the issued licences and/or authorizations, and also controls for the purpose of undertaking the measures against the entities providing telecommunications services without the adequate permit.

In the area of standardization, it is noteworthy that RATEL became a member of the European Telecommunications Standards Institute (ETSI) in 2007.

Following the adoption of the Design Instructions and the set of technical conditions pertinent to mobile telecommunications systems and facilities, the following documents were prepared in 2008:

- **Draft Instructions for cable distribution systems designing – put on public discussion,**
- **Draft technical conditions for cable distribution systems,**
- **Instructions for performing technical measuring in the procedure of TV stations technical inspection,**
- **Guidelines for appropriate bylaw regulating GSM jammer related issues.**

Having regard to the RATEL's authority to grant technical permits – certificates it should be noted that there were 3196 technical permits – certificates and 1608 approvals for import of goods issued during 2008.

RADIOCOMMUNICATIONS

The intensive activities related to the joint work of the Ministry of Culture, the Ministry of Telecommunications and Information Society (MTID), the Republic Broadcasting Agency (RRA)



and RATEL on preparing the necessary enactments for the start-up of DTV operation and necessary regulations for IPTV usage, continued in 2008. On RATEL's initiative, the Republic of Serbia signed the Final Acts of the CEPT multilateral meeting (MA02revS007) and Final Acts of the CEPT T-DAB Planning Meeting (WI95revC007) in 2007, thereby accessing the European agreements related to digital broadcasting.

Moreover, during 2008, the following RF spectrum management related activities took place:

- Draft amendments to the Radio Frequency Bands Allocation Plan in accordance with the WRC-07 decisions and the latest ITU-R and CEPT recommendations, forwarded to the Ministry of Telecommunications and Information Society for adoption,
- Analysis of new assignments for FM and TV broadcasting stations for the purpose of revision of the Plan on Amendments to Frequency/Location Allotment, March-December 2008 (new frequency allotments for FM and/or TV broadcasting stations for 35 Serbian Municipalities),
- Analysis of requests for the modification of technical parameters of broadcasting stations within the assigned commercial networks and their compliance with the TV and FM Broadcasting Stations Allotment Plan, January-December 2008.

Also, the following analyses related to this area of RATEL's competence were performed:

- analysis of the requests for additional coverage within the assigned commercial networks (B92, Fox, Radio 3, regional and local broadcasters),
- analysis of the technical documentations submitted by RDUS-RTV Vojvodina, for the purpose of radio station licence issuance,
- analysis of the technical documentation submitted by regional and local



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- broadcasters, pursuant to the decisions of the Broadcasting Agency. Broadcasting stations licences were issued on 07.03.2008, 16.06.2008, 18.08.2008, 01.12.2008. and 23.12.2008, amounting to the total of 369 licences,
- project analysis and evaluation, and issuance of the terrestrial analogue FM and TV broadcasting stations licences for the territory of the Republic of Serbia, January-December 2008,
 - project analysis and evaluation, and licence issuance to the hailstorm protection service for the territory of the Republic of Serbia (Valjevo and Kruševac range), for the needs of the Serbian Electric Power Company and the Serbian Railways.

Furthermore, the proposals for the following documents were prepared, through analysis of the appropriate frequency ranges usage and the application of the latest ITU-R and CEPT recommendations:

- Channel allocation plan for all capacities within the 7125-7425 MHz range,
- Channel allocation plan for microwave links for the following frequency ranges: 12.75-13.25 GHz, 21.2-23.6 GHz, 24.5-26.5 GHz and 31.8-33.4 GHz.

In 2008, particular attention was given to the frequency spectrum usage monitoring and the provision of the required quality of the radio signal reception. The spectrum monitoring centres in Dobanovci and Niš were equipped with new, modern frequency spectrum monitoring equipment. This equipment is designed for spectrum analysis, measuring the quality of the broadcast signal, measuring of the EM field strength near to the radiation source and indoors. A modern measuring vehicle with embedded equipment was also procured, for the purpose of measuring the size of coverage area and the quality of broadcast signal.

In addition, the RF spectrum management also included the following activities related to radio station licence issuing, radio frequency coordination and notification and RF spectrum monitoring:



- 13,002 radio station licences were issued, including 9,727 licences for fixed and mobile systems, 2,905 licences for microwave and satellite systems and 370 broadcasting licences. 3,031 licences ceased to be valid in 2008,
- 698 radio amateur licences and 292 amateur radio station licences were issued, in cooperation with the Radio Amateur Association of Serbia,
- 247 frequency/location coordinations were performed (109 foreign and 138 national), along with around 200 frequency notifications,
- daily FM and TV broadcast monitoring was performed from the spectrum monitoring centres “Beograd” and “Niš”, along with the periodic measuring throughout the territory of the Republic of Serbia. The number of reports on the performed measuring, i.e. log entries, is 9,794. The total number of cases processed by the telecommunications controls reached 985,
- following the public tender of the Broadcasting Agency for programme broadcasting, as of 1 September 2008 conditions were met for joint ban of operation of the radio stations broadcasting programmes without licence. In the procedure of banning the radio stations using the radio frequencies unlawfully, 105 decisions were adopted, 29 offence proceedings instigated and 18 decisions on forced execution were adopted,
- the total of 7,115 radio station technical inspections were performed.

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USER PROTECTION

Just like in 2007, during 2008, RATEL continued with the user support in order to solve the problems upon complaints concerning the work of some operators. The analysis of the number of user complaints according to the type of service was prepared. Most of the complaints were relative to cable distribution services. RATEL was a direct mediator in solving some of the more complex requests related to the quality of delivered service, and also concerning the effects of the EM radiation on the environment.

456 cases were processed following the user complaints, accompanied by relevant written documents and verbal communication with the users of telecommunication services.

The activities related to the universal service were also continued during 2008. Considering that in 2007 the Agreement on Universal Service Project Implementation had been closed and the first phase consisting of collecting and processing statistical data necessary for the implementation of the US, identification of needs and locating of the most disadvantaged areas had been completed, in 2008 the second phase was completed by providing RATEL with the Project of Universal Service in Serbia, proposing the mechanisms and volume of the services within the US through a number of scenarios.

MONITORING AND ANALYSIS OF THE TELECOMMUNICATIONS MARKET

Pursuant to the Framework Plan, in 2008 RATEL placed particular attention on the analysis and regulation of the telecommunications market. The publication An Overview of Telecom Market in the Republic of Serbia in 2007 is one of the results of the market analysis.

Comparative overview of the number of users and the penetration rate of the public fixed telecom network, public mobile telecom network, Internet and cable systems for 2006, 2007 and 2008 is given in the Table 1 below.

Table 1. Comparative Overview of the Number of Telecom Service Subscribers in the Last 3 Years

	2006		2007		2008	
	Number of subscribers (thousand)	Penetration (%)	Number of subscribers (thousand)	Penetration (%)	Number of subscribers (thousand)	Penetration (%)
Fixed	2,719.40	36.30	2,854.50	38.00	3,084.87	41.14
Mobile	6,643.70	88.60	8,452.60	112.70	9,618.77	128.27
Internet	1,005.00	13.40	1,268.50	16.90	1,619.71	21.60
Cable	541.90	7.20	774.10	10.30	860.79	11.48



For the purpose of identifying the parameters for monitoring particular markets of the telecom sector, the analysis of financial indicators for the leading operators in the Republic of Serbia was performed.

Telecom market regulation requires from the regulator to provide conditions such as to protect the competition in case of monopoly. If this is not possible, it is necessary to identify the SMP operator in the specific market segment and set the prices of these services by applying the cost-based model. Following the adoption of the Platform for drawing-up the Rules on the application of the cost-accounting principle, and a detailed analysis of similar bylaws applied in the EU, the Rules on the application of the cost-accounting principle, separate accounts and reporting of a telecommunications operator with significant market power were prepared and adopted, published in the *Official Journal of RS*, no. 103/08 of 7 November 2008 and entered into force on 15 November 2008.

The application of these Rules currently involves the fixed-line public voice services market and CATV service market. Having identified the characteristic parameters of the monopolistic market, RATEL designated Telekom Srbija, a.d. (Joint Stock Co.) as an SMP for public voice service and the company Serbia Broadband - Srpske kablovske mreže (hereinafter: SBB) as an SMP for CATV services. Pursuant to its powers, in 2008 RATEL received two requests for price modification:

- upon the request from Telekom Srbija a.d., tariff rebalance in fixed telephony was approved on 14 October 2008, yet it was not based on the cost principle since the abovementioned Rules came into force subsequently;
- upon the request from SBB, of 1 December 2008, to modify the monthly maintenance charge, the analysis entailing the application of the cost-based model was performed for the first time.

In the period ahead, all requests received from an SMP operator to modify the prices of services controlled by RATEL will be handled exclusively by applying the abovementioned Rules.

Pursuant to the Rules on general terms and conditions for interconnection of the public telecommunications networks (*Official Gazette of RS*, no. 53/08) and the obligation of the



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operators with significant market power to make publicly available the standard set of technical and commercial conditions under which they offer interconnection to other public telecommunication operators, Telekom Srbija a.d. and SBB made public their Standard Interconnection Offers (SIO) on 26 August 2008 and 31 December 2008, respectively.

COST-BASED MODEL

The concept of defining the operator with significant market power (SMP), as the most important part of the European regulatory regime for electronic communications, involves identifying the operator with the dominant position in the telecommunications market, with respect to one or more services provided. The principal idea of the SMP concept is the prevention of the abuse of monopolistic position, thereby placing both the customer and competitor in the relevant market or market segment in a disadvantageous position, which is particularly characteristic of the telecommunications market, with operators providing a wide range of diversified services. The abuse of the monopolistic position is usually manifested through prices (both wholesale and retail) and, therefore, one of the greatest challenges encountered by the national regulatory authorities (NRAs) is to produce efficient mechanisms for setting the selling prices of the services.

Price control for telecommunications services is focused on the prevention of price subsidies between different services of an SMP operator. The experience of the European countries has shown that the NRAs need more than a comparative analysis of the selling prices of the operators in other countries, but a more reliable and verifiable information basis on the pricing methods, in order to prevent the possibility of price subsidies, which entails the obligation of both SMP and the regulator to focus on the accounting separation of costs and performances.

In order to make up for the missing control mechanism in SMP operators' price control, RATEL had prepared draft Rules on the application of the cost-accounting principle, separate accounts and reporting of a telecommunications operator with significant market power (*Official Gazette of*

RS, no 103/08), regulating the basic principles, models and methodologies of cost and performance accounting, calculation of costing price and selling price of the SMP's services. Prior to adoption of the cost-based model, RATEL's decisions on tariff rebalance with operators having dominant position were made solely on grounds of comparative analysis of the service prices of the operators in the region.

The purpose of the Rules is to provide reliable information basis on costs, revenues, business results and engaged assets according to market services of the public telecom operators with significant market power, in order to set out a special tariff regime. Here, the cost-plus method is applied – unit cost of services plus an appropriate rate of return on the capital engaged in the product production or sales.

Having regard to the obligation to select cost accounting model and method, on the one hand, and real possibilities of its application with the SMP operators in Serbia, on the other, the Republic Telecommunication Agency chose the Historical Cost Accounting (HCA) model according to the Top-Down method, based on the functional principle of the Fully Distributed Cost (FDC). The selected model is compliant with the level of the existing accounting information system in the Serbian companies and it is only the initial solution on the path towards the development of the other two cost accounting models in near future (Current Cost Accounting - CCA and Long Run Incremental Cost - LRIC).

HCA model is based on real costs according to the book value of the operator, or revenues and expenditure of the company as a whole. It is linked with the FDC principle, meaning that all costs incurred by the company are associated to the final products and services offered in the market. Cost allocation can be direct and indirect – by means of appropriate cost allocation drivers, which vary according to the type of cost and service it applies to. Possible cost drivers are the number of employees, person-hours, capacity units, users, etc. All appropriately selected cost drivers need to be expressed in quantitative terms, therefore value indicators, such as revenue, are discouraged. The main advantage of this model is a high degree of the SMP's data verifiability, whereas the main downside concerns the fact that it only refers to the current situation of the



network and services. This model is accompanied by the Top-Down method, which entails primary cost accounting by types for the company as a whole; internal allocation and reallocation of capital and operating costs by company components; capital and operating cost allocation by service types and units.

Pursuant to the Rules, an SMP operator has the obligation to prepare and provide RATEL with the calculation of unit costs for all market services, according to the set time frame and form. In addition to the official financial reports (balance sheet, profit and loss accounts, cash flows report, report on changes in capital and notes to the financial statements), SMP operators have the obligation to prepare and provide RATEL with internal statements, prepared according to the recommendations given in the Rules, at least twice a year.

Controlled prices of the telecom services are formed by consistent application of the cost-based model, which can be complemented by a comparative analysis of the prices in the region, having regard to the end-user protection and provision of material basis for the further development of the SMP operator. Particular value of these Rules lies in its openness and flexibility concerning other ways of cost accounting, such as Activity Based Costing - ABC. This means that, regardless of the primary application of the FDC cost allocation principle, the operators may also easily apply the ABC methodology. According to the Rules the beginning of the CCA model application is scheduled for 1 July 2010, whereas the beginning of application of the LRIC model is planned for 1 July 2012.

The importance of this kind of price control of an SMP in the Serbian telecoms market is manifold, as it:

- 1 enables transparent monitoring of the cost price and selling price of the services which are part of the special tariff regime;
- 2 stimulates a gradual increase in the corporative social responsibility of the operators;
- 3 provides the SMP with a possibility to continually enhance its efficiency as regards business and management of the capital and assets.



ORGANIZATION AND DEVELOPMENT OF RATEL

During 2008, RATEL went on with its regular activities, introducing a more modern business approach. RATEL is still located in rented business premises in Višnjićeva 8 in Belgrade. The spectrum monitoring centres are located in Dobanovci and Niš. During 2008, a detailed list of urgent upgrades was made and the appropriate steps were undertaken. An optical 2Mb/s network was implemented in both spectrum monitoring centres connecting them to RATEL's network. New, modern monitoring and measuring equipment and vehicle with embedded measuring devices were procured.

7 vacancy announcements were published for 13 employees and 5 trainees. Furthermore, RATEL had business cooperation with more than 10,000 clients.

Particular attention was paid to the upgrade of the existing ICT systems within RATEL:

- **new computer network was integrated, configured and adjusted, thereby achieving by far greater security, resistance to failure in the inner network nodes, speed of 1 Gbps throughout LAN and connection of the two separate locations to RATEL's network was secured;**
- **additional system software for back-up copies and for EMC Storage system problems alerts was installed and configured and an additional system software for making back-up copies within RATEL and for reporting problems in the work of EMC Storage system was installed and configured;**
- **system for continuous monitoring of network devices and server within RATEL was installed;**
- **Agency Internet Register was designed, developed and published.**

During 2008, there were 23 sessions of the Managing Board held. They involved preparation of 357 items of the agenda, adoption of 20 bylaws (rules, instructions, etc.) and 405 separate enactments (decisions, decrees, conclusions, etc.).



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In 2008, RATEL published two issues of the professional-scientific magazine TELEKOMUNIKACIJE. The first issue was printed and published in April and the second in November 2008. They were distributed, free of charge, to over 150 addresses in the country, in the region and to the international institutions. The authors are established national and foreign experts in the area of telecommunications, information technologies, economy and law.

Observing the principles of transparency in the work and provision of information to all participants of the telecom market, two regular press conferences were held in RATEL's premises:

- **RATEL two and a half years later, held on 24 April 2008.**
- **Overview of the telecom market in 2007, held on 10 September 2008, on the occasion of issuing RATEL's yearly publication.**

With the purpose of ensuring transparency in RATEL's work and providing the public with the possibility to participate in the procedure of adopting bylaws relevant for telecom sector regulation, pursuant to the Instructions on public consultations procedure, during 2008 RATEL organized public discussions, consultations, advising, seminars, expert workshops, meetings, etc. It should be noted that the Managing Board of the Agency has always used public discussion as means of public consultations for the purpose of further improvement of adoption of bylaws within RATEL competence.

During 2008 RATEL's total revenues amounted to approximately 1 237 million dinars, and the total expenditures were 556 million dinars. Pursuant to Article 18, paragraph 8 of the Law, the surplus of 681 million dinars was paid into the Treasury of the Republic of Serbia and the Autonomous Province of Vojvodina, in the amount of 669 million dinars and 12 million dinars respectively, once the financial reports had been audited.

COOPERATION WITH OTHER INSTITUTIONS AND ORGANIZATIONS

In performing its main role of creating the necessary conditions for the unhindered development of the telecommunications market in the Republic of Serbia within its competencies, RATEL has



close cooperation with relevant state and judicial authorities. In carrying out the joint activities, each institution acts within its authority.

Unfortunately, in the period 01.01.-30.06.2008, the former Ministry of Telecommunications and Information Society did not act according to its powers stipulated under Article 6 of the Telecommunications Law, nor did it act efficiently and timely, pursuant to the powers under Article 57 of the Law on State Administration (*Official Gazette of RS*, nos. 79/05 and 101/07). This had a crucial impact on the number of adopted and published bylaws prepared by RATEL. A significant number of rather important rules adopted by the Managing Board, which awaited the opinion on compliance with the Constitution and the laws from the Ministry, were halted in the midst of the adoption and implementation process. Namely, the following bylaws:

- Rules on terms and conditions and the procedure for the issuance of authorization to a public telecommunications operator for interconnection of a national telecommunications network with a telecommunications network of another country,
- Rules on terms and conditions for the issuance of authorization for public telecommunication networks and contents of authorization,
- Rules on terms and conditions for provision of voice transmission services over the Internet and the contents of authorization,
- Rules on general terms and conditions for the interconnection of public telecommunications networks,
- Decision on the amount of the annual fee for using the assigned numbers and addresses from the Numbering Plan,
- Rules on radio frequency usage fees.

On 13 June 2008, the former Ministry of Telecommunications and Information Society delivered a Decision whereby “the Ministry takes over the tasks conferred to the Republic Telecommunication Agency for a period of 120 days, as of 13 June 2008, including the authorities of the chairman and the members of the Managing Board related to performing the conferred tasks”.



At RATEL's request for the Government of Serbia to examine the aforementioned decision of the Ministry, in its session of 19 June 2008, the Government of Serbia adopted the Decision annulling the decision of the Ministry of Telecommunications and Information Society, published in the *Official Gazette of the Republic of Serbia*, no. 61/08, of 20 June 2008.

Since the new Government of the Republic of Serbia and the new Ministry for Telecommunications and Information Society (MTID) were constituted in the second half of 2008, there has been an open and direct cooperation between the Ministry and RATEL, enabling efficient execution of the legal activities. All above listed rules received the required opinion and were published in the *Official Gazette of the Republic of Serbia* by the end of 2008. In this way, conditions were created for further liberalization of the telecom market in the Republic of Serbia.

During 2008, RATEL participated in the activities of work groups and commissions of the Government of Serbia dealing with the following issues:

- National Programme for Integration of the Republic of Serbia in the EU,
- Accession of the Republic of Serbia to the World Trade Organization,
- Strategy for the regulatory reform in the Republic of Serbia for the period from 2008 until 2011,
- Sectorial meetings European Commission – Republic of Serbia,
- Preparing documents for the European Commission (*European Communication Monitoring Report 2-Serbia*) and Cullen International.

We would like to point out RATEL's participation in drafting the National Programme for Integration (NPI), through work within the Information Society and Media Group and Competition Group. This is a document containing a plan of gradual harmonization of the legislation with *acquis communautaire*, stipulated under the Stabilization and Association Agreement (SAA). Since NPI provides a detailed overview of reforms and activities to be carried



out in the years ahead, it is of great importance for the work of the state institutions, and also for the future business plans of the private sector.

The dynamic development of ICTs, i.e. services and equipment, requires continuous monitoring and introduction of new regulations. This requires advanced and direct international cooperation with the NRAs and other international institutions in the area and with the EU Member Countries. For the purposes of harmonization of regulations, technical provisions, standards and certificates, experts from the Agency actively participated in the meetings of several international organizations, among which the ITU, CEPT and ETSI.

In its work, RATEL cooperates with all participants in the telecom market: operators, providers, distributors, industry, research and educational institutions and consumer associations.

RATEL's Advisory Council held three sessions or open work meetings in 2008. The following issues related to the development of telecommunications in the Republic of Serbia were discussed:

- Overview of the telecom market in the Republic of Serbia in 2007,
- 2008 Framework Business Plan,
- Note on the Strategy for the Development of Broadband Telecommunications in Vojvodina,
- Forming expert teams to discuss current telecom regulatory issues, such as guidelines for the Strategy for the Development of Broadband Telecommunications in the Republic of Serbia, the Strategy for the Development of Digital Broadcasting in the Republic of Serbia, Electronic Communications Law and amendments to the RF Bands Allocation Plan, number portability in mobile networks (technical pre-requisites and economic sustainability), carrier pre-selection (technical pre-requisites and economic sustainability), LLU (technical pre-requisites and



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economic sustainability), defining the verification method of the compliance of mobile operator with the licence requirements,

- Discussing draft Action Plan for the implementation of the Strategy for the Development of Telecommunications in the Republic of Serbia in the period from 2006 until 2010.

Constant contacts with all participants in the market were maintained through the official institutional participation of RATEL in the meetings and roundtables, while the Agency employees participated in several international and national conferences.

Furthermore, during 2008 RATEL cooperated with the regulatory authorities from the region. Direct talks were held and experience exchanged with the experts from the regulatory agencies of Austria, Croatia, Montenegro, Bosnia and Herzegovina, Greece and Macedonia.

Executive Director

Dr Milan Janković

2. TELECOM MARKET ANALYSIS

Pursuant to Articles 9 and 10 of the Telecommunications Law, the Republic Telecommunication Agency is authorized to prevent anticompetitive practices of the public telecommunications operators in the market, provided they are not subject of the procedure of the competition authority. The Ministry of Telecommunications and Information Society set out in the Action Plan pertinent to the Strategy for the Development of Telecommunications in the Republic of Serbia in the Period from 2006 until 2010, for the markets within the telecommunications sector to be defined and analysed during 2009.

Based upon the internationally accepted guidelines and the national regulatory framework, the Agency developed a methodology that will be applied to the following markets:

- Fixed telephony,
- Mobile telephony,
- Interconnection,
- Leased lines,
- Internet,
- Radio and television programme distribution.

The first step in the analysis is to define the relevant markets both in terms of production and geography, some of which will subsequently be further divided into wholesale and retail markets. Once the services offered in the relevant market have been determined, the hypothetical monopoly test (HMT) is applied in order to examine the demand-side substitution and supply-side substitution and to determine the end-user's reaction to the increase in prices, thereby discovering whether potential competition exists in the observed market. Having defined the relevant market, it is necessary to determine, by applying the so called Three-Criteria-Test (TCT), whether the market shows barriers such as to prevent new entries



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and therefore impede further market liberalization. The first criteria concerns the legal and economic barriers to entry; the second tests whether market structure is such as not to tend towards effective competition in a relevant time horizon; and the third criteria is used to assess whether the Telecommunications Law and the Competition Law are sufficient to adequately address market failure. Should it turn out that such barriers do exist, the distribution of power among the existing operators needs to be assessed in order to determine whether the conditions are met for any of the operators to be declared as having significant market power. The dominant operators would be subjected to adequate obligations pursuant to applicable legal provisions, such as application of special tariff regime, obligation to provide network access and interconnection to another telecommunication operator and obligation to provide leased line service upon a reasonable request provided there are available capacities, all to the end of preventing the abuse of dominant position. The distribution of power among the existing operators in the market is to be examined by applying the criteria for assessment of dominance:

- Market shares,
- Overall size of the undertaking,
- Control of infrastructure not easily duplicated,
- Technological advantages and superiority,
- Absence of countervailing buying power,
- Easy or privileged access to capital markets,
- Product/services diversification,
- Economies of scale,
- Economies of scope,
- Vertical integration,
- A highly developed distribution and sales network,
- Absence of potential competition,
- Barriers to expansion.



Pursuant to the EU Guidelines, the selection of criteria depends on the relevant market characteristics and therefore not all of the above criteria need to be met for an operator to be designated as the operator with significant market power.

The purpose of the market analysis is to determine whether the conditions exist for an operator to be declared SMP. In 2008, the preparations for the analysis to be implemented were finalized, so that the analysis results and conclusions are expected to be available in late 2009.

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2.1. BASIC CHARACTERISTICS OF THE TELECOM MARKET IN THE REPUBLIC OF SERBIA

The Telecommunications Law based on the 1998 EU Regulatory Package was adopted in 2003 as a result of the need to harmonize the legal system with the European legislation. The basic

Figure 1. Republic of Serbia – Basic Facts





Basic Facts	Source: Statistical Office of the Republic of Serbia & RATEL
Name	Republic of Serbia
Capital	Belgrade
Area	88,361 km ²
Population (without AP Kosovo and Metohija), 2002 data	7,498,001
Country Code:	+381
Internet domain:	.rs
GDP for 2008	33.31 billion euros Real annual growth 6.20% (estimate)
Average net income in 2008	32,746 dinars (401.97 euros) Annual growth 18.00%
Fixed penetration:	41.14
Mobile penetration:	128.28
ISPs:	197
Network digitalization rate:	95.52%

principles laid down in the Telecommunications Law concern rational usage of the RF spectrum, guaranteed quality of telecommunications services, promotion of competition, user protection, provision of interconnection under equal terms and observance of international norms and standards. According to the division of competence stipulated by the Law, the Government adopts the Policy and the Strategy for the development of telecommunications proposed by the relevant Ministry, whereas the Republic Telecommunications Agency is assigned a regulatory role.

In order to speed up the development of the telecom market, the Government of the Republic of Serbia adopted the Strategy for the Development of Telecommunications in the Republic of Serbia from 2006 until 2010, which defines the legal, institutional, economic and technical aspects of the development. The Strategy intends to stimulate the development of the telecoms infrastructure and services, as well as the harmonization of the sector specific legislative provisions of the Republic of Serbia with the EU regulatory framework.



The document lays down the following principles:

- significant increase of the telecommunications' share in the total gross domestic product;
- attracting foreign and domestic investments, by adopting incentive measures in order to create challenging and favourable business environment;
- full digitalization of the telecommunications infrastructure, as a key prerequisite for building the information society;
- reaching the average European level of development of telecommunications;
- providing for the Internet to be available to all, fast, inexpensive and secure;
- promoting the development of web economy;
- increase the participation of domestic industry and knowledge in the development of the telecommunications sector in the Republic of Serbia and ensure its restructuring in order to enter the world market;
- harmonization of the development of telecommunications infrastructure with the requirements set in the strategies for other sectors, in particular with the Strategy for the Development of Information Society;
- ensuring efficient access to information and knowledge;
- increase in the level of knowledge and education through application of the information and communication technology and by building telecommunication infrastructure and information society.

According to the data of the Republic Telecommunication Agency, the revenues from telecom services in 2008 amounted to 1.61 billion dinars. The share of telecom sector revenues in GDP was around 4.87% (cf. 4.7% in 2007).

The available data were gathered by the Agency based upon the reports submitted by the telecom market players.

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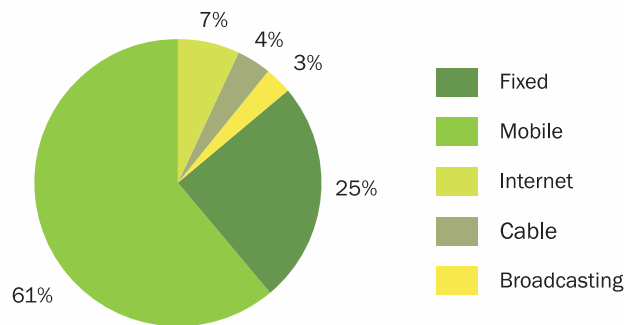
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Revenues
from telecom services
1.61 billion euros
(4.87% GDP)

In terms of services, in 2008 the largest share in the total revenues, 61%, goes to the mobile market, whereas cable services with 4% and broadcasting with 3% are still at the bottom of the scale. The structure of revenues of the telecommunications sector is given below (Figure 2).

Figure 2. Allocation of Revenues by Services in 2008

Source: RATEL



Tables 3 and 4 show telecom service baskets representing monthly expenditure per subscriber of telecom services in Serbia in 2008 compared with the 2007 data. The low usage basket shows the average monthly expenditure for basic telecom services, which include television, fixed and mobile phone, whereas the high usage basket shows how much the population spends monthly using also Internet and CATV, in addition to basic package. In 2008, the cost of the basic package equalled 4.51% of average monthly salary, and that of the extended package 12.26%. In the

Table 2. Low Usage Basket

Source: RATEL

Low usage basket	2007		2008	
	Average bill	% of monthly salary	Average bill	% of monthly salary
Fixed	928.88	2.69%	725.00	1.88%
Mobile (prepaid)	351.92	1.02%	364.50	0.94%
TV (national TV subscription)	350.00	1.02%	387.00	1.00%
Total	1,630.80	4.73%	1,476.50	3.82%
Average net salary (in December)	34,471.00		38,626.00	

basic package the largest amount goes to fixed-line services (2.21%) in the extended package the biggest expenditure is the mobile (postpaid) bill (4.07%).

Table 3. High Usage Basket			Source: RATEL	
High usage basket	2007		2008	
	Average bill	% of monthly salary	Average bill	% of monthly salary
Fixed	928.88	2.69%	725.00	1.88%
Mobile (postpaid)	1,257.15	3.65%	1,333.12	3.45%
TV (national TV subscription)	350.00	1.02%	387.00	1.00%
ADSL	1,309.89	3.80%	1,178.00	3.05%
CATV	563.04	1.63%	392.61	1.02%
Total	4,408.96	12.79%	4,015.73	10.40%
Average net salary (in December)	34,471.00		38,626.00	

Since there were no substantial direct foreign investments in the telecom sector in 2008, the investments from 2007 remaining the biggest (source SIEPA):

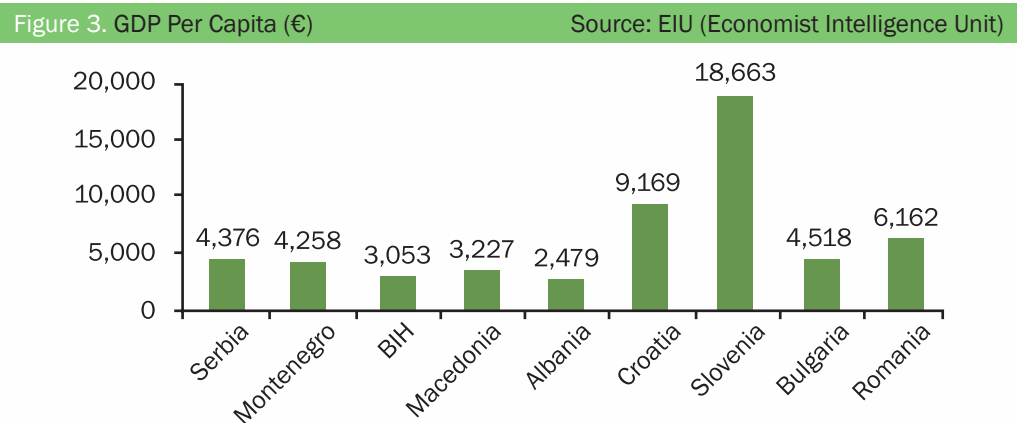
- Telenor (Norway) 1.602 billion euros, privatization,
- Mobilkom Austria (Austria) 570 million euros, the biggest greenfield investment.

2.2. COMPARATIVE ANALYSIS WITH THE SEE COUNTRIES

Three countries of the South East Europe: Bulgaria, Romania and Slovenia are members of the EU and therefore their telecom regulations are fully harmonized with the European legislation. Other countries of the region: Albania, Bosnia and Herzegovina, Montenegro, Croatia, Macedonia and Serbia, are making great efforts in order to reach the level of development of telecommunications and ICT characteristic of the EU Member States, in technological, economic and regulatory terms.

Country	Country Code	Population (mn)	BDP (€ bn)
Albania	AL	3.2	7.93
Bulgaria	BG	7.8	34.00
Bosnia & Herzegovina	BA	3.9	11.90
Montenegro	ME	0.6	2.55
Croatia	HR	4.6	42.18
Macedonia	MK	2.1	6.77
Romania	RO	21.6	135.40
Slovenia	SI	2.0	36.50
Serbia	RS	7.4	33.31
Turkey	TR	74.2	515.00

Slovenia has the biggest GDP per capita (Figure 3), whereas Croatia is leading among the non-EU countries.



Romania showed the greatest growth rate of GDP per capita (Figure 4), whereas the non-EU countries with the biggest growth rate are Montenegro (7.0%) and Serbia (6.2%).



Figure 4. Increase in GDP Per Capita Compared with 2007

Source: EIU (Economist Intelligence Unit)

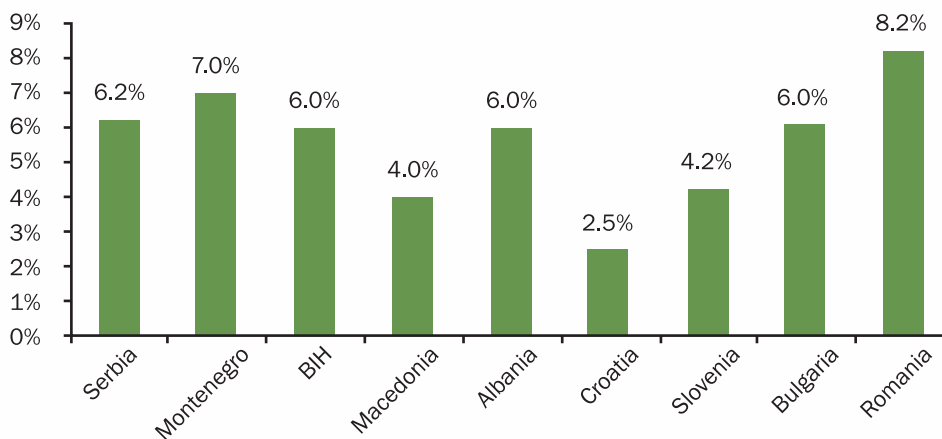
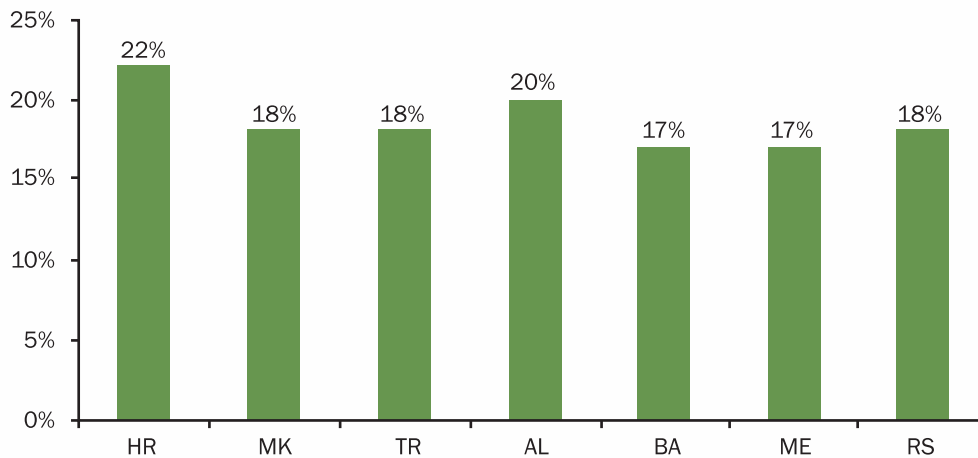


Figure 5 indicates the value of VAT in the Republic of Serbia and other countries in the region.

Figure 5. VAT in the Region

Source: Enlargement Countries Monitoring Report 2 (Cullen International)



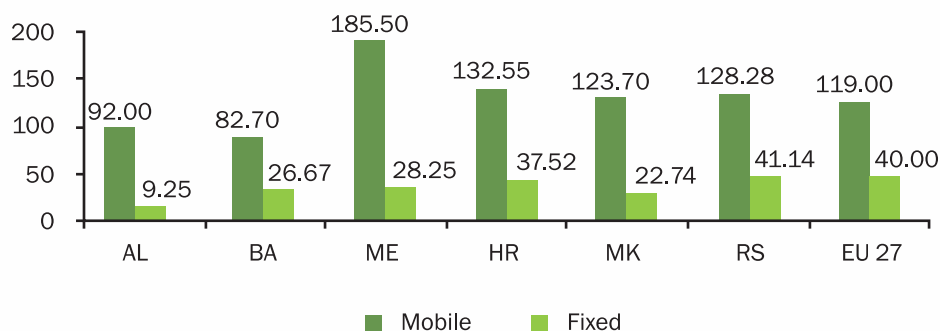


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The comparative overview of mobile and fixed penetration in the Republic of Serbia (Figure 6) shows that the number of mobile subscribers is significantly bigger than the number of fixed-line subscribers.

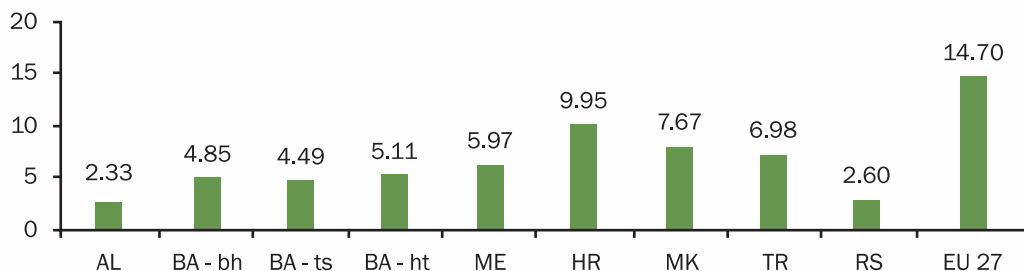
Figure 6. Mobile and Fixed Penetration (Countries in the Region)
Source: Country Monitoring Report 2 Annex (Cullen International)



In 2008, fixed penetration in Serbia grew from 38.59 to 41.14 (growth of 6.6%), and mobile penetration from 112.70 to 128.27 (growth of 13.8%).

The prices of specific services provided by the operators in the region and the EU over fixed network, as well as the leased line services are given in Figures 7, 8 and 9. Monthly subscription

Figure 7. Standard Monthly Subscription for Residential Users (€)*
Source: Country Monitoring Report 2 Annex (Cullen International)



*Including VAT

charge, price of call-unit and local call tariff are still the lowest in the Republic of Serbia, whereas Croatia has the highest monthly subscription charge in the region.

Figure 8. Price of a 3-Minute Local Call (€)

Source: Country Monitoring Report 2 Annex (Cullen International)



The highest charges for 2 km of 2 Mbps leased line on an annual level are present in Albania (1,939 euros), and for 2 Mbps Macedonia (12,148 euros).

Figure 9. Annual Charges for 2 km of National 64 kbit/s Leased Lines (€)

Source: Country Monitoring Report 2 Annex (Cullen International)

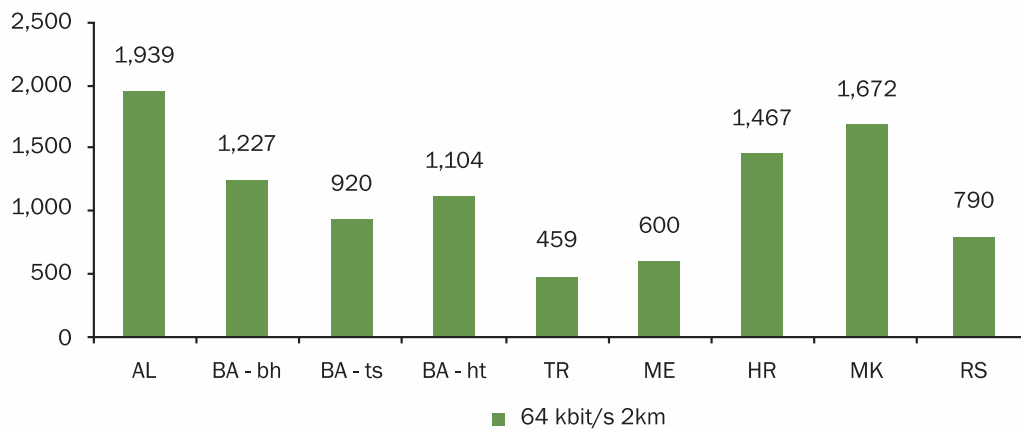
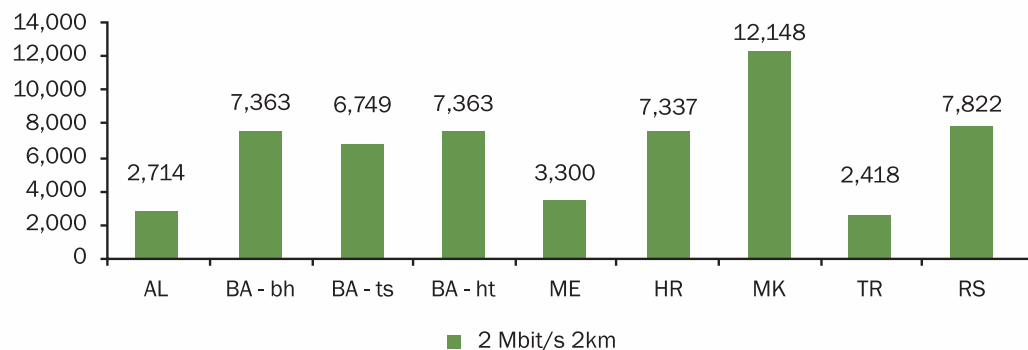


Figure 10. Annual Charges for 2 km of National 2 Mbps Leased Lines (€)

Source: Country Monitoring Report 2 Annex (Cullen International)



There is a significant growth of Internet users in Serbia. The number of potential Internet users in Serbia in 2008 reached 1,619,711, which is an increase of approximately 27.7% compared with 2007 when there were 1.27 million users. Also, as a result of the development of telecommunications and broadband Internet, in 2008 the growing number of broadband users exceeded the number of dial-up users (Figure 11).

The development and application of new technologies is clearly reflected in the growth of the number of xDSL lines, which demonstrated a significant increase in respect to 2007. The largest penetration of xDSL lines was seen in Croatia (11.194), while the number of xDSL lines per 100 inhabitants in Serbia was doubled compared with 2007, amounting to 3.637.



Figure 11. Total Number of Fixed Internet Connections According to the Type of Connection
Source: Country Monitoring Report 2 Annex (Cullen International)

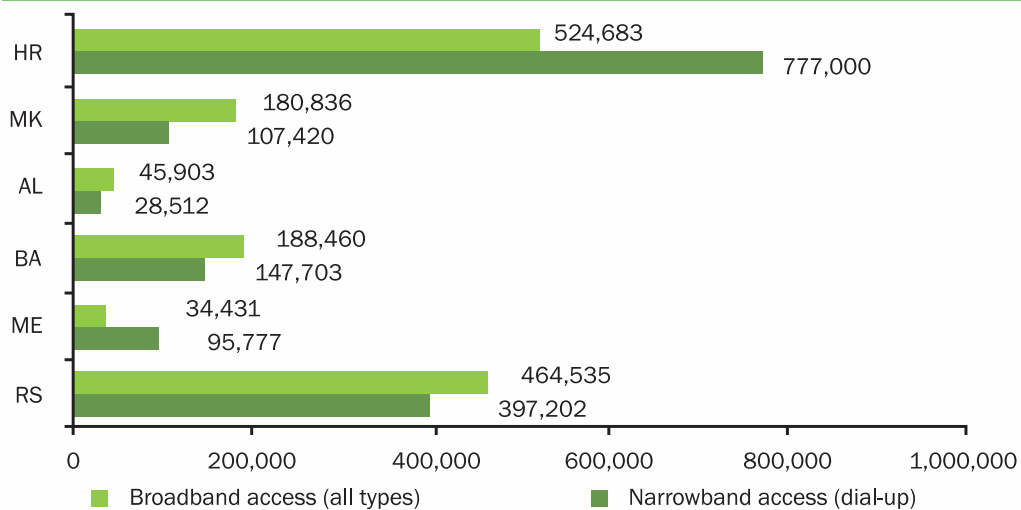
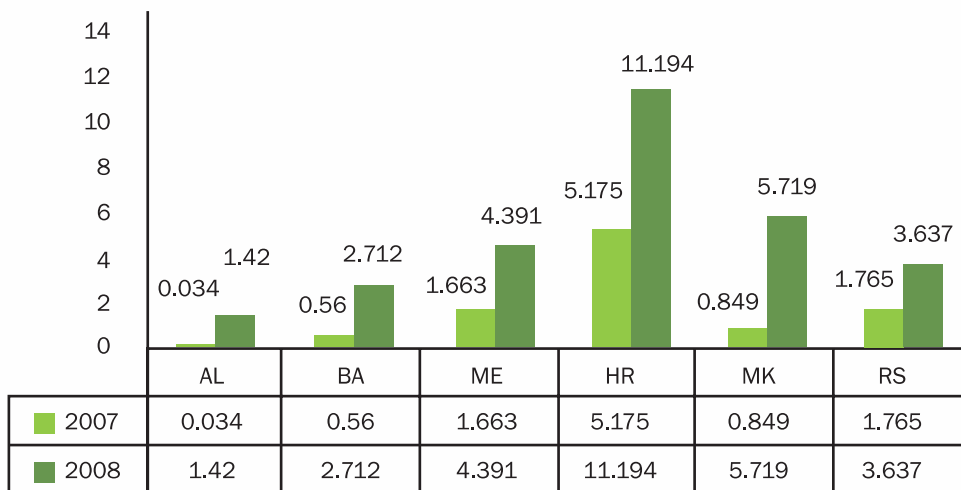


Figure 12. xDSL per 100 Inhabitants
Source: Country Monitoring Report 2 Annex (Cullen International)





2.3. INDICATORS OF ICT DEVELOPMENT

The International Telecommunication Union (ITU) publishes the indicators of ICT development on a regular basis. These indicators enable the comparison of all UN Member States in terms of the level of development of this important element of the society. Lately, great significance is given to the indicators requiring public polls. So far, the data have usually been obtained from the companies present in the ICT industry and the predictions of the future development have been based on the grounds of such data. However, a need occurred for the indicators to be obtained on the basis of representative sample of the telecommunications services users. In this regard, earlier this year, ITU published a “Manual for Measuring ICT Access and Use by Households and Individuals”, which provides a description of the core indicators and methodology for data collection and analysis. The list of the core indicators on use of ICT by households and individuals are given below. The list comprises 12 core indicators HH1 – HH12, and an additional, reference indicator HHR1. In order to provide for Serbia to be among the countries where these indicators are applied, in cooperation with the Statistical Office of the Republic of Serbia, RATEL initiated the collection of ICT indicators of relevance for monitoring the development of telecommunications in the Republic of Serbia. The first results of surveys comprising all 12 core indicators are expected to be available in early 2010.

Table 5. Indicators for Measuring ICT Development

Source: ITU, Manual for Measuring ICT Access and Use by Households and Individuals, 2009 Edition

Indicator	Definitions and notes
HH1 Proportion of households with a radio	The <i>proportion of households with a radio</i> is calculated by dividing the number of in-scope households with a radio by the total number of in-scope households. A radio is a device capable of receiving broadcast radio signals, using popular frequencies, such as FM, AM, LW and SW. It includes a radio set integrated in a car or an alarm clock but excludes radios integrated with a mobile phone, a digital audio player (MP3 player) or in a computer.

HH2	Proportion of households with a TV	<p>The <i>proportion of households with a TV</i> is calculated by dividing the number of in-scope households with a TV by the total number of in-scope households.</p> <p>A TV (television) is a stand-alone device capable of receiving broadcast television signals, using popular access means such as over-the-air, cable and satellite. It excludes TV functionality integrated with another device, such as a computer or a mobile phone.</p>
HH3	Proportion of households with telephone	<p>The <i>proportion of households with telephone</i> (fixed or mobile) is calculated by dividing the number of in-scope households with a telephone (fixed or mobile) by the total number of in-scope households.</p>
	Proportion of households with fixed telephone only	<p>The <i>proportion of households with fixed telephone only</i> is calculated by dividing the number of in-scope households with a fixed telephone only by the total number of in-scope households.</p> <p>A <i>fixed telephone line</i> refers to a telephone line connecting a customer's terminal equipment (e.g. telephone set, facsimile machine) to the public switched telephone network (PSTN) and which has a dedicated port on a telephone exchange. This term is synonymous with the terms main station or Direct Exchange Line (DEL) that are commonly used in telecommunication documents. It may not be the same as an access line or a subscriber.</p>
	Proportion of households with mobile cellular telephone only	<p>The <i>proportion of households with mobile cellular telephone only</i> is calculated by dividing the number of in-scope households with a mobile cellular telephone only by the total number of in-scope households.</p> <p>A <i>mobile cellular telephone</i> refers to a portable telephone subscribing to a public mobile telephone service using cellular technology, which provides access to the PSTN. This includes analogue and digital cellular systems, as well as IMT-2000 (3G). Users of both post-paid subscriptions and pre-paid accounts are included.</p>
	Proportion of households with both fixed and mobile cellular telephone	



HH4	Proportion of households with a computer	<p>The <i>proportion of households with a computer</i> is calculated by dividing the number of in-scope households with a computer by the total number of in-scope households.</p> <p>A <i>computer</i> refers to a desktop or a laptop computer. It does not include equipment with some embedded computing abilities such as mobile cellular phones, personal digital assistants (PDAs) or TV sets.</p>
HH5	Proportion of individuals who used a computer (from any location) in the last 12 months	<p>The <i>proportion of individuals who used a computer</i> is calculated by dividing the total number of in-scope individuals who used a computer from any location in the last 12 months by the total number of in-scope individuals.</p> <p>A <i>computer</i> refers to a desktop or a laptop computer. It does not include equipment with some embedded computing abilities such as mobile cellular phones, personal digital assistants or TV sets.</p>
HH6	Proportion of households with Internet access at home	<p>The <i>proportion of households with Internet access</i> at home is calculated by dividing the number of in-scope households with Internet access by the total number of in-scope households.</p> <p>The <i>Internet</i> is a world-wide public computer network. It provides access to a number of communication services including the World Wide Web and carries e-mail, news, entertainment and data files, irrespective of the device used (not assumed to be only via a computer – it may also be by mobile phone, PDA, games machine, digital TV etc.). Access can be via a fixed or mobile network.</p>
HH7	Proportion of individuals who used the Internet (from any location) in the last 12 months	<p>The <i>proportion of individuals who used the Internet</i> is calculated by dividing the total number of in-scope individuals who used the Internet (from any location) in the last 12 months by the total number of in-scope individuals.</p> <p>The <i>Internet</i> is a world-wide public computer network. It provides access to a number of communication services including the World Wide Web and carries e-mail, news, entertainment and data files, irrespective of the device used (not assumed to be only via a computer – it may also be by mobile phone, PDA, games machine, digital TV etc.). Access can be via a fixed or mobile network</p>

HH8	Location of individual use of the Internet in the last 12 months	<p>The proportion of individuals who used the Internet at each location can be calculated as either: the proportion of in-scope individuals or the proportion of Internet users, using the Internet at each location.</p> <p>Access to the Internet is not assumed to be only via a computer – it may also be by mobile phone, PDA, games machine, digital TV etc.</p> <p>Individuals should be asked about all locations of Internet use (that is, the survey question used by countries should specify multiple responses). Note that, except for mobile access, the locations are associated with the equipment used e.g. a PC installed at work or at an Internet café.</p>
	<i>Home</i>	
	<i>Work</i>	Where a person's workplace is located at his/her home, then he/she would answer yes to the home category only.
	<i>Place of education</i>	For students. Teachers (and others who work at a place of education) would report 'work' as the place of Internet use. Where a place of education is also made available as a location for general community Internet use, such use should be reported in the Community Internet access facility category.
	<i>Another person's home</i>	The home of a friend, relative or neighbour.
	<i>Community Internet access facility</i>	Internet use at community facilities such as public libraries, publicly provided Internet kiosks, non-commercial telecentres, digital community centres, post offices, other government agencies; access is typically free and is available to the general public.
	<i>Commercial Internet access facility</i>	Internet use at publicly available commercial facilities such as Internet or cyber cafés, hotels, airports etc, where access is typically paid (i.e. not free of charge).
	<i>Any place via a mobile cellular telephone</i>	Use of the Internet at any location via a mobile cellular telephone (including handheld devices with mobile phone functionality).
	<i>Any place via other mobile access devices</i>	Use of the Internet at any location via other mobile access devices, e.g. a laptop computer or handheld device that uses wireless access (at a WiFi 'hotspot') or a laptop computer connected to a mobile phone network.



HH9	Internet activities undertaken by individuals in the last 12 months (from any location)	<p>The proportion of individuals who undertook each activity can be calculated as either: the proportion of in-scope individuals or the proportion of Internet users who undertook each activity.</p> <p>Note that these activities are restricted to private purposes and therefore exclude activities such as purchasing over the Internet undertaken as part of a person's job. Individuals should be asked about all Internet activities (that is, the question used by countries should specify multiple responses). Activities are not mutually exclusive. Access to the Internet is not assumed to be only via a computer – it may also be by mobile phone, PDA, games machine, digital TV etc.</p>
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Getting information about goods or services

Getting information related to health or health services

Includes information on injury, disease, nutrition and improving health generally.

Getting information from general government organizations

General government organizations should be consistent with the SNA93 (2008 revision) concept of general government. According to the SNA "... the principal functions of government are to assume responsibility for the provision of goods and services to the community or to individual households and to finance their provision out of taxation or other incomes; to redistribute income and wealth by means of transfers; and to engage in non-market production." (General) government organizations include central, state and local government units.

Interacting with general government organizations

Includes downloading/requesting forms, completing/lodging forms on line, making on-line payments and purchasing from government organizations. It excludes getting information from government organizations.

General government organizations should be consistent with the SNA93 (2008 revision) concept of general government. According to the SNA "... the principal functions of government are to assume responsibility for the provision of goods and services to the community or to individual households and to finance their provision out of taxation or other incomes; to redistribute income and wealth by means of transfers; and to engage in non-market production." (General) government organizations include central, state and local government units.

Sending or receiving e-mail

<i>Telephoning over the Internet/VoIP</i>	Using Skype, iTalk, etc. Includes video calls (via webcam).
<i>Posting information or instant messaging</i>	Posting messages or other information to chat sites, blogs, newsgroups, on-line discussion forums and similar; use of instant messaging.
<i>Purchasing or ordering goods or services</i>	Refers to purchase orders placed via the Internet whether or not payment was made on line. Orders that were cancelled or not completed are excluded. Includes purchasing of products such as music, travel and accommodation via the Internet.
<i>Internet banking</i>	Includes electronic transactions with a bank for payment, transfers, etc. or for looking up account information. Excludes electronic transactions via the Internet for other types of financial services such as share purchases, financial services and insurance.
<i>Education or learning activities</i>	Refers to formal learning activities such as study associated with school or tertiary education courses as well as distance education involving on-line activities. (A more narrow interpretation is likely to be less meaningful as it could include a range of activities such as using the Internet to search for information.)
<i>Playing or downloading video games or computer games</i>	Includes file sharing games and playing games on line, either paid or free of charge.
<i>Downloading movies, images, music, watching TV or video, or listening to radio or music</i>	Includes file sharing and using web radio or web television, either paid or free of charge.
<i>Downloading software</i>	Includes downloading of patches and upgrades, either paid or free of charge.
<i>Reading or downloading on-line newspapers or magazines, electronic books</i>	Includes accessing news websites, either paid or free of charge. Includes subscriptions to on-line news services.



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HH10	Proportion of individuals with use of a mobile cellular telephone	<p>The <i>proportion of individuals with use of a mobile cellular telephone</i> is calculated by dividing the total number of in-scope individuals with use of a mobile cellular telephone by the total number of in scope individuals.</p> <p>A <i>mobile cellular telephone</i> refers to a portable telephone subscribing to a public mobile telephone service using cellular technology, which provides access to the PSTN. This includes analogue and digital cellular systems, as well as IMT-2000 (3G). Users of both post-paid subscriptions and pre-paid accounts are included. <i>Use of a mobile cellular telephone</i> does not mean that the telephone is owned or paid for by the person but should be reasonably available through work, a friend or family member, etc. It excludes occasional use, for instance, borrowing a mobile phone to make a call.</p>
HH11	Proportion of households with access to the Internet by type of access (narrowband, broadband (fixed, mobile))	<p>This indicator should be calculated as the proportion of in-scope households with Internet access that use each type of access service, for instance, the proportion of households with Internet access that use a broadband service as their means of access.</p> <p>It is expected that countries will collect data at a finer level than shown here. The categories chosen by countries should allow aggregation to total narrowband and total broadband, as well as to fixed and mobile broadband, as defined below. As households can use more than one type of access service, multiple responses are possible.</p>
<i>Narrowband</i>		<p><i>Narrowband includes analogue modem (dial-up via standard phone line), ISDN (Integrated Services Digital Network), DSL at speeds below 256 kbit/s, and mobile phone and other forms of access with an advertised download speed of less than 256 kbit/s.</i></p> <p>Note that narrowband mobile phone access services include CDMA 1x (Release 0), GPRS, WAP and <i>i-mode</i>.</p>
<i>Fixed broadband</i>		<p><i>Fixed broadband refers to technologies at speeds of at least 256 kbit/s, in one or both directions, such as DSL (Digital Subscriber Line), cable modem, high speed leased lines, fibre-to-the-home, powerline, satellite, fixed wireless, Wireless Local Area Network and WiMAX.</i></p>

	<i>Mobile broadband</i>	Mobile broadband refers to technologies at speeds of at least 256 kbit/s, in one or both directions, such as Wideband CDMA (W-CDMA), known as Universal Mobile Telecommunications System (UMTS) in Europe; Highspeed Downlink Packet Access (HSDPA), complemented by High-Speed Uplink Packet Access (HSUPA); CDMA2000 1xEV-DO and CDMA 2000 1xEV-DV. Access can be via any device (handheld computer, laptop or mobile cellular telephone etc.).
HH12	Frequency of individual use of the Internet in the last 12 months (from any location)	<p>The frequency of individual use of the Internet can be calculated as either: the proportion of in-scope individuals or the proportion of Internet users, using the Internet with each frequency.</p> <p>It is recommended that countries collect this information in respect of a typical period; therefore, respondents should ignore weekends (if they only use the Internet at work) and breaks from their usual routine, such as holidays.</p> <p>Access to the Internet is not assumed to be only via a computer – it may also be by mobile phone, PDA, games machine, digital TV etc.</p>
	<i>At least once a day</i>	Once a working day for respondents who only (or most frequently) use the Internet from work
	<i>At least once a week but not every day</i>	
	<i>Less than once a week</i>	
Reference indicator		
HHR1	Proportion of households with electricity	<p>Electricity is not an ICT commodity, but is an important prerequisite for using many ICTs. It is therefore included in the core list as a reference indicator.</p> <p>Electricity access may be by a grid/mains connection, or from power generated locally (including at the dwelling). Local power includes electricity generated by a fuel-powered generator, or from renewable resources such as wind, water or solar. It excludes sole use of energy storage devices, such as batteries (though these may be used to store electricity from other sources).</p>



2.4. SWOT ANALYSIS OF THE TELECOM MARKET IN THE REPUBLIC OF SERBIA

STRENGTHS

- For several years now, the entire telecom market has shown constant growth in the fixed-line, mobile, Internet and radio and TV programme distribution markets.
- A series of regulatory measures and activities have been carried out to the end of liberalization of nearly all telecom market segments.
- Telecom sector is attractive to the investors due to quick return on investments.
- In the mobile sector, the government influence has been considerably diminished with the entry of two new operators owned by foreign multinational companies.
- The number and quality of services in the market have been increasing.
- There has been a constant increase in the demand for converged telecom services, which include voice, data and image transmission.
- The adoption of bylaw regulating the terms and conditions and the procedure for the issuance of authorization to a public telecommunications operator for interconnection of a national telecommunications network with a telecommunications network of another country, has enabled greater competition in both wholesale and retail broadband access market.

WEAKNESSES

- There is still a monopoly in the fixed-line market, since the 80% state-owned Telekom Srbija a.d., awaiting privatization, is the only operator.
- The regulatory framework has not been harmonized with the EU 2002 Regulatory Package.
- ADSL Internet access infrastructure to end-user is exclusively owned by Telekom Srbija a.d.
- LLU remains unregulated.
- The number of prepaid users is considerably higher than the number of postpaid users, which means smaller sure revenues of the operators.



- A significant growth in the number of mobile users is not expected, considering the high penetration rate.

OPPORTUNITIES

- Fixed-line market liberalization would bring about greater competition, thus increasing the choice of service and operator to end-users.
- The development of 3G services by mobile operators could create a possibility for the further development of content providers in terms provision of new services.
- The introduction of VoIP, CDMA and WiMAX technologies may increase fixed-line competition.
- The adopting of the LLU regulation will lead to greater competition in wholesale and retail broadband market.
- The digital switchover will enable the development of broadcasting, whereas the digital dividend will provide for the development of other telecom services.

THREATS

- The slowdown in the economic growth in 2009, may reflect on the telecom market as well, in particular on the development of 3G mobile network and broadband Internet access.
- The delay in liberalization of the fixed-line services may considerably slow down the further development of the telecom market.



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3. PUBLIC FIXED TELECOMMUNICATIONS NETWORKS AND SERVICES

Telekom Srbija a.d. is the only public fixed telecommunication service operator. Since 2003, Telekom Srbija a.d. has been in the ownership of two shareholders, Public Company of PTT traffic "Srbija" (80%) and OTE, Greece (20%).

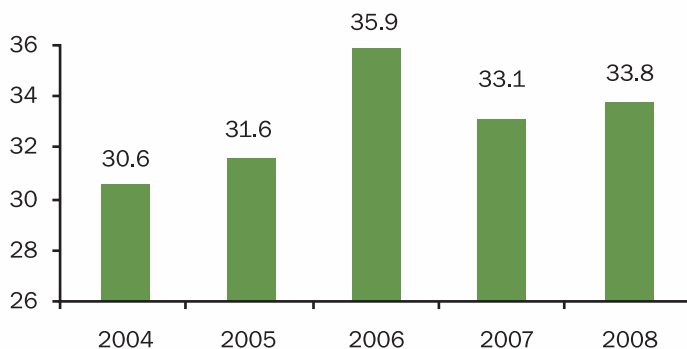
Since Telekom Srbija a.d. is the only public fixed telecommunication service operator, on 24 March 2006, pursuant to the Telecommunications Law, the Republic Telecommunication Agency declared Telekom Srbija a.d. an SMP. Accordingly, a special tariff regime is applied to public switched telecommunications services and there is the obligation to apply a cost-based model in telecom service pricing. Telekom Srbija a.d. is under obligation to observe the regulations and conditions stipulated under the Rules on the application of the cost-accounting principle, separate accounts and reporting of a telecommunications operator with significant market power and the telecommunications Law.

The total revenue from fixed telephone services in the territory of the Republic of Serbia in 2008 amounted to 33.8 billion dinars, 2% more compared with the revenues of 35.1 billion dinars in the previous year (Figure 13). The revenues from the international traffic in 2008 amounted to 5.9 billion dinars, making the total revenue 39.7 billion dinars. The largest share in the total revenues still goes to revenues from national traffic, amounting to 23.5 billion dinars or 59% of the total revenues, whereas the smallest share - and therefore the smallest impact on the total revenue flow - is that of the interconnection - around 2%. The investments made in the fixed telephony in 2008 amounted to 7.4 billion dinars, which is a decrease of 44% in respect to 2007 when the investments in this sector were 13.2 billion dinars.

As for the structure of fixed-line revenues in 2008, the biggest growth of 32% was seen in revenues from subscription fee amounting to 4.3 billion dinars. In 2008 the subscription fee rose from 74.50 dinars (without VAT) to 195.00 dinars (without VAT), thereby accounting for the



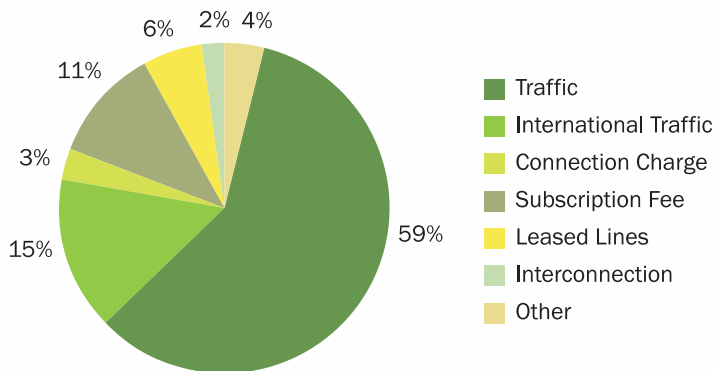
Figure 13. Growth Tendency of Revenue from Fixed Telephone Services (RSD bn)* Source: RATEL



* Revenues from fixed telephone services in the territory of the Republic of Serbia

increase in the revenues. The increase was also seen with the revenues from the connection charge 4%, along with the revenues from other services, which grew by 40% in respect to 2007. In 2008, the revenues from traffic fell by 7%, whereas the revenues from interconnection decreased by 22% in respect to the previous year.

Figure 14. Distribution of Revenues from Fixed Telephone Services in 2008 Source: RATEL

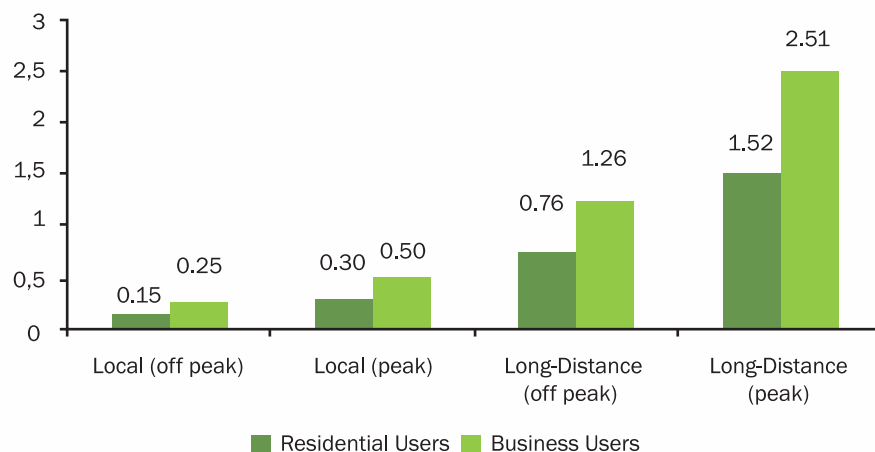


Following the request of Telekom Srbija a.d., stating that a benchmarking analysis has shown that the price of the fixed-line service was still significantly lower compared with the prices in the

region, (see Figure 8), RATEL adopted the Decision on approving the price correction to the Telecommunications Company Telekom Srbija a.d., namely, for monthly subscription fee as of 1 November 2008, and for fixed-line calls and calls to special services as of 1 December 2008. Pursuant to the Decision, the monthly subscription fee amounts to 195.00 dinars (without VAT) as of 1 November 2008. However, the Government of the Republic of Serbia reached an agreement with Telekom Srbija a.d. to postpone the implementation of the part of the decision concerning the levelling of the call-unit price for residential and business users to 0.6074 dinars (without VAT) along with the increase in tariff for calls to special services.

Figure 15. Prices of Local and Long-Distance Telephone Services, VAT Excluded (RSD/min)

Source: RATEL



Compared with the previous year, the number of residential users paying only the subscription fee rose (almost 20 % of subscribers), which is the consequence of the price increase, together with the fact that there are 150 call-units available free of charge provided they are not exceeded. Most residential monthly bills for fixed-line services (around 32.7%) were in the range between 500 and 1 000 dinars (Figure 17). As for business users, as many as 54% of subscribers paid up to 2000 dinars monthly for fixed-line services, whereas 22.8% paid only the subscription fee (Figure 18). Smaller number of business users paying over 10000 dinars a month may be



explained by the fact that many larger companies have developed IP-based corporate networks which led to a significant reduction in the monthly bills.

Figure 16. Prices of International Telephone Services, VAT Excluded (RSD/min) in 2008

Source: RATEL

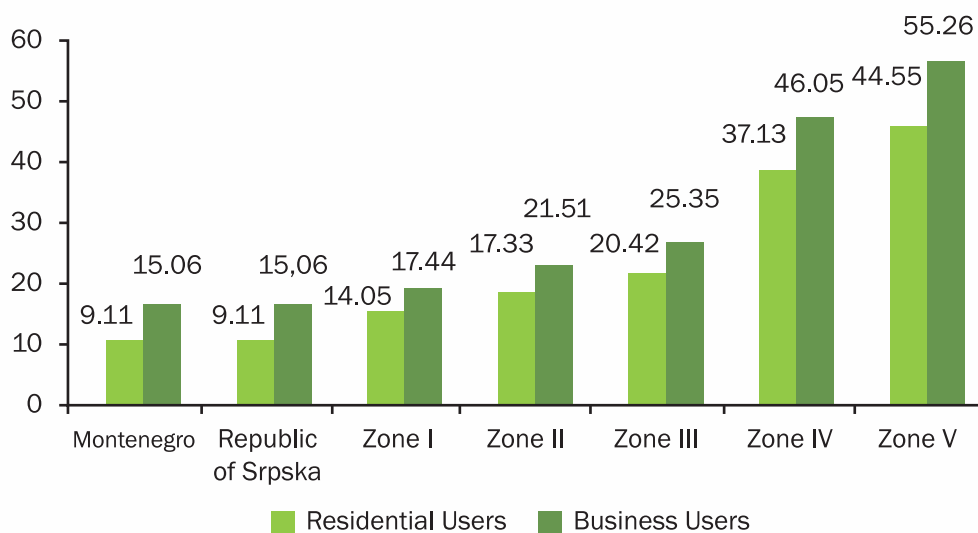


Figure 17. Distribution of Residential Subscribers According to Monthly Bill (RSD) Source: RATEL

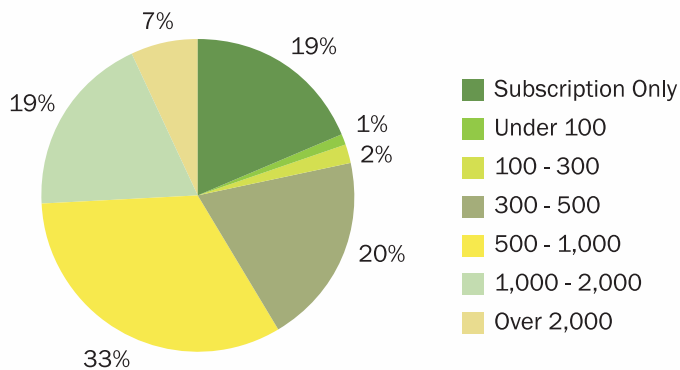




Figure 18. Distribution of Business Subscribers According to Monthly Bill (RSD)

Source: RATEL

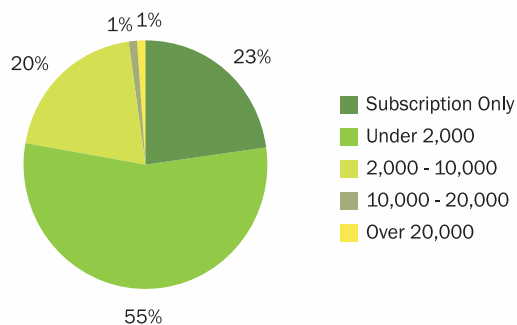


Figure 19. Number of Main Lines (mn)

Source: RATEL

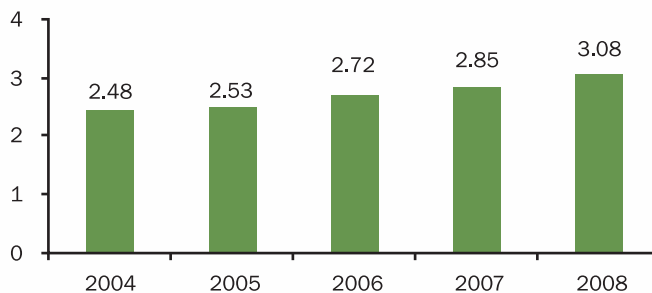
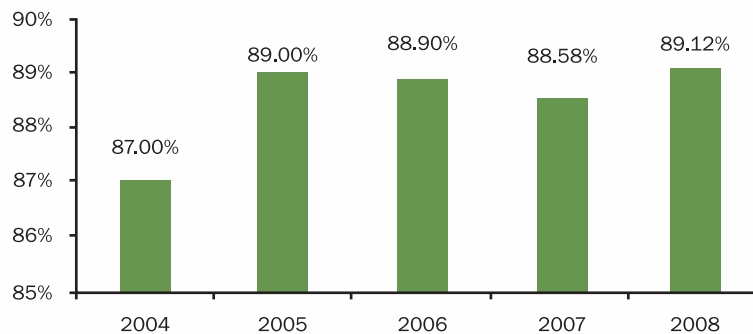


Figure 20. Share of Residential Users in the Total Number of Fixed-Line Subscribers

Source: RATEL

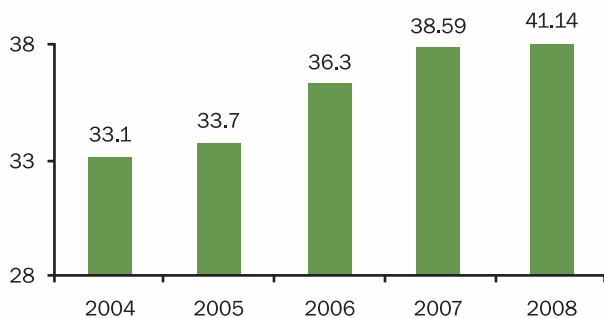


The number of main lines is growing every year, reaching 3.08 million in 2008, this being an increase of 3% in respect to 2007. The vast majority of users, 89%, are still private persons. The number of party-lines was reduced by approximately 20%. The digitalization rate rose to 95.52% in 2008.

Fixed penetration increased in respect to the previous year, amounting to 41.14%, which is above average for the region. According to the number of households, the penetration rate was around 116% in 2008.

Figure 21. Fixed Penetration (%)

Source: RATEL



In 2008, the number of public payphones remained more or less unchanged, whereas the relevant revenues dropped by 36%, thus continuing the trend characteristic for this service in recent years. Apparently, public payphones are no longer profitable for the telecommunications operators and therefore the interest for investments in this service is ceasing to exist.

The breakdown of the number of ISDN connections in the period 2004-2008 is given in Figure 23 below. The number of ISDN subscribers in 2008 was 83.9 thousand or 3% of the total number of subscribers, this being an increase of 6% in respect to 2007. More than 97% of subscribers have a basic rate access, whereas the other users have primary rate access. In view of more modern technologies being introduced, further growth of ISDN connections is not expected.

In 2008, the number of unmet requests for new fixed-line connections was around 314 thousand, this being a decrease of 10% compared with 2007. The number of malfunctions was also cut

Figure 22. Public Payphones (Thousands)

Source: RATEL

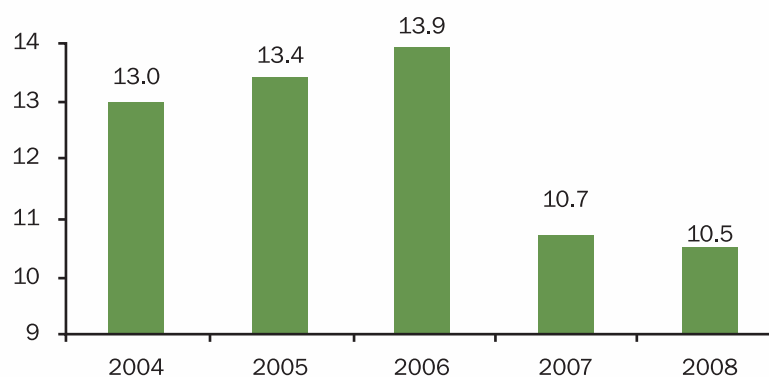
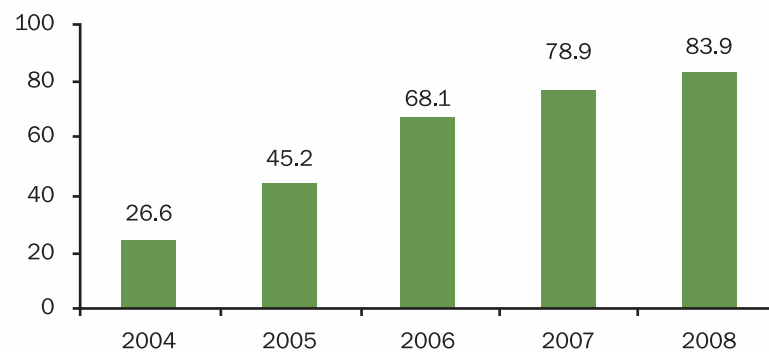


Figure 23. Total Number of ISDN Subscribers (Thousands)

Source: RATEL



down to 31.19 per 100 lines, and the percentage of malfunctions repaired within 24 hours was 61.44%.

The total fixed network traffic grew by 23% in 2008 and is estimated to 15.9 billion minutes in national traffic and 1.9 billion minutes in international traffic. As shown in Figure 25, the traffic volume varied considerably in the observed period, showing a decrease tendency in the period 2005-2007, primarily due to other types of services being offered, such as mobile network, electronic messages or VoIP.



Figure 24. Number of Requests for New Fixed-Line Connections (Thousands)

Source: RATEL

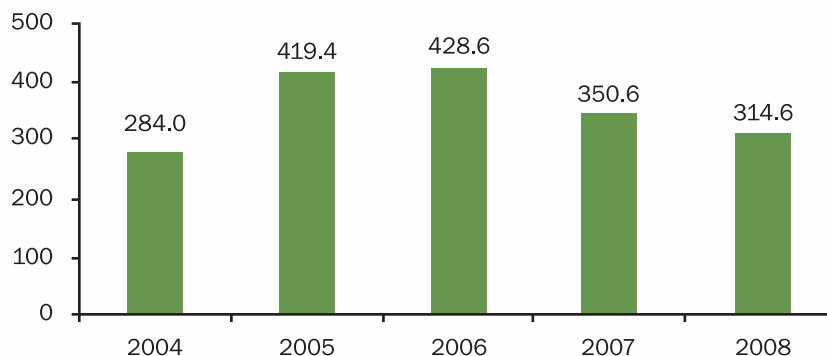
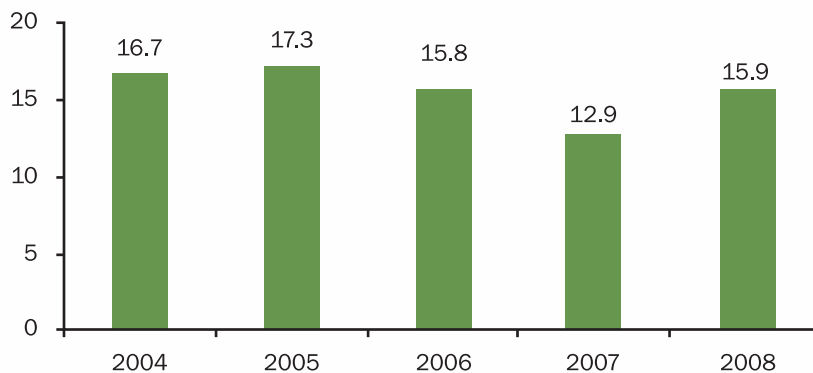


Figure 25. Total Traffic (Billion of Minutes)

Source: RATEL

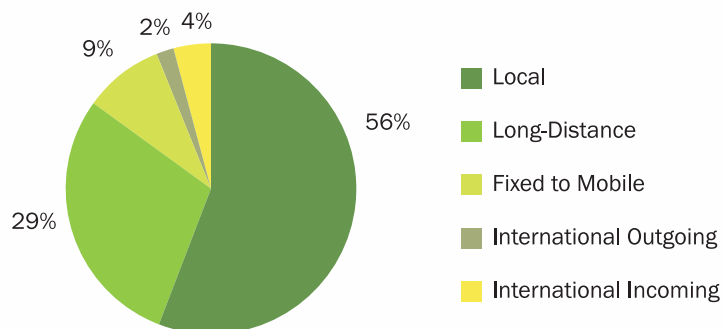


The total number of minutes of fixed network traffic is estimated on the basis of data from the exchanges where it is possible to register the consumed call units or minutes. Such data are extrapolated according to the total number of users in the network. 56% of total traffic was local traffic, and only 2% international outgoing traffic.

Compared with the previous year, the share of local traffic dropped from 69% to 56%, the share of long distance traffic grew from 10% to 29%, whereas the share of fixed-to-mobile traffic dropped

Figure 26. Distribution of Fixed Network Traffic in 2008

Source: RATEL



from 13% to 9% in 2008. The drop in fixed-to-mobile traffic is explained by the increasing number of gateways to mobile networks, implemented for company needs, generating most calls from local networks directly to mobile operators.

The international ongoing and incoming traffic kept practically the same level compared with the previous year. However, the changes in the volume may be expected in the period ahead, mainly because of the entry of VoIP operators in the fixed-line market.

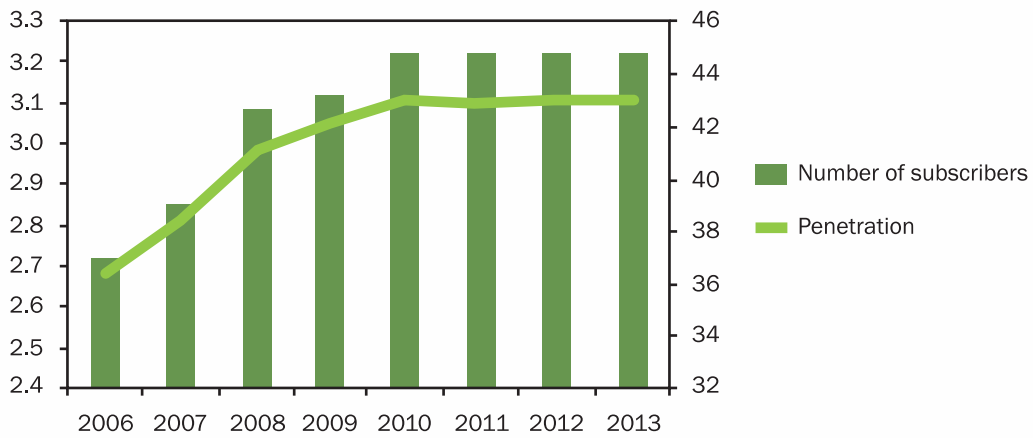
Pursuant to the Rules on terms and conditions for provision of voice transmission services over the Internet and the contents of authorization (*Official Gazette of RS*, no. 94/08), 9 authorizations for provision of voice transmission services over the Internet were granted in late 2008, and, therefore, with the entry of VoIP operators in the fixed-line market, greater competition can be expected in the period ahead. In 2008, tariff rebalance for fixed telephony was initiated and the Rules on the application of the cost-accounting principle, separate accounts and reporting of a telecommunications operator with significant market power (*Official Gazette of RS*, no. 103/08) were adopted, which should contribute to the stabilization of the prices and revenues in this market.

According to the forecasts of the Business Monitor International, in 2010 the penetration rate will reach 43%, after which a slight stagnation of public fixed telecom services is predicted to take place.



Figure 27. Projected Growth Rate Related to the Public Fixed Telecommunication Networks and Services (mn)

Source: Business Monitor International, Serbia Telecommunications Report 2009, March 2009





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4. PUBLIC MOBILE TELECOMMUNICATIONS NETWORKS AND SERVICES

Mobile market continues with a positive growth trend in 2008. The coverage rate of the public mobile networks is constantly rising, both in terms of territory and population. Meanwhile, the service usage is growing in volume, while new services based on the latest technologies are being continuously introduced.

There are three mobile operators present in the Serbian market:

- **Telecommunications company Telekom Srbija a.d. - Mobilna telefonija Srbije MTS**, owned by Public company for PTT traffic Srbija (80%) and OTE, Greece (20%) (license replaced on 01.08.2006)
- **Telenor d.o.o. Belgrade**, 100% owned by Sonofon A/S, Denmark, owned by Telenor ASA, Norway (license issued on 01.09.2006)
- **Vip mobile d.o.o. (member of Mobilkom Austria Group)**, owned by Telekom Austria Group, Austria (license issued on 01.12.2006).

Table 6. Number of Subscribers in the Past Three Years		Source: RATEL		
	2006	2007	2008	
Number of subscribers	6,643,700	8,452,642	9,618,767	
Penetration (%)	88.60	112.73	128.28	

All three operators were granted a license for public mobile telecommunications network and public mobile telecommunications network services in accordance with GSM/GSM1800 and UMTS/IMT-2000 standards, issued by the Republic Telecommunication Agency. The licenses were issued for the territory of the Republic of Serbia, for a period of 10 years, which can be extended upon the expiration for another 10 years without a special request from the operator, provided the requirements under the License are fulfilled. Vip Mobile d.o.o. was granted a license on 01.12.2006, but began operating in July 2007.



The Norwegian company Telenor has been present in the Serbian telecom market since 31 July 2006, when it had been issued a license for public mobile telecommunications network and public mobile telecommunications network services in accordance with GSM/GSM1800 and UMTS/IMT-2000 standards, in a bidding procedure. Through this procedure, Telenor bought the company Mobi63. This is the biggest direct foreign investment in Serbia so far.

Telenor d.o.o. is a member of Telenor Group, which operates throughout Europe and Asia. Telenor Group has ownership in thirteen mobile operators, which also include some of the operators in the region, namely, Panon in Hungary and Promonte in Montenegro.

In 2007 Telenor began with the commercial use of UMTS network enabling video calls and additional services based on high speed data transmission.

In 2008 Telenor built 540 new base stations.

MTS - Mobilna telefonija Srbije, as a branch of the Telecommunications Company Telekom Srbija a.d., was founded in June 1997, and in August 1998 it began to operate through a GSM standard based network. In December 2006, MTS began with the commercial operation of a 3G network with the latest HSDPA technology. During 2008, the operation of the 3G network was intensified 2008. The number of 3G network subscribers rose from 70 thousand in 2007 to approximately 490 thousand in 2008. In addition to the Serbian market, , Telekom Srbija a.d. is present as a mobile operator in Republic of Srpska and Montenegro, as well.

In 2008, Telekom Srbija a.d. built 524 new base stations.

The third licence for mobile operator was granted to Vip mobile d.o.o. Vip mobile is a member of the Mobilkom Austria Group, present in eight European countries, including the following countries in the region: Croatia, Bulgaria and Macedonia.

In addition to 320 million euros paid for the licence, during 2008 Mobilkom Austria made considerable investments in the development of infrastructure and hired a large number of professionals, thus making the biggest greenfield investment in Serbia so far.



Figure 28. Mobile operators - Telenor

Source: Telenor Srbija



Official Data

Name	Telenor d.o.o.
Head office	Belgrade
Ownership	100% Sonofon A/S
Number of employees	1205
Percentage of territory covered by GSM network signal	84.21%
Percentage of population covered by GSM network signal	93.23%
Percentage of territory covered by UMTS network signal	9.85%
Percentage of population covered by UMTS network signal	34.88%
Number of base stations	1820



Figure 29. Mobile Operators – Telekom Srbija a.d.

Source: Telekom Srbija a.d.



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Official Data

Name	Telekom Srbija a.d.
Head office	Belgrade
Ownership	80% JP PTT „Srbija“ 20% OTE, Greece
Number of employees	658
Percentage of territory covered by GSM network signal	87.54%
Percentage of population covered by GSM network signal	92.25%
Percentage of territory covered by UMTS network signal	29.50%
Percentage of population covered by UMTS network signal	55.85%
Number of base stations	1798

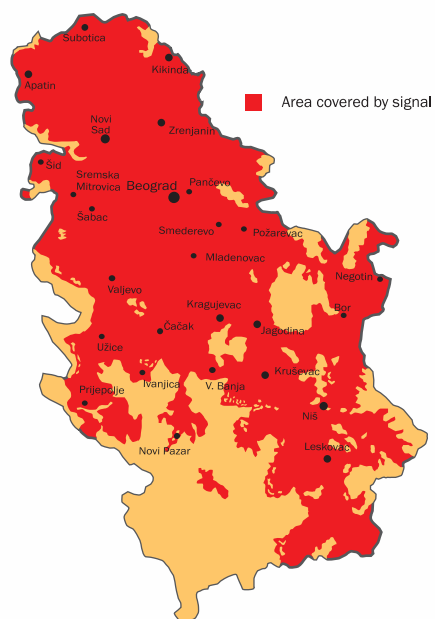


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Figure 30. Mobile Operators – Vip mobile

Source: VIP



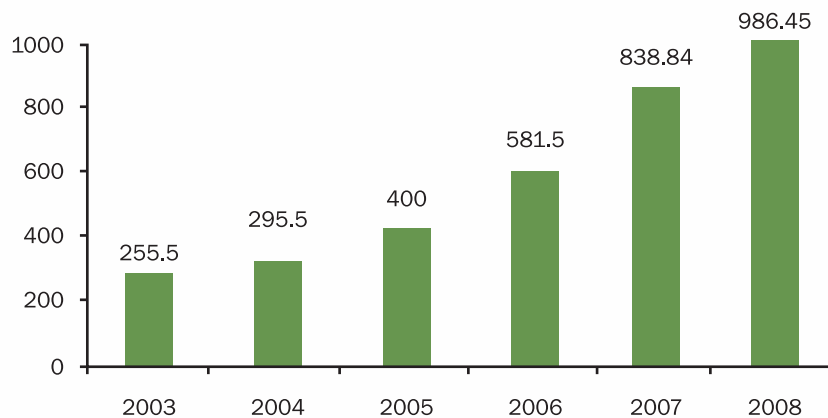
Official Data

Name	Vip mobile d.o.o
Head office	Belgrade
Ownership	100% Mobilkom Austria
Number of employees	613
Percentage of territory covered by GSM network signal	56.63%
Percentage of population covered by GSM network signal	73.90%
Percentage of territory covered by UMTS network signal	2.42%
Percentage of population covered by UMTS network signal	25.83%
Number of base stations	727



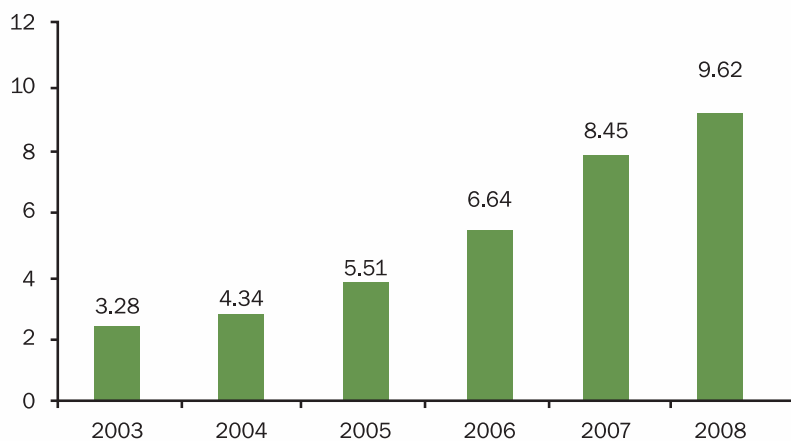
The revenues from the mobile network services in 2008 reached 986.45 million euros, this being a 9% increase in respect to 2007. (Figure 31).

Figure 31. Total Revenues from Mobile Telephony (mn euros) Source: RATEL



The total number of mobile users in 2008 grew by 16% amounting to 9,618,767, thus continuing the growth tendency of the recent years.

Figure 32. The Total Number of Mobile Users (mn) Source: RATEL



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**9.62 million
of users**



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The number of users exceeded the number of inhabitants for the second year in a row, the penetration rate in 2008 being 128.27%.

Figure 33. Mobile Penetration

Source: RATEL

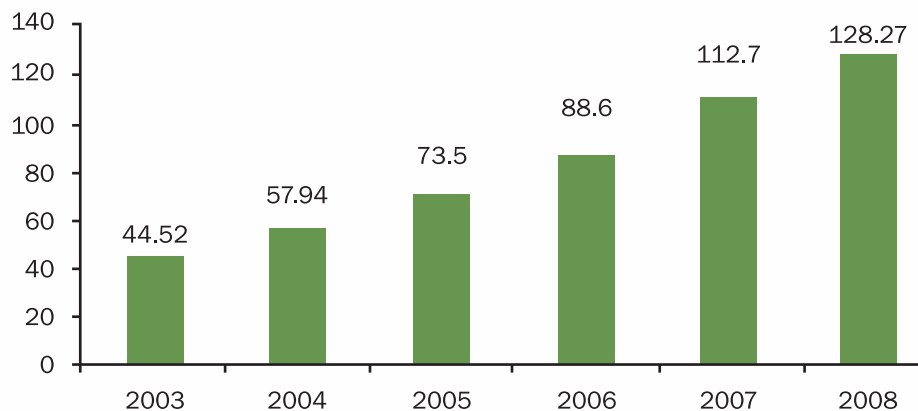
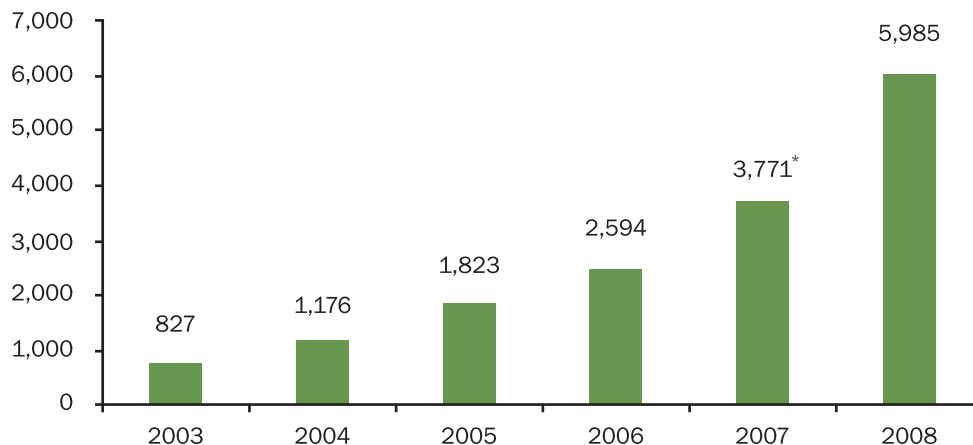


Figure 34. Total Ongoing Traffic (mn Minutes)

Source: RATEL



* The total traffic for 2007 does not include the data for Vip mobile

Along with the number of users, the total traffic in 2008 grew as well, amounting to approximately 5.9 billion minutes of calls, which is an increase of 58% compared with the previous year. Annual average of traffic per users in 2008 was 622 minutes, this being an increase of 31% in respect to 2007, when each user spent around 475 minutes, on the average, talking on the cell phone.

The number of sent SMSs i MMSs continues to grow. During 2008, each users sent 820 SMSs on the average, whereas the total number of SMSs amounted to 7.9 billion. This resulted in an increase of 76% in respect to 2007, when the total of 4.4 billion messages or 475 messages per user were sent.

In 2008, there were 21.6 million MMSs sent, which is an increase of 28.5% in respect to 2007.

Figure 35. Number of Sent SMSs/MMSs (mn)

Source: RATEL

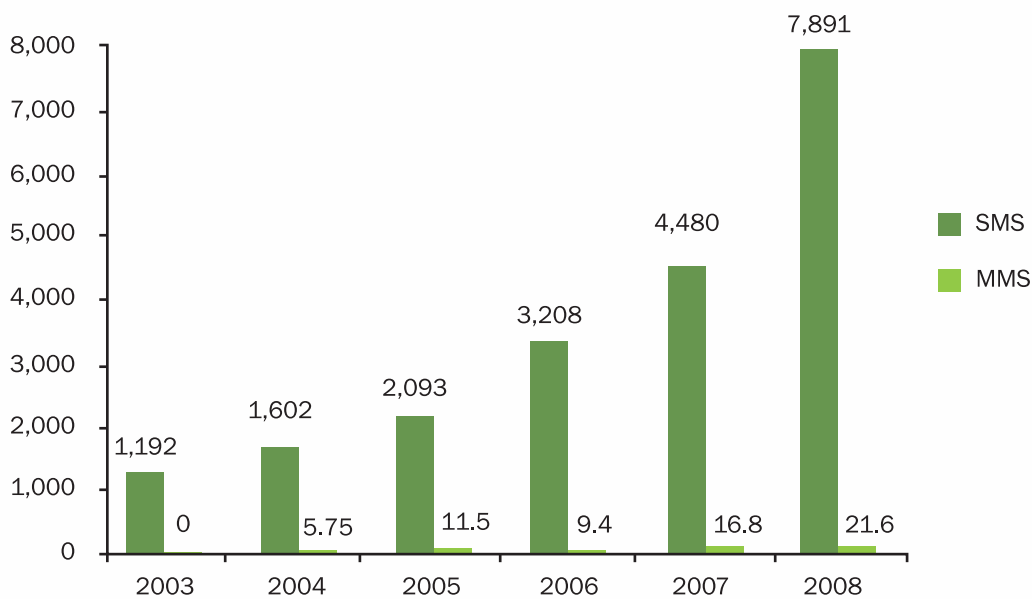
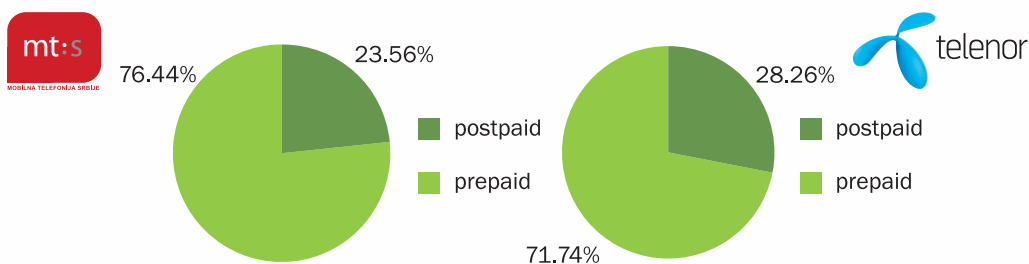




Figure 36. Prepaid/Postpaid Users by Operators *

Source: RATEL

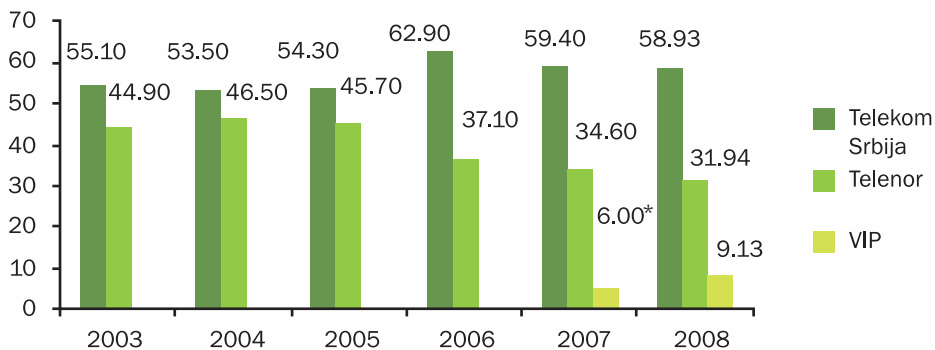


* The ratio of prepaid and postpaid users is given only for MTS and Telenor, since Vip mobile did not submit the data on the number of prepaid and postpaid users for 2008.

Figures 37 to 40 show the market share of the mobile operators in terms of the number of users, share of each operator in the total revenue and share in the total traffic.

Figure 37. Market Share in Terms of the Number of Users (%)

Source: RATEL

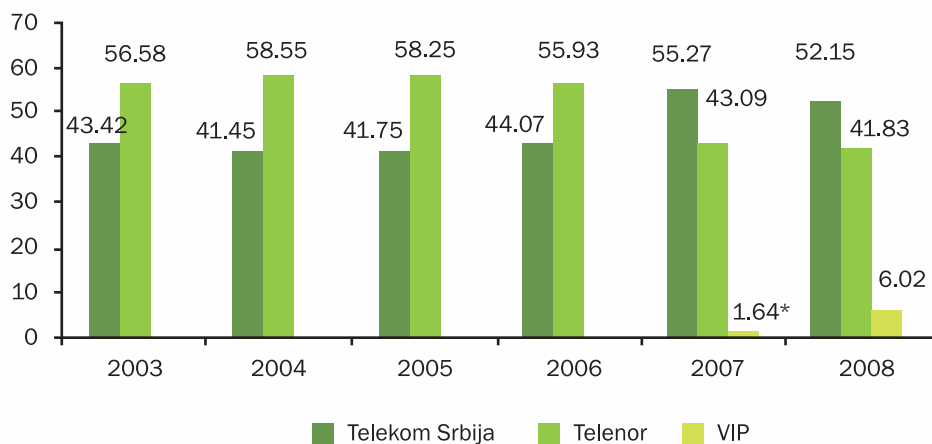


* Vip mobile began with the operation in June 2007.



Figure 38. Share in the Total Revenue from Mobile Services (%)

Source: RATEL



* Vip mobile began with the operation in June 2007.

Figure 39. Share in the Ongoing Traffic (%)*

Source: RATEL



* The total outgoing traffic for 2007 does not include the data for Vip mobile.



Figure 40. Market Share in Terms of the Number of SMS-MMS (%)

Source: RATEL



¹ The data on MMS for 2008 do not include the data for Vip mobile.

The competition in the Serbian mobile market was measured using the Herfindahl - Hirschman-Index (HHI).

HHI is an indicator used to determine the degree of concentration of a given market and it is defined as the sum of the squares of the market shares of each individual market share. Pursuant to the Telecommunications Law, the market share of the operators shall be identified by the number of users. The value of this index, in 2006, 2007 and 2008 equalled 5332, 4759 and 4684, respectively. The value of the index is decreasing every year, meaning that the competition in the mobile market is boosting, which is the result of the new entrant, the third operator, in the Serbian mobile market. The entry of Vip mobile in the Serbian mobile market has contributed to the raise of overall competition and further liberalization of this market.

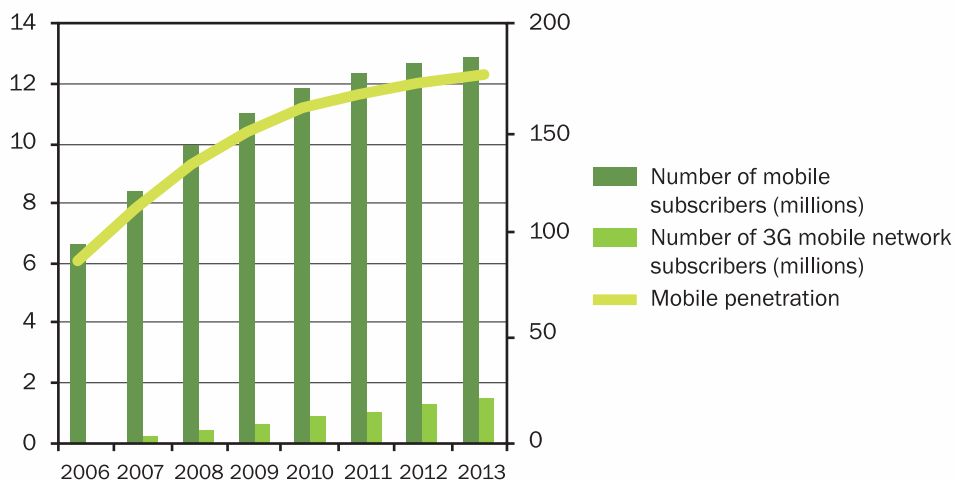
The boost of competition in this sector has positive effect on end-users. The struggle for market share leads to the cut-down in the prices of the existing services, greater investments, introduction of new technologies and the offer of new services designed to meet the needs of the end-user. The operators are providing a vast range of services to the users. These include the following: voice mail, call divert, call waiting, conference call, sending and receiving SMSs, data transmission, incoming call identification, hidden identification, regular monthly itemized bill, connection/disconnection upon request, change of tariff package, replacement of a damaged or lost SIM card, WAP, MMS service, etc. The introduction of the 3G network meant launching new services: real time video calls, video streaming, video clips, high speed Internet, etc.

Mobile market was fully liberalized in 2006, through relevant licence issuance. The sector is fully competitive, high quality services are offered, and the prices are among the lowest in Europe.

According to the survey of Business Monitor International, the expected growth for 2009 and 2010 is around 11% and 7%, respectively. The estimated penetration for 2010 is around 161%, when a significant slowdown in the growth of mobile subscribers in Serbia is expected.

Figure 41. Projected Growth Rate Related to the Mobile Telephony

Source: Business Monitor International, Serbia Telecommunications Report 2009, mart 2009





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5. INTERNET SERVICES

Internet market, in particular broadband Internet, is a rather important aspect of every society. According to various studies on the relation between the broadband Internet and GDP, carried out in the recent years worldwide, the increase in the number of broadband connections has a direct impact on the increase in GDP. Pursuant to the Strategy for the Development of Telecommunications in the Republic of Serbia in the Period from 2006 until 2010 and the pertinent Plan of Action, the Republic Telecommunication Agency has conducted a series of regulatory measures and activities which concern the development of the data transmission networks and access to high speed Internet, paying particular attention to observing the principles of technological neutrality and the increase of broadband penetration to over 10%.

As of 2005, onwards, there have been significant changes in the Internet market in the Republic of Serbia, in particular in the structure of the end-users' Internet connections and the amount of revenues made from the Internet service provision. Namely, in 2008, the number of broadband connections exceeded that of dial-up for the first time, although if the access is observed by different technologies, dial-up is still the most common technology. However, negative growth of dial-up connections in the past years indicates the growing needs of the users for easily accessible contents of a higher quality, offered by broadband access. This is further confirmed by the fact that the number of broadband connections in Serbia reached 490 thousand in 2008 (55% of the total number of Internet connections), twice as many as in 2007. The most common broadband access is ADSL, and the whole infrastructure for the access to end-user is in the ownership of Telekom Srbija a.d. In addition to the mentioned technologies, the Internet connection can be through cable modem or network developed and built by cable operators, wireless using the licence free frequency bands around 2.4 GHz and 5.8 GHz and through UMTS (3G) mobile operators' networks.

In 2008 there were 201 Internet providers in Serbia. However, in December 2008 there were exactly 197 ISPs registered in the Authorization Register, since some operators had been erased from the Register upon personal request or due to non-compliance with the obligations stipulated under the Law and the Rules on terms and conditions for the Internet services and other data



transmission services provision and on contents of authorization. ADSL access was provided by 21, cable modem access by 22, wireless access was offered by 82 and dial-up by 48 providers.

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Table 7. Number of ISPs by Access Technology

Source: RATEL

	2005	2006	2007	2008
Dial-up	34	51	60	48
Cable modem	5	9	14	22
Wireless	38	75	118	82
ADSL	12	16	23	21

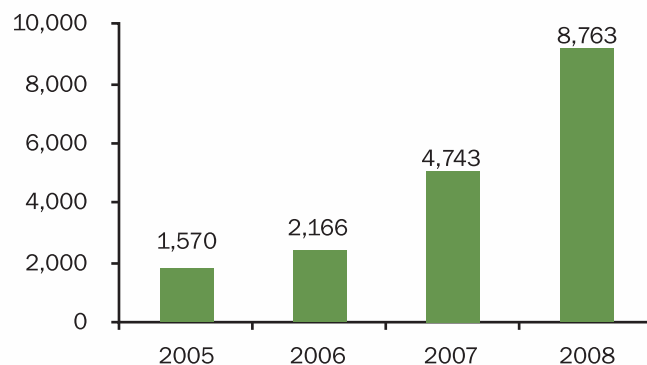
Table 8. Total Number of ISPs

Source: RATEL

	2005	2006	2007	2008
Number of ISPs	66	109	159	197

Figure 42. Revenues from the Internet in RSD Million

Source: RATEL



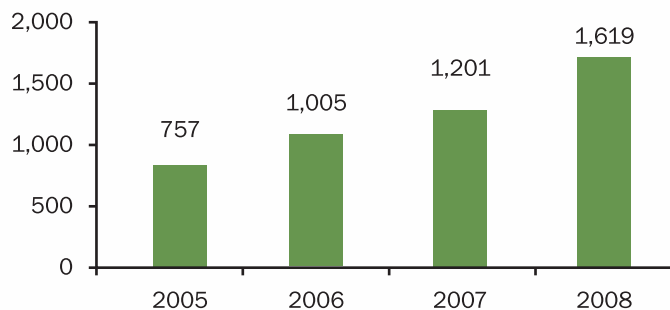
Direct consequence of the investments and business activities of the operators, and the regulatory activities of the Agency, is the constant expansion of the Serbian Internet market. This is further confirmed by the fact that the total revenues from the Internet services were almost doubled in respect to the previous year, and five times bigger in respect to 2005. However, it

remains uncertain how the new economic circumstances will affect the development and growth of the information society in the years ahead.

The total number of Internet subscribers in 2008 amounted to approximately 891 thousand. However, if we consider the availability of the Internet access or Internet services, then the total number of potential subscribers turns out to be 1.6 million, since it also includes around 738 thousand of 3G mobile network subscribers. The total number of broadband connections (without the 3G mobile network subscribers) was almost twice the number of connections in 2007, amounting to approximately 490 thousand, whereas the number of dial-up subscribers was almost reduced to half (cut down by 43%). Thus, broadband access has become dominant.

Figure 43. Number of Internet Users in Thousands*

Source: RATEL



* The total number includes 3G mobile network subscribers.

As mentioned earlier, the total number of broadband connections in Serbia in 2008 was over 490 thousand (55% of the total number of the Internet connections), which is twice as much as in 2007. There was a significant increase in the number of subscribers who access the Internet using ADSL modem, which was doubled in respect to the previous year. Also, there was a considerable growth (over 70%) in the number of subscribers having the Internet access through cable modem. It needs to be pointed out that special modems enabling the broadband Internet through 3G mobile network appeared for the first time in 2008. The total number of these subscribers amounted to 25 thousand or 5% of the total number of broadband connections.



Figure 44. Number of Users According to Access Technology

Source: RATEL

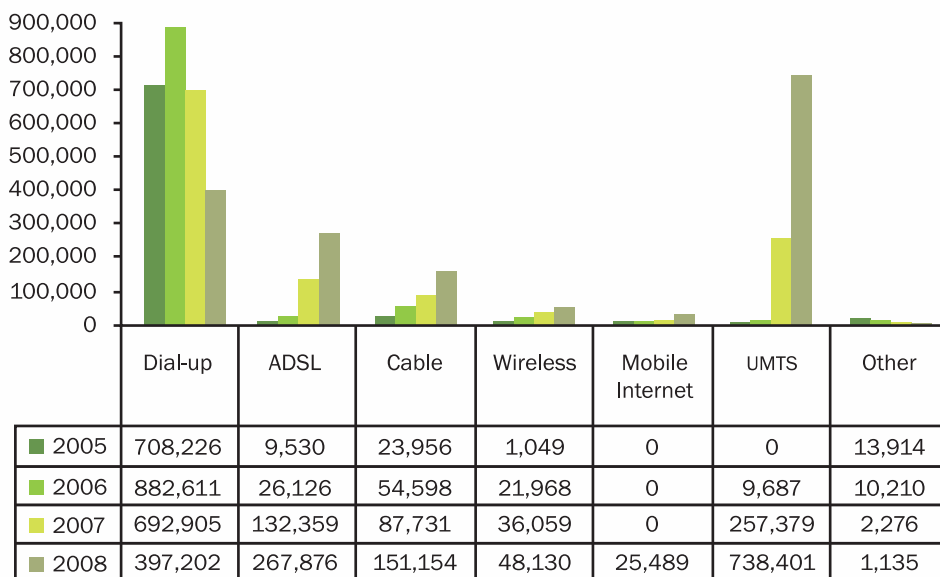
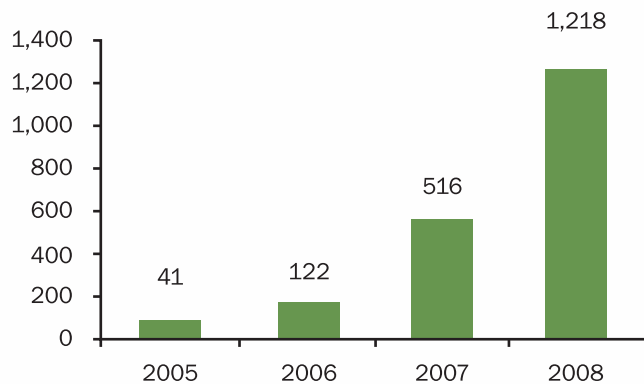


Figure 45. Number of Broadband Users in Thousands*

Source: RATEL

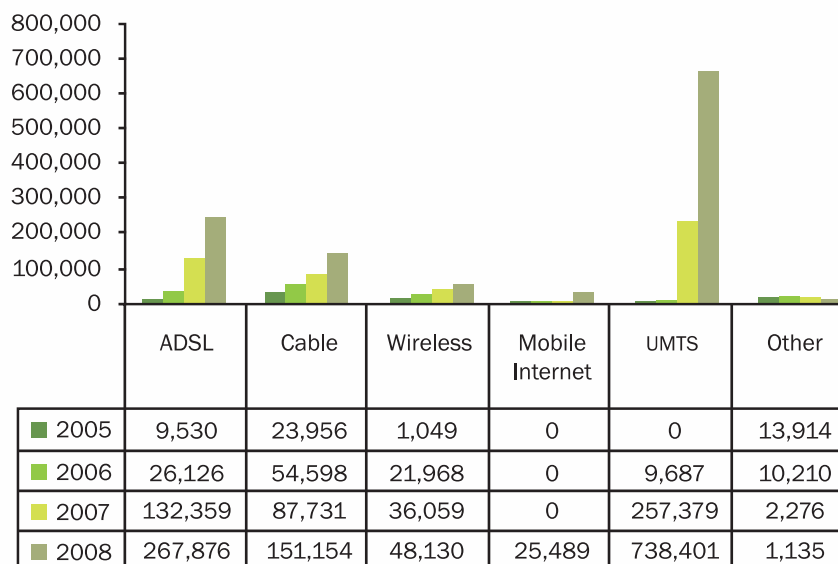


*The total number includes 3G mobile network subscribers.



Figure 46. Number of Broadband Users According to Technology

Source: RATEL



The number of Internet connections per 100 inhabitants was 21*, whereas the number of broadband Internet connections per 100 inhabitants was 16*. However, if the 3G mobile network subscribers are excluded from the total number of broadband subscribers, broadband penetration amounts to 6.57%, which is still below the average in both the South East Europe of 7.74%, and the European Union (EU 27) of 22.9%.

In the Internet sector there was an increase in the number of the Internet providers and in the number of users, in particular those with broadband access. The possibility of the Internet access is a very important element of the development of the information society.

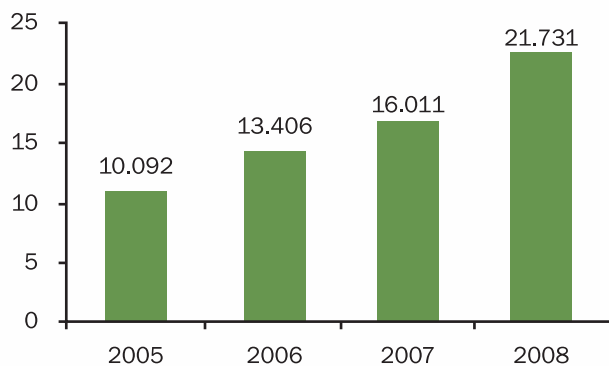
The quality of services largely depends on the chosen technology. A drastic fall in the number of dial-up users has been seen in the recent years. On the other hand, the number of users of the technologies enabling broadband Internet is constantly growing (particularly ADSL and cable).

*The calculation includes 3G mobile network subscribers



Figure 47. Internet Penetration Rate(%)*

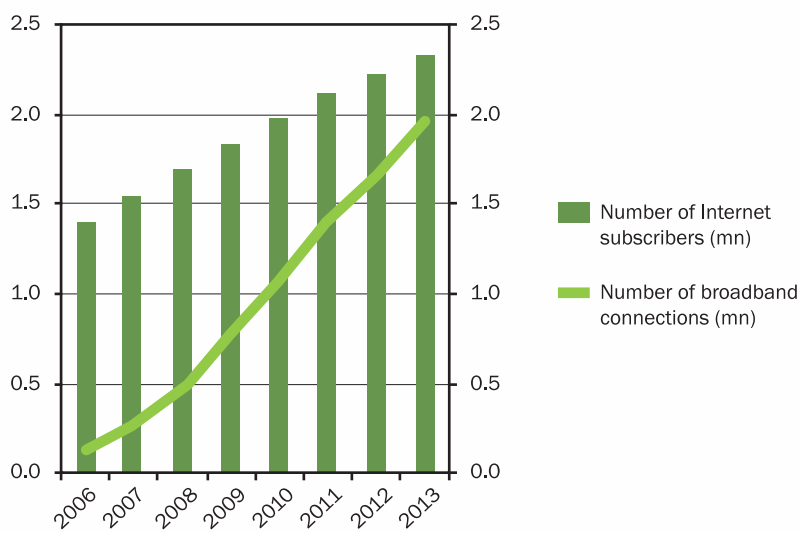
Source: RATEL



* 3G mobile network subscribers included.

Figure 48. Projected Growth Rate of the Internet Service Market (mn)

Source: Business Monitor International, Serbia Telecommunications Report 2009, March 2009





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The Internet access via 3G mobile network also deserves special interest. The number of these terminal devices is growing considerably.

Considering the constant growth of the Serbian telecom market in the past four years, a significant rise in the number of Internet connections is expected to be seen in the years ahead, which is also confirmed by the analysis and forecasts of the Business Monitor International. The number of broadband connections in Serbia is expected to reach 1.9 million by the end of 2013.

Based on the pricelist published on the ISPs' websites, it can be noted that a large number of different packages is offered, enabling different flows and different types of access to the end-user. The best selling packages in 2008 were those with downlink speeds of 512 kbps and 1024 kbps (around 174 thousand connections).

6. USAGE OF ICTs IN SERBIA

Surveys on the use of information-communication technologies by individuals, households and companies in Serbia are regularly conducted by the Statistical Office of the Republic of Serbia. In 2008 the survey was conducted by telephone (with answering rate of 98.8 %) on the sample of 2000 individuals, 2000 households and 1096 companies.

In the Republic of Serbia there are 33.2% of the households using the Internet connection, this being an increase of 6.9% in respect to 2007, which means that the growth trend in the number of households using the Internet continues. According to RATEL's data, the number of households with Internet connections was 33.5%, which corresponds to the data of the Statistical Office obtained through the poll.

According to the development level of the areas, the households using the Internet access are more frequent in the urban than in the rural areas. Nevertheless, there is a considerable rise in the number of households using the Internet both in the urban and in the rural areas, as shown in Figure 50.

The statistics demonstrate that the increase in the number of households having the Internet access is constantly growing:

- In urban areas it amounts to 41.20%, compared with 35% in 2007.
- In rural areas it amounts to 21.70%, compared with 13.70% in 2007, which confirms the necessity for new technologies to be introduced and applied in the rural areas, such as CDMA.

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*1.25 million of people
are using the computer
on a daily basis*

Figure 49. Households with Internet Access Source: Statistical Office of the Republic of Serbia

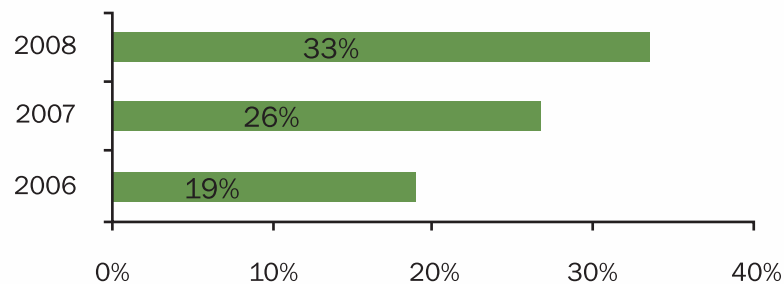
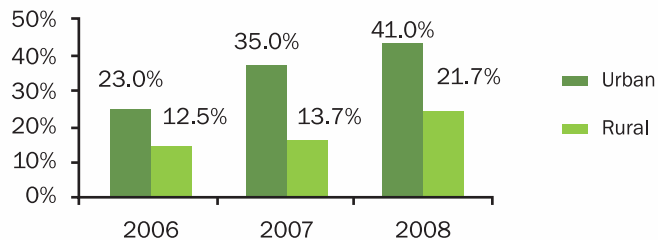


Figure 50. Percentage of the Households with Internet Connection in Urban and Rural Areas Source: Statistical Office of the Republic of Serbia



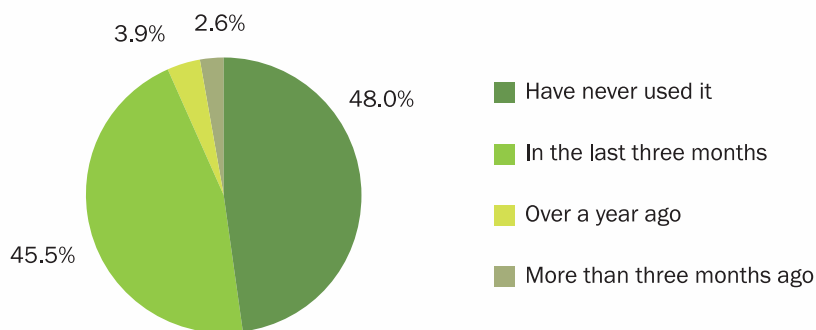
The uneven diffusion of the computers in households and the gap in using the Internet access is related to the structure of households according to the amount of monthly income. The Internet access is mainly used by the households with the monthly income of over 600 euros (76.4% in 2008), while the share of households with the income of under 300 euros is rather low (only 14.6% in 2008).

In 2008 there were 40.8% of households with the computer in the Republic of Serbia, which is an increase of 6.8% in respect to 2007. The incidence of computers in the households varies in terms of territory as follows: Belgrade 53.1%, Vojvodina 41.5% and Central Serbia 34.8%.

Figure 51 shows the usage of computers by individuals. The survey revealed an alarming result that 48.0% of the respondents who participated in the poll have never used the computer.

Figure 51. Individual Computer Use

Source: Statistical Office of the Republic of Serbia

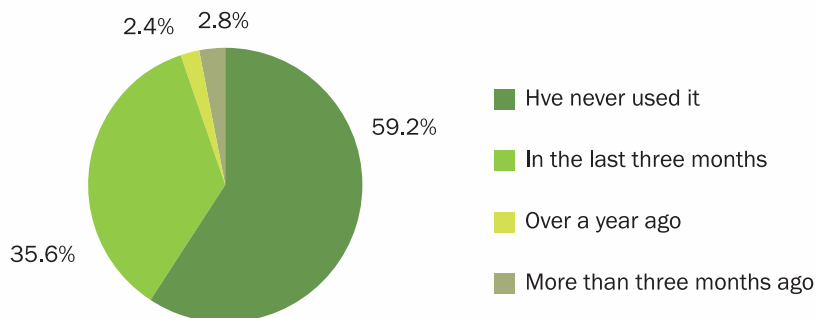


However, this is a slight improvement compared with 2007 when this percentage amounted to 5.0%. The percentage of people who used the computer in the last three months was 45.5%.

35.6% of people in Serbia used the Internet in the last three months, 2.8% of the respondents used the Internet more than three months ago and 2.4% of them over a year ago. As many as 59.2% of the respondents have never used the Internet. The obtained data clearly indicate the need for all relevant institutions to be involved in order to educate and inform the population on the possibilities and advantages of using the Internet.

Figure 52. Individual Internet Use

Source: Statistical Office of the Republic of Serbia





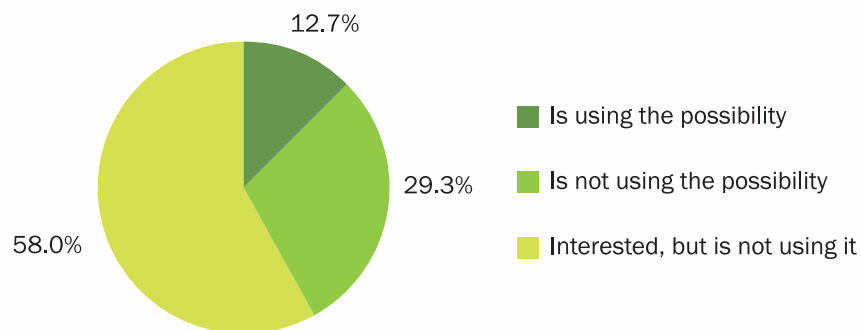
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In 2008, the number of the Internet users rose by 6.2% in respect to 2007.

Asked if they would be interested in using the Internet services of the public administration instead of personal contact, 29.3% of the respondents answered negatively and 58% expressed the interest even though they hadn't used such services. This results shows that the number of people who wish to use the Internet services of the public administration is growing, yet the remaining problem is the insufficient information on the advantages of these services, their availability and the way they can be used, along with the low level of development of the public administration services.

Figure 53. Public Administration Internet Service Use as Opposed to Personal Contact
Source: Statistical Office of the Republic of Serbia



Compared with 2007, the number of persons using the electronic services of the public administration increased by somewhat over 30,000.

Of the total number of respondents, over 62.2% of them used the Internet every day in the last three months, 29.9% used the Internet at least once a week, while the remaining 6.6% of the participants used the Internet once a month and only 1.3% at least once a year.

Over 1,250,000 persons use the Internet every day or almost every day, which is an increase of 400,000 users in respect to 2007.

Figure 54. Frequency of Individual Internet Use

Source: Statistical Office of the Republic of Serbia

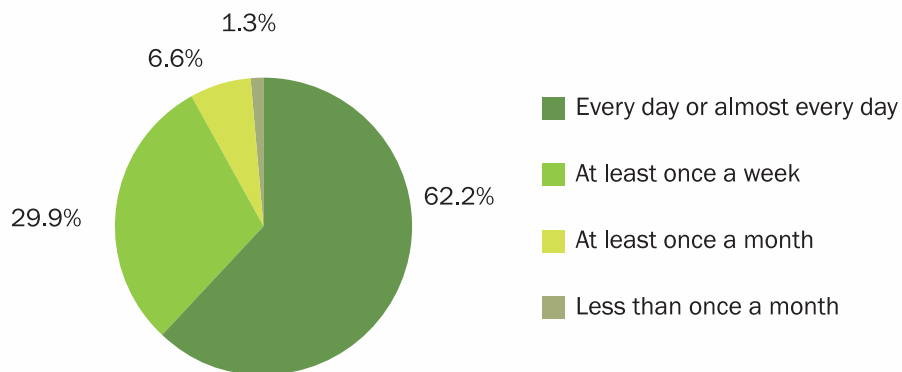
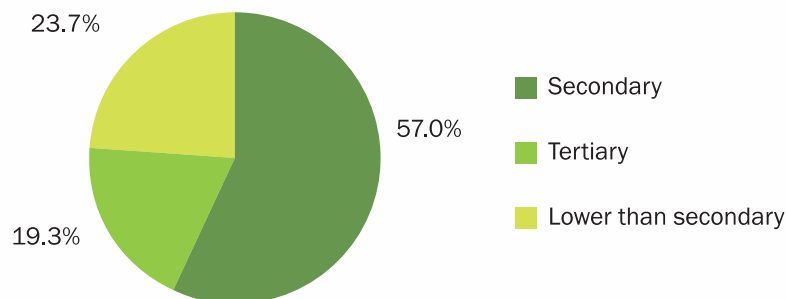


Figure 55 shows the structure of computer users according to education. Most users have secondary education (57.0%), followed by users with college or university degree (19.3%), while the remaining 23.70% of the users have education below secondary level.

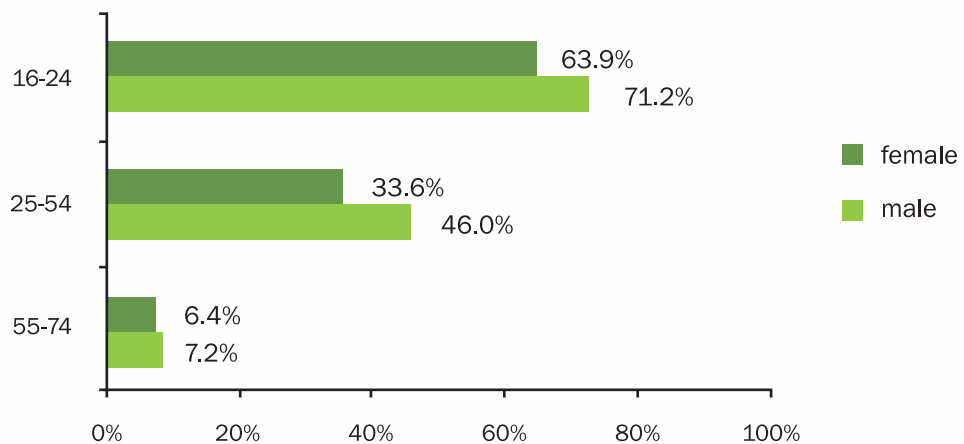
Figure 55. Structure of the Internet Users by Education

Source: Statistical Office of the Republic of Serbia



With all ages, the highest percentage of the Internet users are male, with the difference between male and female Internet users being the greatest in the 25-54 age group, unlike 2007 when the

Figure 56. Internet Use by Gender and Age Source: Statistical Office of the Republic of Serbia



largest difference occurred in the age group 16-24. Nevertheless, it can be concluded that the difference in gender among the Internet users is minimal.

The analysis of the respondents according to gender showed that there were 48.5% male and 42.4% female Internet users in the last three months.

The same as last year, during 2008 the Internet was mostly used for e-mail activities (79.90% of users), followed by obtaining information on various products and services (60.40% of users), which is a slight decrease compared with 2007. In 2008 the third place went to reading or downloading online newspapers/magazines (40.10%) unlike 2007 when 51.45% of users used the Internet for downloading games, music and images.

There is a considerable increase in the number of respondents using the Internet for obtaining the information on education, trainings or courses (29.40%), or searching study-related information (28.30%) unlike the previous year when the Internet was used for this purpose by only 6% of users. In 2008, there were around 4% less users of the Internet banking services in respect to the previous year, while the Internet was least used for selling goods and services.

The survey showed that the people are mostly using the Internet services for obtaining information, i.e. one-way communication, while the number of interactive Internet users in Serbia is still quite small.

As for the type of connection, Figure 58 shows that the modem access is decreasing, whereas faster connections, such as DSL (ADSL) and cable Internet are growing.

Figure 57. Private Internet Use (in the Last 3 Months)

Source: Statistical Office of the Republic of Serbia

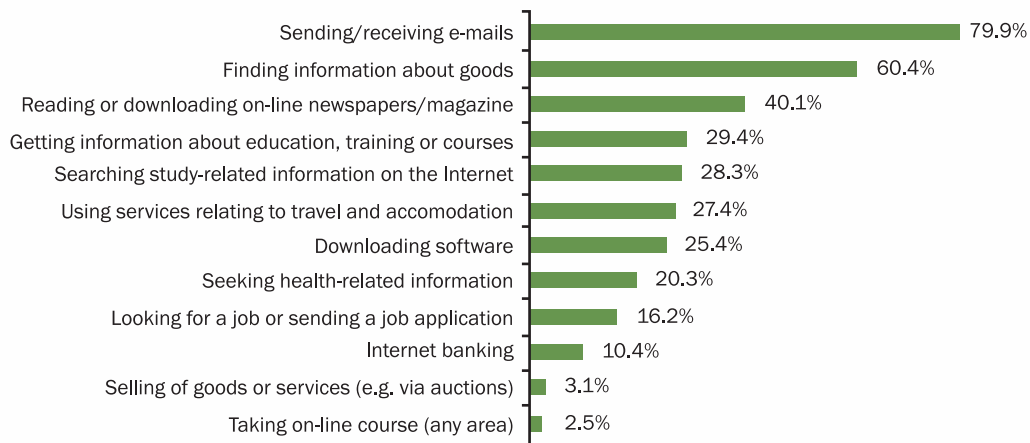
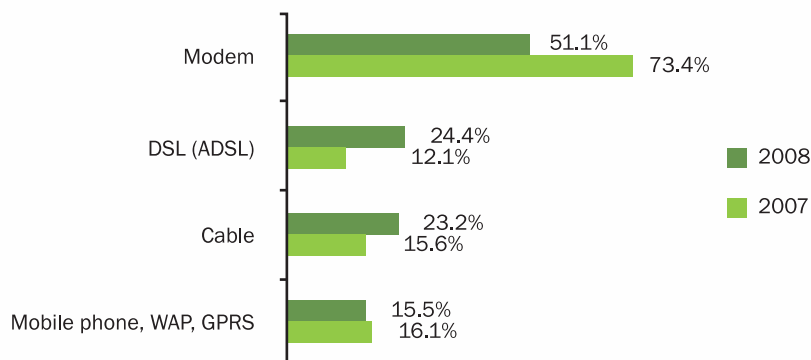


Figure 58. Type of Internet Connection

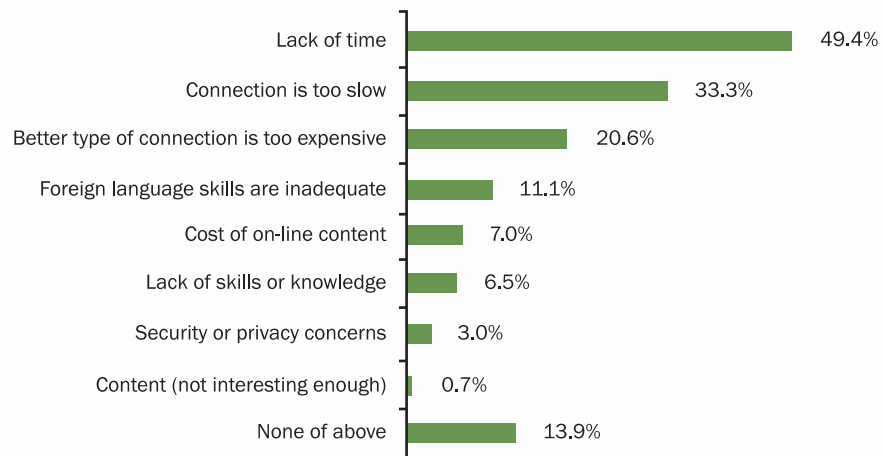
Source: Statistical Office of the Republic of Serbia



The same as in 2007, the main reason listed for not using the Internet more often was lack of time (49.4%), while 33.3% of them said that the connections were too slow. Also, 20.60% of respondents said that a better Internet connection was too expensive. The results corresponding to other answers (Figure 59) show no change in respect to 2007. The reasons for the slow connection may be found in the infrastructure that does not allow for a service of a higher quality. As for the prices of better connections, the price of ADSL connection, for instance, equals 3.05% of the average monthly salary in Serbia.

Figure 59. Reasons for Not Using the Internet More Frequently

Source: Statistical Office of the Republic of Serbia



As shown in Figure 60, there were 91.5% of companies with the Internet connection, specifically 96.8% of large enterprises, 96.1% of medium-size and 89.9% of small-size enterprises. The biggest increase of 5.1% was seen with the medium enterprises.

Figure 61 shows the purposes for which the companies use the Internet. In 2008, the companies were primarily using the Internet to make financial transactions with banks, track market parameter (price) flow and, to a lesser extent, training and further education of the employees. There was a significant increase in all three areas, primarily due to the increased number of companies with the Internet access.

Figure 60. Internet Access by Number and Company Size

Source: Statistical Office of the Republic of Serbia

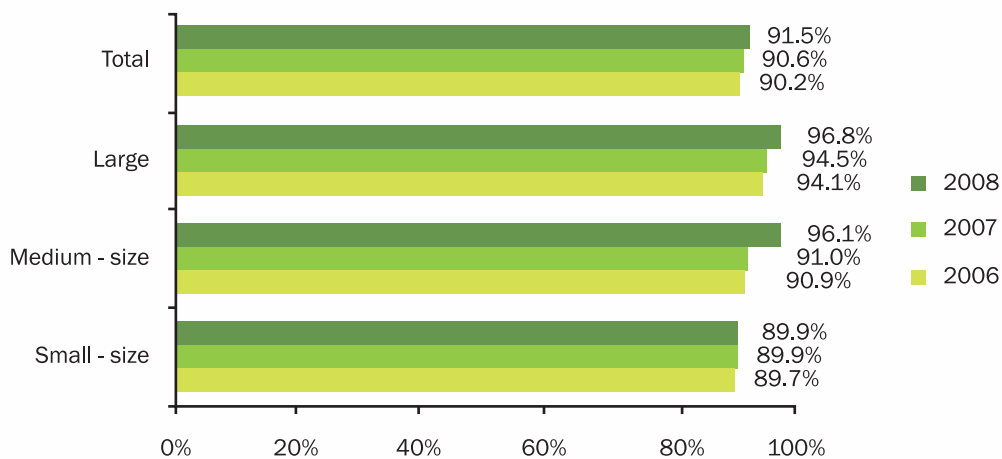


Figure 61. Purpose of Internet Use in Companies

Source: Statistical Office of the Republic of Serbia

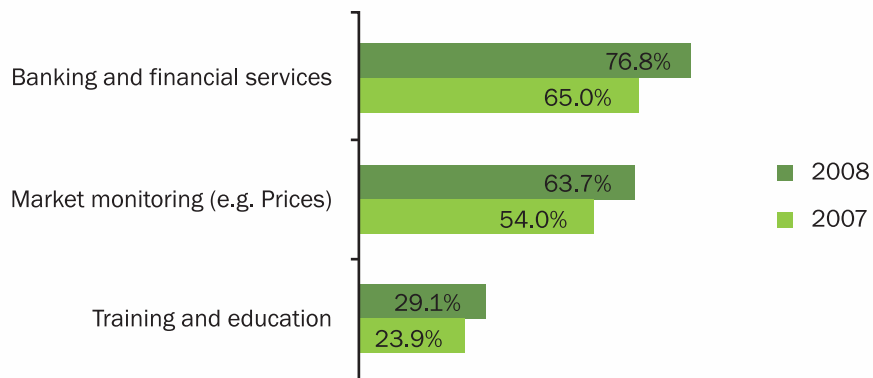


Figure 62 shows the percentage of companies with their own website. The websites are usually used for product advertising, to provide users with useful information, and making available the product catalogues, pricelists of services, while the least space is given to post-sales support.



Figure 62. Number of Companies with Their Own Website

Source: Statistical Office of the Republic of Serbia

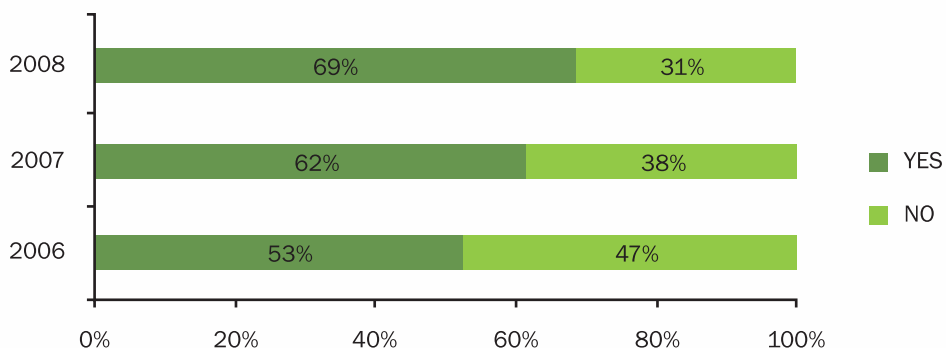
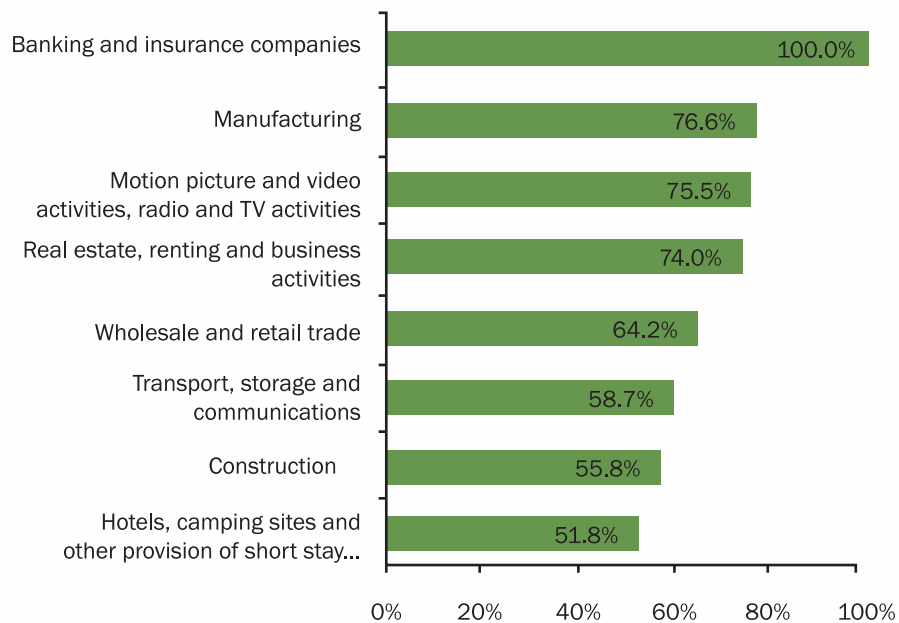


Figure 63. Percentage of Companies with Websites, According to Business Activity

Source: Statistical Office of the Republic of Serbia



7. RADIO AND TELEVISION PROGRAMME DISTRIBUTION

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In the Republic of Serbia the following services of radio and television programme distribution are offered, depending on different platforms:

- Radio and TV programme distribution via cable network (coaxial, hybrid and optical) - CATV
- Radio and TV programme distribution via satellite (Direct to Home – DTH) Radio and TV programme distribution via MMDS (Multichannel Multipoint Distribution System) and LMDS (Local Multipoint Distribution System)
- IPTV radio and TV programme distribution via IP protocols
- Radio and TV programme distribution via broadcasting systems.

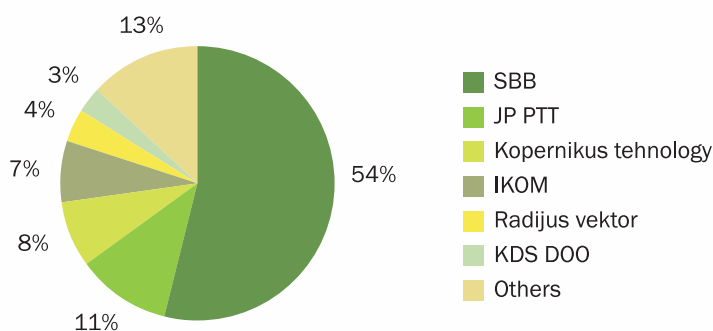
There were 79 operators registered for providing these services, the leading operator in radio and TV programme distribution in terms of the number of subscribers being the company Serbia Broadband – Srpske kablovske mreže (SBB), with the market share of 54%. Consequently, pursuant to the Law on Telecommunications and the Statutes of the Republic Telecommunication Agency (*Official Gazette of RS*, no 78/05), RATEL's Managing Board, in its session of 16 February 2007, passed the Decision on Designating the Public Telecommunication Operator with Significant Market Power for the Radio and Television Distribution via Cable Distribution Network, declaring the company SBB as the operator with significant market power. Accordingly, a special tariff regime is applied to radio and television programme distribution services and there is the obligation to apply the cost-based model in forming the prices of telecommunications services, meaning that SBB is required to observe the rules and conditions set out in the Rules on the application of the cost-accounting principle, separate accounts and reporting of a telecommunications operator with significant market power (*Official Gazette of RS*, no. 103/08) and the Telecommunications Law.



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Figure 64. Market Shares of the Leading Operators in 2008 Source: RATEL



**922 thousand
subscribers**

Beside SBB, significant players in the radio and television distribution market are companies Public Enterprise PTT – RJ KDS, Kopernikus tehnology doo, IKOM DOO, Radijus vektor doo and KDS DOO Novi Sad. In terms of the number of subscribers, the share of these operators together in 2008 was around 86%.

The total number of subscribers continues to grow, exceeding 922 thousand in 2008 (including DTH subscribers), which is 37% more compared with 2007. Most subscribers are still connected to the hybrid (HFC) network, making available broadband Internet access in addition to radio and television programme distribution. Penetration was 12%, or 37% in terms of the number of households. According to the data of the Statistical Office of the Republic of Serbia the average household has three members, so that the number of potential users of CATV is estimated to 2.7 million.

In 2008, the total revenues from radio and television programme distribution increased by 49%, amounting to approximately 5.6 billion dinars. This increase was partly the result of the growth in the number of users, and partly of the rise in the prices of radio and television programme distribution by some providers. The biggest share in the revenues from the distribution service provision goes to the revenues from monthly subscriptions.

Figure 65. Total Number of Users (Thousands)/Number of Users per 100 Inhabitants

Source: RATEL

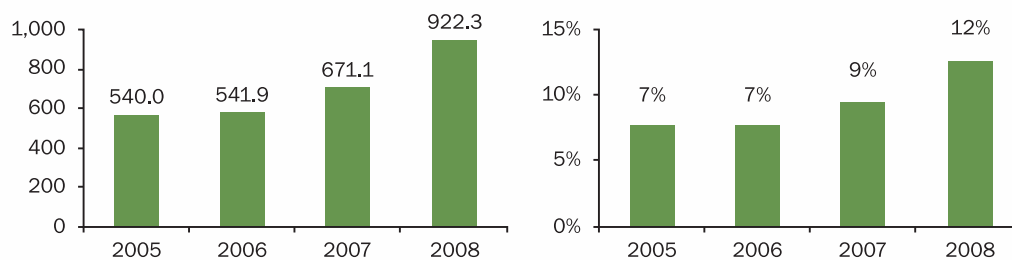
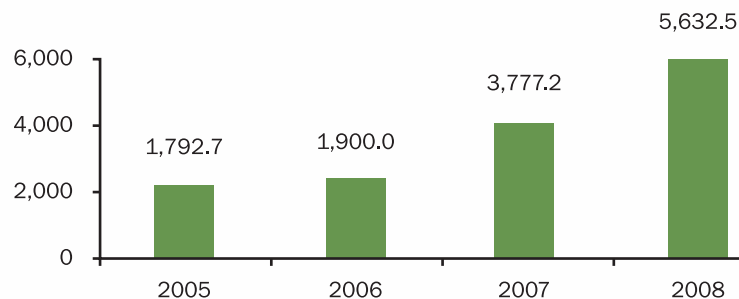


Figure 66. Increase in Cable Operators Revenue (RSD mn)

Source: RATEL

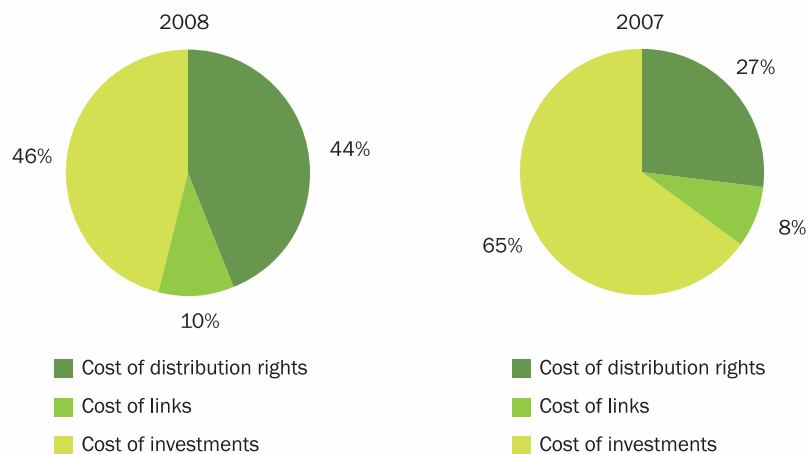


In 2008, the total costs of copyright and related rights and redistribution rights amounted to approximately 1.53 billion euros, which is an increase of 80% compared with the previous year, whereas the rights for links increased by 50%, amounting to 4.5 million euros. The total investments in the radio and television programme distribution were reduced by around 20%, amounting to approximately 19.7 million euros.

Modern cable distribution system enables the providing of services other than radio and television programme distribution. The Strategy for the Development of Telecommunications in the Republic of Serbia envisages defining technical conditions for network building and operators' work. Particular attention is given to the importance these networks have for the enhancement of competition in the area of access networks, since cable distribution system is a realistic alternative for voice transmission and the Internet access.

Figure 67. Costs Allocation (%)

Source: RATEL



Until two years ago, networks for television and radio signal transmission were using only coaxial cable technology. However, hybrid networks have become dominant in the past two years and the fact that optical cables are used for signal transmission is particularly important, since they have technical characteristics which are on a considerably higher level in respect to those of coaxial cable.

The investments of the operators in the existing networks contributed to rise in the quality of service and the number of users. It is estimated that the number of subscribers in the radio and television programme distribution market in the Republic of Serbia could grow significantly if the current investment dynamics continues. The investments would contribute to the enhancement of networks and a wider set of services offered to subscribers (cable Internet, but also the possibility for some of the cable operators to begin with the voice service provision).

The development of satellite distribution (DTH) promotes competition within the radio and television programme distribution market, since there is interest for such service not only among the users in the areas without cable ducts, but also with the users in urban areas. During 2008, draft Rules regulating the provision of this service were prepared and the adoption procedure was initiated.

8. BROADCASTING

Based upon the public tenders and decisions made by the Council of the Republic Broadcasting Agency regarding the license issuance for television and radio programme broadcasting, the Republic Telecommunication Agency issued the broadcasting station licenses to the following broadcasters:

For TV signal coverage – commercial broadcasting service for national area:			
Ord. Number	Name and seat of the radio station owner	Number of issued broadcasting station licences	Number of issued broadcasting station licences for radio/TV signal transmission
1.	DOO TV AVALA, Beograd	9	0

For radio signal coverage – commercial broadcasting service for national area:			
Ord. Number	Name and seat of the radio station owner	Number of issued broadcasting station licences	Number of issued broadcasting station licences for radio/TV signal transmission
1.	Holding kompanija „INTER SPEED“ AD, Beograd	1	0

For TV signal coverage – public broadcasting service for the area of province:			
Ord. Number	Name and seat of the radio station owner	Number of issued broadcasting station licences	Number of issued broadcasting station licences for radio/TV signal transmission
1.	Radiodifuzna ustanova Vojvodine „RADIO-TELEVIZIJA VOJVODINE“, Novi Sad	2	4

For radio signal coverage – public broadcasting service for the area of province:			
Ord. Number	Name and seat of the radio station owner	Number of issued broadcasting station licences	Number of issued broadcasting station licences for radio/TV signal transmission
1.	Radiodifuzna ustanova Vojvodine „RADIO-TELEVIZIJA VOJVODINE“, Novi Sad	3	2

For radio signal coverage– commercial broadcasting service for the area of province:

Ord. Number	Name and seat of the radio station owner	Number of issued broadcasting station licences	Number of issued broadcasting station licences for radio/ TV signal transmission
1.	NS - AS D.O.O., proizvodnja, trgovina i usluge, Novi Sad	6	0

For TV signal coverage– commercial broadcasting service for regional area:

Ord. Number	Name and seat of the radio station owner	Number of issued broadcasting station licences	Number of issued broadcasting station licences for radio/ TV signal transmission
1.	Preduzeće za informisanje „IBARSKE NOVOSTI“ AD, Kraljevo	4	0
2.	PREDUZEĆE KONZUM LAV D.O.O., Užice	5	12
3.	Akcionarsko društvo „RADIO-TELEVIZIJA ZAJEČAR“, Zaječar	5	0
4.	Društvo za proizvodnju, promet i usluge „BELPOS“ D.O.O., Vladimirci	1	2

For radio signal coverage– commercial broadcasting service for regional area:

Ord. Number	Name and seat of the radio station owner	Number of issued broadcasting station licences	Number of issued broadcasting station licences for radio/ TV signal transmission
1.	Preduzeće za trgovinu, usluge i posredovanje „MIPOS“ DOO, Beograd	1	2
2.	Informativno preduzeće „CENTAR“ D.O.O., Valjevo	1	0
3.	Akcionarsko društvo radio-televizija „KRAJINA“, Negotin	1	4
4.	Radio difuzno društvo „Radio-Televizija AS“ D.O.O., Šabac	3	4
5.	RADIO SOMBOR A.D., Sombor	1	0
6.	Akcionarsko društvo „RADIO-TELEVIZIJA ZAJEČAR“, Zaječar	1	0
7.	Informativni i marketinški centar „LUNA PRESS“ D.O.O., Užice	1	0
8.	Privredno društvo za radio difuziju i usluge „PETKAN KAN“ D.O.O., Petrovac /na Mlavi/	1	4



For TV signal coverage– commercial broadcasting service for local area:

Ord. Number	Name and seat of the radio station owner	Number of issued broadcasting station licences	Number of issued broadcasting station licences for radio/TV signal transmission
1.	Privredno društvo „RADIO TELEVIZIJA JASENICA“ Akcionarsko društvo, Smederevska Palanka	1	0
2.	Javno preduzeće „RADIO-TELEVIZIJA KRAGUJEVAC“, Kragujevac	2	2
3.	Privredno društvo za radio i televizijske aktivnosti „MOSTINFO“ D.O.O., Kuršumlija	1	2
4.	MULTIMEDIJALNI INTERNET CENTAR D.O.O., Valjevo	1	2
5.	MEDIA NS D.O.O. za turizam usluge i trgovinu, Novi Sad	1	2
6.	Javno preduzeće „RADIO-BUJANOVAC“, Bujanovac	1	0
7.	Radio difuzno društvo „Radio-Televizija AS“ D.O.O., Šabac	2	2
8.	Privredno društvo za usluge i promet eksport-import „LASTAVICA“ D.O.O., Kruševac	2	2
9.	EPARHIJA BAČKA SRPSKE PRAVOSLAVNE CRKVE, Novi Sad	1	0
10.	Javno preduzeće za informisanje „MLADENOVAC“, Mladenovac	2	4
11.	Preduzeće za radio, televiziju i marketing „TELEVIZIJA PLUS“ D.O.O., Kruševac	1	2
12.	IDEALLE TEAM D.O.O., Lebane	2	0
13.	Društvo za proizvodnju i emitovanje radio i televizijskog programa „RTV ALDI“ D.O.O., Preševo	2	2
14.	JET COMPANY D.O.O., Kikinda	1	2
15.	Javno preduzeće „RADIO TELEVIZIJA VRNJAČKA BANJA“, Vrnjačka Banja	2	2
16.	Privatno preduzeće za radiodifuziju radio televizija „PAHULJICA“ D.O.O., Zlatibor	1	2
17.	Preduzeće za produkciju i promet „PEK-TON“ D.O.O., Kučevo	2	0
18.	Društvo sa ograničenom odgovornošću za proizvodnju i trgovinu „BRAZDA GROUP“, Novi Sad	1	2
19.	Društvo za televizijske aktivnosti KLISURA PRODUKCIJA D.O.O., Grdelica	1	2



20.	Preduzeće za telekomunikacije, kablovske, zemaljske i satelitske sisteme K.T.L. D.O.O., Loznica	1	2
21.	Javno novinsko-izdavačko, radio-difuzno i TV preduzeće „REČ RADNIKA“, Aleksinac	2	2
22.	TELEVIZIJA „LOGOS“ EPARHIJE ŽIČKE SRPSKE PRAVOSLAVNE CRKVE, Trstenik	2	2
23.	Asocijacija udruženja i nevladinih organizacija „RTV NIŠAVA“, Niš	2	0
24.	Preduzeće za radio, televiziju i marketing „ALFA PRODUKCIJA“ D.O.O., Užice	1	2
25.	RADIO TELEVIIZIJA KURŠUM D.O.O., Kuršmlija	1	2
26.	Društvo sa ograničenom odgovornošću „PERICA EKSPORT-IMPORT“, Jagodina	1	2
27.	Javno preduzeće za informisanje sa P.O. „RADIO TELEVIIZIJA SOKOBANJA“, Sokobanja	1	2
28.	Udruženje građana „Forum žena Prijepolja“, Prijepolje	1	4
29.	Preduzeće za informisanje i marketing „STUDIO MAG“ D.O.O., Obrenovac	2	2
30.	Preduzeće za reklamu, usluge i TV program „JEFIMIJA“ D.O.O., Kruševac	1	2
31.	Javno preduzeće „RADIO TELEVIIZIJA BRUS“, Brus	2	2
32.	Akcionarsko društvo „INFORMATIVNI CENTAR“, Priboj	2	4
33.	D.O.O. za radio i televiziju „RTV KLADOVO“, Kladovo	1	2
34.	Javno informativno preduzeće radio televizija „CARIBROD“, Dimitrovgrad	2	2
35.	Javno preduzeće za informativnu delatnost „RADIO-TELEVIZIJA OPŠTINE KOVAČICA“, Kovačica	2	0
36.	BANKER D.O.O., Niš	2	0
37.	Društvo sa ograničenom odgovornošću „LASER VISION“ D.O.O., Svrlijig	1	2
38.	RADIO TELEVIIZIJA „SUNCE“ D.O.O., Arandelovac	2	4
39.	Preduzeće za radio i televizijske aktivnosti i usluge „EMINENT“ D.O.O., Ljubovija	3	4
40.	Javno preduzeće za radio i televizijsku delatnost „NIŠKA TELEVIIZIJA“, Niš	1	2

41.	Preduzeće za proizvodnju, trgovinu i usluge „RUF“ D.O.O., Petrovac /na Mlavi/	2	2
42.	RTV GOLJIJA D.O.O., Ivanjica	1	2
43.	Nezavisna televizija „TV 017“ D.O.O., Vranje	1	2
44.	Javno radiodifuzno preduzeće regionalna radiotelevizijska stanica „RTV PANČEVO“, Pančevo	1	0
45.	RADIO TELEVIZIJA „VG-4“, Knjaževac	2	2
46.	Privredno društvo za proizvodnju i emitovanje radio i televizijskog programa „GRM“ AD, Gornji Milanovac	1	2
47.	O.D. za emitovanje radio i televizijskih programa Timotijević Žarko i dr „SEZAM“, Bor	2	2
48.	Javno informativno preduzeće „NOVI PUT“, Jagodina	1	2
49.	RADIO-TELEVIZIJA „34M“ D.O.O., Kragujevac	1	0
50.	K 9 D.O.O. ZA MARKETING RADIO I TELEVIZIJU, Novi Sad	1	2
51.	Radio i televizija „KANAL-M“ društvo sa ograničenom odgovornošću, Paraćin	2	2
52.	SUBOTICA, FOND PANONIJA, Age Mamuzića 11, Subotica	1	2
53.	Društvo sa ograničenom odgovornošću „P KANAL“, Pirotd	1	2
54.	Preduzeće „TANUKI“ D.O.O., Priot	2	4
55.	JAVNO INFORMATIVNO PREDUZEĆE INFORMATIVNI CENTAR, Tutin	1	2
56.	Privredno društvo za proizvodnju i emitovanje TV programa „TELEVIZIJA LESKOVAC“ AD, Leskovac	1	2
57.	D.O.O. za informisanje i izdavačku delatnost „MEDIJA CENTAR“, Odžaci	1	2
58.	RADIO TELEVIZIJA VALJEVO - KRONIK D.O.O., Valjevo	1	2
59.	Radio televizija „PRIMA INTERNACIONAL“ D.O.O., Bajina Bašta	2	4
60.	Društvo za proizvodnju, promet i usluge „GMC – TRADE“ D.O.O., Lazarevac	1	2
61.	JAVNO PREDUZEĆE TELEVIZIJA POŽEGA, Požega	1	2
62.	Društvo sa ograničenom odgovornošću „RTV 5“, Niš	2	2
63.	Radio televizija „STANKOM“ D.O.O., Beograd	1	0

64.	Radiotelevizija „M“ D.O.O., Sremska Mitrovica	1	2
65.	TELEVIZIJA PETROVEC D.O.O., Bački Petrovac	1	0
66.	Javno preduzeće „TELEVIZIJA BLACE“, Blace	1	2
67.	Javno preduzeće gradski informativni centar „APOLO“, Novi Sad	1	2
68.	Društvo sa ograničenom odgovornošću „FOLK – DISK“, Salaš	2	4
69.	Javno preduzeće za informisanje „VRBAS“, Vrbas	1	2
70.	SPEKTAR EXPORT IMPORT I MARKETING D.O.O., Sombor	1	2
71.	Privredno društvo za radio i televizijske aktivnosti „MOSTNET RTV“ D.O.O., Prokuplje	2	2
72.	Preduzeće za izdavačku delatnost radio i televiziju „MELOS“ D.O.O., Kraljevo	2	2
73.	Ustanova „CENTAR KULTURE BOSILEGRAD“ sa P.O., Bosilegrad	2	2
74.	Javno preduzeće „REGIONALNA TELEVIZIJA VALJEVO“, Valjevo	1	2
75.	Akcionarsko društvo „DISKOS“ za izdavanje i proizvodnju nosača zvuka i slike, Aleksandrovac (kruševački)	2	2
76.	Televizija „GALAKSIJA 32“ D.O.O., Čačak	1	2

For radio signal coverage– commercial broadcasting service for local area:

Ord. Number	Name and seat of the radio station owner	Number of issued broadcasting station licences	Number of issued broadcasting station licences for radio/TV signal transmission
1.	Ortačko društvo za iznajmljivanje i distribuciju filmova „IBM“ Marković Milorad i drugi, Kraljevo	1	0
2.	Ustanova informativni centar „BACSKY PETROVEC“, Bački Petrovac	1	0
3.	Preduzeće za radio i televiziju, produkciju „RADIO PULS“ D.O.O., Despotovac	1	2
4.	Preduzeće za usluge i trgovinu „SOKO GROUP“ D.O.O., Beograd	1	2
5.	Preduzeće za informisanje „IBARSKE NOVOSTI“ AD, Kraljevo	1	0

6.	INVITEM D.O.O., Kać	1	0
7.	Preduzeće za proizvodnju, trgovinu i usluge „REFREF“ D.O.O., Novi Pazar	1	0
8.	D.O.O. „RADIO-ADA“ Preduzeće za emitovanje radio programa, Ada	1	0
9.	RADIO DONJI SREM D.O.O., Pećinci	1	2
10.	Javno preduzeće „RADIO LESKOVAC“, Leskovac	1	2
11.	Javno informativno preduzeće „IVANJIČKI RADIO“, Ivanjica	1	2
12.	Privredno društvo „RADIOMAX“ D.O.O., Zlatibor	1	2
13.	Preduzeće za radio i televizijske delatnosti „M&DJ COOL“ D.O.O., Beograd	1	0
14.	Privredno društvo za inženjering, trgovinu i usluge „ELIPSA“ O.D., Kraljevo	1	0
15.	Preduzeće za proizvodnju, promet i usluge „LOTEL“ D.O.O., Loznica	1	2
16.	Javno preduzeće za informisanje „RADIO LAZAREVAC“ sa potpunom odgovornošću, Lazarevac	1	0
17.	Ortačko društvo za proizvodnju, radio-difuziju i trgovinu „SPEKTAR PLUS“ O.D., Trgovište	1	4
18.	D.O.O. „RADIO 9“, Kragujevac	1	2
19.	Preduzeće za proizvodnju, promet i usluge „M“ O.D., Vranje	1	2
20.	Privatno društvo sa ograničenom odgovornošću „IMPRES“, Bačka Topola	1	0
21.	D.O.O. za promet i usluge „96“, Čačak	1	0
22.	Javno informativno preduzeće „BAČKA TOPOLA“, Bačka Topola	1	0
23.	RADIO-STUDIO NEŠVIL Privredno društvo za proizvodnju, promet i informacije D.O.O., Bogatić	1	0
24.	Privredno društvo za radio-televizijske aktivnosti „RADIO DEDAL“ D.O.O., Leštane	1	0
25.	Društvo sa ograničenom odgovornošću „IN RADIO“, Novi Sad	1	0
26.	EPARHIJA BAČKA SPC-CRKVENA OPŠTINA BAČKA PALANKA, Dositejeva 1, Bačka Palanka	1	0



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TELECOM MARKET IN THE
REPUBLIC OF SERBIA
IN 2008

27.	Radio difuzno društvo „BRAVO PLUS“ D.O.O., Kragujevac	1	2
28.	Privredno društvo „BOOM93“ D.O.O., Požarevac	1	2
29.	Javno preduzeće radio stanica „DESPOTOVAC“, Despotovac	1	0
30.	RADIO DRINA D.O.O., Mali Zvornik	1	2
31.	Preduzeće za promet usluge i telekomunikacije i marketing „RADIO-VLADIMIRCI“ D.O.O., Vladimirci	1	2
32.	Privredno društvo za proizvodnju i usluge „RENOAR“ D.O.O., Požarevac	1	0
33.	Proizvodno, trgovinsko i uslužno preduzeće „TEHNIKA PLUS“ D.O.O., Lučani	1	0
34.	D.O.O. za emitovanje radio programa „PANDA RADIO“, Kanjiža	1	0
35.	Preduzeće za usluge „ATLETICO“ O.D., Šid	1	2
36.	RADIO ACTIVE Društvo sa ograničenom odgovornošću, Bečej	1	0
37.	Preduzeće za uslužnu i informativnu delatnost „BUBAMARA“ D.O.O., Svrlijig	1	0
38.	Društvo sa ograničenom odgovornošću „ZOGAKS“, Gornji Milanovac	1	0
39.	Društvo za telekomunikacije, trgovinu i usluge „ASTERIAS“ D.O.O., Novi Kneževac	1	2
40.	Informativno-marketinško društvo „VESTI“ A.D., Užice	1	0
41.	Javno informativno preduzeće „RADIO ČAČAK“, Čačak	1	2
42.	EPARHIJA MILEŠEVSKA SRPSKE PRAVOSLAVNE CRKVE, Prijepolje	1	0
43.	Uslužno trgovinsko preduzeće „SITI“ D.O.O., Svilajnac	1	0
44.	Preduzeće za radio i televiziju „RADIO ANTENA 037“ OD Dejan Milenković i dr., Kruševac	1	0
45.	Društvo sa ograničenom odgovornošću za telekomunikacije „IN MAX“, Vršac	1	0
46.	Društvo sa ograničenom odgovornošću za marketing, trgovinu i usluge „STUDIO DŽOKER“, Čačak	1	0
47.	Javno preduzeće za informisanje, izdavaštvo i marketing „RTV PRUGA“, Lajkovac	1	2
48.	Trgovinsko preduzeće „GEDZA PETROL“ D.O.O., Negotin	1	0

49.	Preduzeće za radiodifuznu delatnost „RADIO LIM“ D.O.O., Priboj	1	2
50.	Radiodifuzno preduzeće „021“ društvo sa ograničenom odgovornošću, Novi Sad	1	2
51.	Preduzeće za proizvodnju, promet i usluge „KLIK – KOMERC“ D.O.O., Arilje	1	2
52.	PANOVIZIJA D.O.O., Vršac	1	2
53.	RADIO TELEVIZIJA „ČETIRI S“ D.O.O., Bojnik	2	2
54.	Preduzeće za radiodifuznu delatnost „TODORVIĆ I DRUGI“ O.D., Lozovik	1	0
55.	Ustanova za kulturu, informisanje i obrazovanje, Kulturno-informativni centar „MLADOST“, Futog	1	0
56.	RADIO SRBOBRAN D.O.O. za informisanje, Srbobran	1	2
57.	Javno preduzeće za informisanje i kulturu „BARAJEVO“, Barajevo	1	2
58.	Dom kulture „ABDULA KRAŠNICA“, Preševo	1	2
59.	Radio-novinsko javno preduzeće „PARAĆIN“, Paraćin	1	2
60.	Preduzeće za proizvodnju, trgovinu i usluge „RADIO AMARO“ D.O.O., Sjenica	1	0
61.	D.O.O. RTV. EKOS-LE, Vlasotince	1	2
62.	ANI PRESS D.O.O., Piroć	1	2
63.	Društvo sa ograničenom odgovornošću „RADIO SAJAM“, Novi Sad	1	2
64.	RADIO ĐERDAP AD KLADOVO, Kladovo	1	2
65.	Javno informativno preduzeće „RADIO VALJEVO“, Valjevo	1	2
66.	Društvo ljubitelja rumunske muzike i kulture „VICTORIA“, Vršac	1	2
67.	Privredno društvo “RADIO GALEB” D.O.O., Veliko Gradište	1	0
68.	ARNOVLJEV SLOBODAN I ORTAK O.D. za usluge, trgovinu i eksport-import, Novi Kneževac	1	0
69.	IZDAVAČKA I INFORMATIVNA USTANOVA „GLAS“, Niš	1	0
70.	Javno preduzeće „Radio i televizije Trstenik“ sa P.O., Trstenik	1	0

71.	Radio stanica „NO LIMIT RADIO“, Senta	1	0
72.	Javno radiodifuzno i TV preduzeće „PETROVAC NA MLAVI“, Petrovac /na Mlavi/	1	0
73.	Preduzeće za proizvodnju elektronskih uređaja i usluge „FREERADIOLINK“ D.O.O., Niš	1	0
74.	Radio difuzno preduzeće „EMA“ Trajković Oliver i ortaci O.D., Božnjevac, Bujanovac	1	0
75.	RADIO 5 D.O.O. za radio-difuznu delatnost, Novi Sad	1	0
76.	EPARHIJA ŠUMADIJSKA SRPSKE PRAVOSLAVNE CRKVE, Kragujevac	1	0
77.	Javno preduzeće kulturno-informativni centar „BELA PALANKA“, Bela Palanka	1	0
78.	Preduzeće „CITY RADIO“ O.D. Kocić Dragan, Niš	1	2
79.	Javno preduzeće „RADIO SUBOTICA“ SZSBADKAI RADIO KOZVALLALAT T.F, Subotica	1	2
80.	Preduzeće za usluge i informisanje „EKTRAN“ O.D. Enver Islamović i dr., Novi Pazar	1	2
81.	RADIO TELEVIZIJA MAJDANPEK A.D., Majdanpek	2	2
82.	STARA ČARŠIJA OD, Čuprija	1	2
83.	RTV „M PLUS“ Društvo sa ograničenom odgovornošću, Mladenovac	1	0
84.	Preduzeće za informativne usluge „JABUČJE“ D.O.O., Ljubovija	1	0
85.	Preduzeće za radiodifuziju i telekomunikaciju „BUS“ društvo sa ograničenom odgovornošću, Kovin	1	2
86.	AKORD D.O.O. Preduzeće za trovinu i posredovanje, Subotica	1	0
87.	Javno preduzeće „RADIO ČIĆEVAC“, Čićevac	1	2
88.	RADIO SMEDEREVO Društvo sa ograničenom odgovornošću, Smederevov	1	2
89.	RADIO PRAVOSLAVNE EPARHIJE VALJEVSKE „ISTOČNIK“, Valjevo	1	0
90.	Kulturno informativni centar „LUKIJAN MUŠICKI“, Temerin	1	0
91.	Informativno-izdavački centar Katoličke crkve „RADIO MARIJA“, Plandište	1	2

92.	Društvo za radio i difuziju „TIM RADIO“ D.O.O., Prnjavor /Mačvanski/	1	0
93.	Preduzeće za radiodifuziju i marketing „RADIO SAN“ D.O.O., Užice	1	0
94.	Radiodifuzno društvo „RSG MEDIA GROUP“ D.O.O., Kragujevac	1	0
95.	FAST RADIO D.O.O., Niš	1	0
96.	SURDULIČKA RADIO TELEVIZIJA D.O.O., Surdulica	1	2
97.	EPARHIJA BAČKA SPC-CRКVENA OPŠTINA SOMBOR, Veljka Petrovića 1, Sombor	1	0
98.	Akcionarsko društvo „RADIO TV PODRINJE“, Loznica	2	0
99.	RADIO LJUBOVILJA Društvo za informisanje i radiodifuznu , delatnost sa D.O.O., Ljubovilja	1	2
100.	RTV Produkcija i marketing „UB-KOMPANI“ D.O.O., Beograd	1	0
101.	Preduzeće za zanatske usluge, ekonomsku propagandu, reklamu i marketing „BULAT M.PRESS“ DOO, Ub	1	2
102.	Preduzeće za proizvodnju promet i usluge i eksport-import „GOGY“ OD Goran Avramović i drugi, Gornji Milanovac	1	2
103.	PLANETA 21000 DOO za proizvodnju i emitovanje radio i TV programa eksport-import i usluge, Novi Sad	1	2
104.	Privredno društvo „ELEK GARIĆ“ D.O.O., Jagodina	1	2
105.	Preduzeće za usluge, promet i proizvodnju „BEMIN MJUZIKL 93“ Branko Jerković i ostali O.D., Arilje	1	0
106.	Preduzeće za radio i TV aktivnosti trgovinu i ugostiteljstvo „RADIO 216“ D.O.O., Banatsko Karađorđevo	1	0
107.	Društvo sa ograničenom odgovornošću „RADIO-OPANAK“, Mionica	1	0
108.	Udruženje građana „ROMSKI CENTAR ZA DEMOKRATIJU“, Valjevo	1	2
109.	RAZVOJNI CENTAR ROM OBRENOVAC, Obrenovac	1	2
110.	Preduzeće za radiodifuznu delatnost i marketing „RADIO SEVEN“ D.O.O., Niš	1	0

111.	Društvo sa ograničenom odgovornošću „RADIO 014“, Valjevo	1	2
112.	RADIO LJUBAV D.O.O., Jagodina	1	2
113.	STEFAN STREET D.O.O., Apatin	1	0
114.	Preduzeće „Media System“ za telekom, market. i usluge OD vlasništvo Ljubiše Bogdanovića i dr., Pojate	1	0
115.	Preduzeće za pružanje usluga i promet „LUKS“ društvo sa ograničenom odgovornošću, Smederevo	1	0
116.	RADIO VRŠAC Društvo sa ograničenom odgovornošću u mešovitoj svojini, Vršac	1	0
117.	Društvo sa ograničenom odgovornošću „RADIO MAGNUM-18“, Zaječar	1	0
118.	Javno preduzeće za informisanje „INFORMATIVNI CENTAR“, Odžaci	1	2
119.	OZON Društvo sa ograničenom odgovornošću preduzeće za radio difuznu delatnost, Sremska Mitrovica	1	2
120.	Privredno društvo za trgovinu „LADY LENA“ D.O.O., Žitorađa	1	0
121.	Dom kulture sa potpunom odgovornošću „BABUŠNICA“, Babušnica	1	0
122.	Radio difuzno preduzeće „VIZIJA“ D.O.O., Novi Pazar	1	2
123.	CIP Centar za informatički inženjering i projektovanje D.O.O., Kraljevo	1	0
124.	Privredno društvo „FUR“ D.O.O., Petrovac /na Mlavi/	1	2
125.	DOO za radio i televiziju „F KANAL“, Zaječar	2	2
126.	Javno preduzeće „INFORMATIVNI PRESS CENTAR“ opštine Vladičin Han, Vladičin Han	1	2
127.	Proizvodno trgovinsko preduzeće „GORLAT“ D.O.O., Novi Pazar	1	0
128.	RTM D.O.O. za radio-televiziju marketing i druge delatnosti, Čuprija	1	0
129.	J.P. Radiodifuzne delatnosti „RADIO BAČKA“, Bač	1	0
130.	SPA 106 Duško Đukić PR, Kosjerić	1	2
131.	Javno preduzeće za radio difuzne delatnosti „RADIO NOVI BEČEJ“, Novi Bečej	1	2
132.	RADIO SRCE D.O.O. za usluge, reklame i propagandu, Prokuplje	1	0

133.	O.D. za emitovanje radio i televizijskog programa Aleksić Dušan i dr. „KOMETA 030“, Bor	1	2
134.	RADIO 019 Ivan Matić PR, Negotin	1	0
135.	D.O.O. za proizvodnju, usluge i trgovinu „JELIMIK“ eksport-import, Jagodina	1	2
136.	Javno preduzeće za informisanje „RADIO STARA PAZOVA“, Stara Pazova	1	2
137.	Javno preduzeće za informisanje „RADIO TELEVIZIJA INĐIJA“, Indija	1	2
138.	Ortačko društvo radio i televizijske delatnosti Petrović Branislav i ortak MLAVA-MEDIJA, Petrovac /na Mlavi/	1	0
139.	EPARHIJA VRANJSKA SRPSKE PRAVOSLAVNE CRKVE, Vranje	1	0
140.	Privredno društvo za radio difuziju „HIT“ Društvo sa ograničenom odgovornošću, Požarevac	1	2
141.	PALLAS PRODUCTION DOO preduzeće za telekomunikacije i radio i televizijske aktivnosti, Banatsko Veliko Selo	1	0
142.	EPARHIJA BAČKA SPC-CRKVENA OPŠTINA SUBOTICA, Zmaj Jovina 22, Subotica	1	0
143.	Informativno-izdavački centar K C, Leskovac	1	0
144.	NOVI SAD, RTD D.O.O. Preduzeće za proizvodnju i usluge, Milana Simina 16, Novi Sad	1	0
145.	Privredno društvo „RADIO TELEVIZIJA JASENICA“ AD, Smederevska Palanka	1	2
146.	Društvo sa ograničenom odgovornošću za marketing i usluge „RADIO LAV“, Vršac	1	0
147.	Centar za bošnjačke studije TUTIN, Tutin	1	0
148.	Trgovinsko informativno preduzeće „DOUBLE E“ D.O.O., Novi Pazar	1	0
149.	Preduzeće za emitovanje radio programa i trgovinu „RADIO 016“ D.O.O., Leskovac	1	0
150.	RADIO POZITIV D.O.O., Jagodina	1	0
151.	RADIO PRICK Dragan Mitkić preduzetnik, Grdelica	1	2
152.	Preduzeće za marketing, informisanje i promet „OP-TOP“ Ilić Tomislav i drugi O.D., Topola	1	0
153.	KULTURNI CENTAR OPŠTINE BEOČIN, Beočin	1	2



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154.	KARLOVAČKA RADIOTELEVIZIJA D.O.O., Sremski Karlovci	1	0
155.	Javno preduzeće „RADIO PIROT“, Piro	1	2
156.	Preduzeće za radio-difuziju „RADIO CER“ D.O.O., Lipolist	1	2
157.	Preduzeće za uslužnu delatnost O.D. „BUM“ - Viorović Slaviša i ostali, Boljevac	1	0
158.	Preduzeće za promet i usluge „SLOBODA – 90“ A.D., Krupanj	1	2
159.	Akcionarsko društvo „RADIO TELEVIZIJA SOKOBANJA“, Niš	1	2
160.	Javno informativno preduzeće „RADIO POŽEGA“, Požega	1	0
161.	RTV SIGNAL - NS D.O.O., Novi Sad	1	2
162.	Društvo sa ograničenom odgovornošću za telekomunikacije „TOP FM TEAM 013“ D.O.O., Plandište	1	0
163.	Društvo sa ograničenom odgovornošću za marketing „RADIO RITAM“, Pančevo	1	0
164.	YU ECO D.O.O., Subotica	2	2
165.	Informativno preduzeće „REČ POMORAVLJA“ D.O.O., Velika Plana	1	2
166.	BALTAR D.O.O., Niš	1	2
167.	Ortačko društvo za radio i televizijsku delatnost „RADIO TELEVIZIJA RUBIN“, Kruševac	1	2
168.	Privredno društvo za trgovinu, usluge i protok informacija „VINOGRADINA“ D.O.O., Valjevo	1	0
169.	Preduzeće za radio emitovanje „RADIO 34“ D.O.O., Kragujevac	1	0
170.	Preduzeće za proizvodnju, inženjering, usluge i promet „ALPE SYSTEM“ D.O.O., Vrnjačka Banja	1	0
171.	Agencija za market.,emit.i produk. radio i TV prog. „Media-Press“ Dane Stanojčić Preduzetnik, Vrnjačka Banja	1	2
172.	Privredno društvo „BRAVO“ D.O.O., Požarevac	1	0
173.	D.O.O. za proizvodnju, trgovinu i usluge „JORD“ eksport-import, Čačak	1	0

174.	Ekološki radio „FRUŠKA GORA“ D.O.O. za informativnu, marketinšku i zabavnu delatnost, Irig	1	2
175.	Radio-difuzno društvo „PETICA“ O.D., Koceljeva	1	2
176.	Preduzeće za proizvodnju, trgovinu i usluge „CONTEXT“ D.O.O., Grocka	1	0
177.	Javno preduzeće „Radio-televizija Šabac“, Šabac	1	0
178.	Radio televizijska ustanova „RESAVA – SVITEL“ D.O.O., Svilajnac	1	2
179.	Društvo sa ograničenom odgovornošću informativno-propagandni centar „KULA“, Kula	1	0
180.	Preduzeće za informisanje „PRESS – COMPANY“ D.O.O., Doljevac	1	0
181.	Preduzeće za radio-televiziju i druge delatnosti „DAK“ D.O.O., Čuprija	1	2
182.	Javno preduzeće radio stanica „RADIO RAŠKA“, Raška	1	0
183.	Javno preduzeće „INFORMATIVNI CENTAR KOSJERIĆ“, Kosjerić	1	2
184.	Preduzeće za marketing i informisanje „RTV CITY“ D.O.O., Ub	1	0
185.	ATOM - ZONA D.O.O., Brus	1	0
186.	Preduzeće za emitovanje i realizaciju RTV programa „ZOANA PRES“ D.O.O., Sombor	1	0
187.	Radiodifuzno društvo „OK RADIO“ D.O.O., Vranje	1	2
188.	VAŠ KLAS D.O.O. društvo za radio aktivnosti, proizvodnju, trgovinu i usluge, Sopot	1	2
189.	EPARHIJA BAČKA SRPSKE PRAVOSLAVNE CRKVE, Novi Sad	1	0
190.	Preduzeće za proizvodnju, trgovinu i usluge „SOFTIĆ“ D.O.O., Tutin	1	2
191.	Preduzeće za radio-difuziju „SAŠKA RADIO“ D.O.O., Donji Milanovac	1	0
192.	Ustanova za kulturu, informisanje i obrazovanje, Kulturno informativni centar „KISAČ“, Kisač	1	2
193.	J.P. Radio difuzne delatnosti „RADIO SEČANJ“, Sečanj	1	2
194.	Preduzeće za radio i TV difuziju „GAGA“ D.O.O., Vlasotince	1	0

195.	BEOCEDIP D.O.O., Raška	1	2
196.	Javno preduzeće za informisanje „NOVI PAZAR“, Novi Pazar	1	0
197.	O.D. „AUTO MIRKO – 2“ Lazić Srđan i dr., Prokuplje	1	2
198.	Komanditno društvo „ČAVA“ za radio i novinsku izdavačku delatnost Slavko Čava Pavlović, Osečina	1	2
199.	RADIO JAVOR D.O.O., Ivanjica	1	4
200.	D.O.O. za marketing i tehničko poslovne usluge „KRUNA“ Čačak - Ogranak KRUNA RADIO, Ivanjica	1	2
201.	FIJENS D.O.O. za proizvodnju, trgovinu i usluge, Novi Sad	1	2
202.	Društvo sa ograničenom odgovornošću za proizvodnju, promet roba i usluga „DANELLI“, Alibunar	1	2
203.	Javno radiodifuzno preduzeće „RADIO OBRENOVAC“, Obrenovac	1	0
204.	Radio-difuzni centar Katoličke crkve „RADIO MARIJA“, Novi Sad	1	2
205.	M-31 Društvo sa ograničenom odgovornošću, Užice	1	2
206.	Proizvodno uslužno preduzeće „BIS-KOMERC“ D.O.O., Kragujevac	1	0
207.	Privatno pred.za market. i dr. usluge u oblasti prom. roba i usluga „JUTRO PRODUCTION“ DOO, Gornji Milanovac	1	0
208.	Javno radio-difuzno preduzeće „RADIO POŽAREVAC“, Požarevac	1	2
209.	Privatno preduzeće za proizvodnju, promet i usluge „BUKOVACA COMPANY“ D.O.O., Nova Varoš	1	0
210.	Javno informativno preduzeće „BC INFO“, Bela Crkva	1	2

In August 2008, the Republic Telecommunication Agency and the Republic Broadcasting Agency launched a public call in a joint statement, inviting all radio station owners who had not been granted the licence for programme broadcasting to stop working by 1 September 2008, since the public tenders had been completed, pursuant to Article 119 of the Broadcasting Law. Based upon this public call, RATEL began with the intensive detection of radio stations operating without the licence in the whole territory of the Republic of Serbia with the purpose of undertaking appropriate measures against of these stations. This action began with identifying the operation



of broadcasting stations without the licence, first from the spectrum monitoring centres in Belgrade and Niš and then through mobile controls from other parts of the Republic of Serbia.

By the end of 2008, over 150 broadcasting stations working without the licence were identified through controls and detection of illegal broadcasting. Based upon the obtained results and pursuant to legal provisions regulating telecommunications and general administrative procedures, appropriate measures were taken against the owners of the aforementioned stations, i.e. decrees were adopted prohibiting, without any delay and for an indefinite period, the operation of radio stations, on the grounds of unlawful usage of radio frequencies. Also, the Broadcasting Agency was informed on the results of RATEL's action with the purpose of taking coordinated measures against the owners of the stations operating without the licence.

According to data from the wider area of Belgrade, there were over 60% of stations without the licence who stopped working by 1 September 2008 or immediately after that date. However, it should be mentioned that a number of owners of radio station without the licence kept on working, waiting for additional tenders for some regional and local areas.

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9. TELECOMMUNICATIONS NETWORKS OF PUBLIC ENTERPRISES

9.1. ELECTRIC POWER INDUSTRY OF SERBIA, PUBLIC ENTERPRISE

The efficient operation of the electrical power system of our country, comprised of the public enterprises Electric Power Industry of Serbia (EPS) and Electric Networks of Serbia, is entirely dependent on the existence of a modern telecommunications system for relaying technical and business data. The construction of a new telecommunications system for the electrical power companies in our country started several years ago, and is now drawing to a close. All of the planned top-level networks are either completed or nearing completion. The test phase of their deployment will soon commence, though certain segments of the optical network have been operational for a long time. All current measurements show that a high quality level was attained for the components in use. Therefore, apart from the significant increase in network quality, a large financial gain is manifest as well.

9.1.1. OPTICAL CABLE NETWORK

The optical cable network is increasingly similar in appearance to the high-voltage electrical power transmission network. As regards power lines with a voltage level of 400 kV and 220 kV, it could be said that the cables were fully replaced by installing lines with built-in optical cables. This type of replacement was completed in a large number of power lines with a voltage level of 110 kV and several lines of 35 kV.

The project of installing optical cables at the top network layer has largely been completed and, due to a clear need for new telecommunications connections in lower layers, both regional and local, the network is currently expanding in this direction. Thus current implementation and immediate plans are focused on covering the entire 110 kV power transmission network.



Taking all of this into account, it could be said that optical cables connect all important power supply facilities in Serbia. The network as it stands now spans the length of 3,700 km, with the length of over 4,000 km to be achieved by end 2009. Inadequate states were noted on the secondary protective cable during construction on certain segments of the 400 kV power level network, thus, replacements were installed utilising the same equipment already deployed in the field and using new AWG cables, to the length of approximately 500 km. Therefore, indirectly, the power supply condition of all power lines where optical equipment was introduced was likewise significantly improved.

The new optical network was mostly built using OPGW cables with 48 fibres, of those 24 G.652 type fibres and 24 G.655 type fibres. Only the initial construction line from Belgrade to Bajina Bašta utilized a total of 24 fibres of the G.652 type. A 24 fibre cable was also used in certain segments where the state of the network required extremely thin and light OPGW cables, comprised of 12 G.652 type fibres and 12 G.655 type fibres.

The state of the optical network is regularly monitored by measuring losses, chromatic dispersion and polarization mode dispersion (PMD), twice per year. The quality is very good thus far, remaining within the prescribed margins. Regular monitoring has uncovered undesired effects in several segments on power lines under extreme weather conditions. These cables were returned within the warranty period and said segments were replaced by the cable provider.

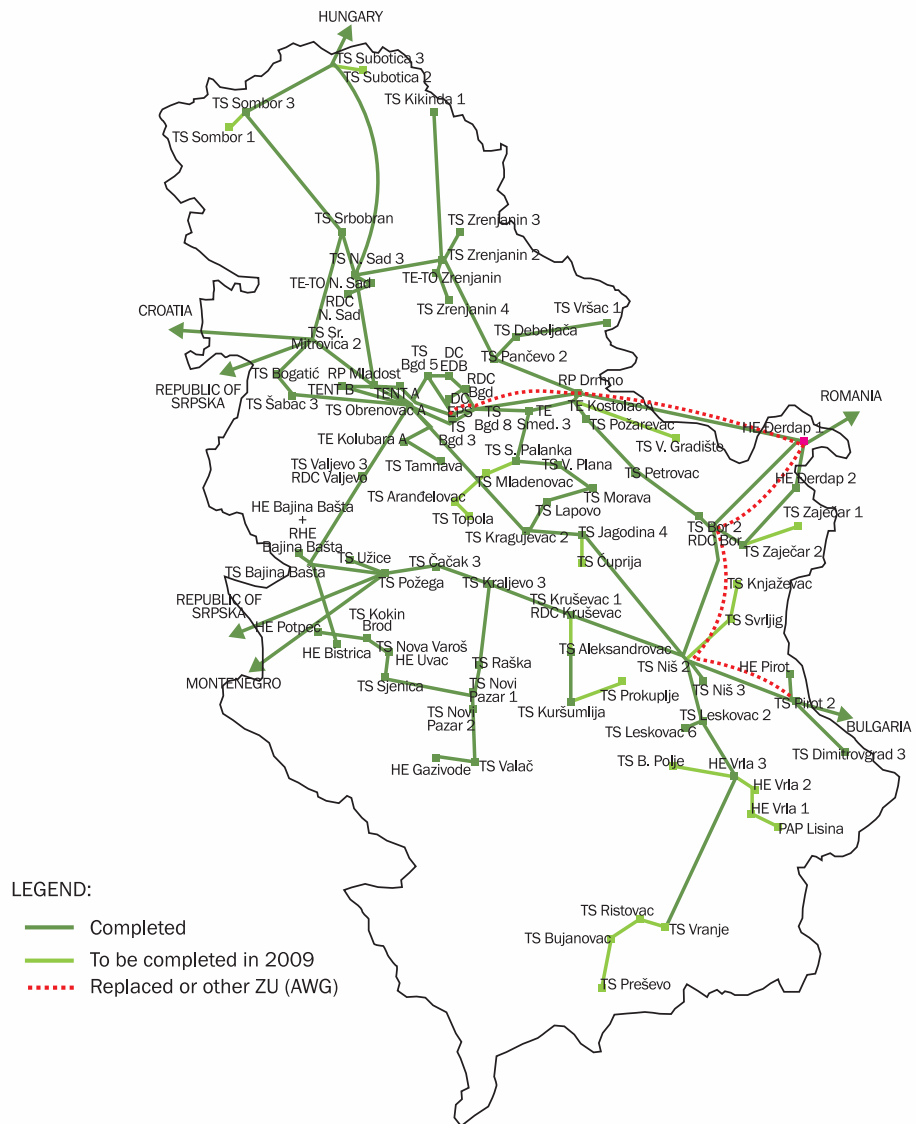
By installing terminal devices and deploying the monitoring system, the fibres in use are automatically under constant control, while the free fibres will still need to be controlled by occasional measurements or special systems.

The optical network built thus far is shown in Figure 68. The Figure shows that the network covers nearly the entire territory of the Republic of Serbia, reaching all important facilities in the power supply system and that, with further development, it will practically cover all significant points in the country, both from a power supply, as well as a telecommunications aspect. Further development towards regional and local layers will surely make it the most widely distributed optical transfer medium on this territory with multiple usage capabilities.



Figure 68. Optical Network of the Electric Power Industry of Serbia

Source: EPS





Since the need for utilising new telecommunications capacities was ever present and increasing, the usage started before the full completion and deployment. This is especially true of the interconnection routes with neighbouring countries during the process of connecting to the UCTE. Part of the optical network has been in use for years with temporary terminal equipment of a lower capacity. After deploying the designated terminal equipment, the temporary equipment should be moved towards lower layers. Temporary partial use covers nearly half of the routes installed, initially taking up very modest telecommunications capacities.

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9.1.2. TERMINAL EQUIPMENT

Pursuant to the design, the new top level optical telecommunications network was to contain 60 nodes where the installation of adequate terminal equipment was envisaged. These nodes represented the key facilities in the power supply system of the country, i.e. all hydro and thermal power plants, all mines and all important transformer stations, as well as facilities wherefrom electrical power connectivity with neighbouring countries is established. The entire system is connected to two command centres, the main centre and the backup (Disaster Recovery Centre). The main TC centre is located in the Dispatch Centre.

The plan is completely fulfilled. Locations were replaced in only two cases where the planned optical link was not implemented for objective reasons, thus the installation of the envisaged devices would make no sense. These devices were allocated to other locations at the distribution level, where a large need for their use arose.

With the aim of transmitting business, technical and voice data priority was given to SDH technology, since it is dominant for these types of uses worldwide. The capacities on all major routes are of an STM-16 level, on minor routes they are of STM-4, while certain peripheral and antenna routes are of an STM-1 level. All those points have adequate flexible multiplexers installed to receive various user interfaces utilising the 64 kbit/s channel, comprising the network providing channel transfer in dedicated TC networks.



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All of the devices were installed, tested and deployed as planned. Since the topology of an SDH network is of a mesh type, this means that the security systems need to be adequate. Since there are no classical rings in the network, traffic security in an SDH mesh network uses SNCP (Sub Network Connection Protection) systems. They provide security for the traffic on a point-point basis, i.e. between the entry and exit node in an SDH network. The LCAS (Link Capacity Adjustment Scheme) protocol is used for transmitting business traffic and route traffic along various routes.

The control and monitoring systems, as well as the synchronization systems, were implemented and are operational. The control and monitoring system is comprised of three independent subsystems: the system for the control and monitoring of the SDH network, the system for the control and monitoring of the FMUX network and the system for the control and monitoring of the synchronisation devices. The control and monitoring system is a centralised, redundant system with high capacities enabling the remote control of all network elements, SDH and FMUX devices, as well as synchronisation devices.

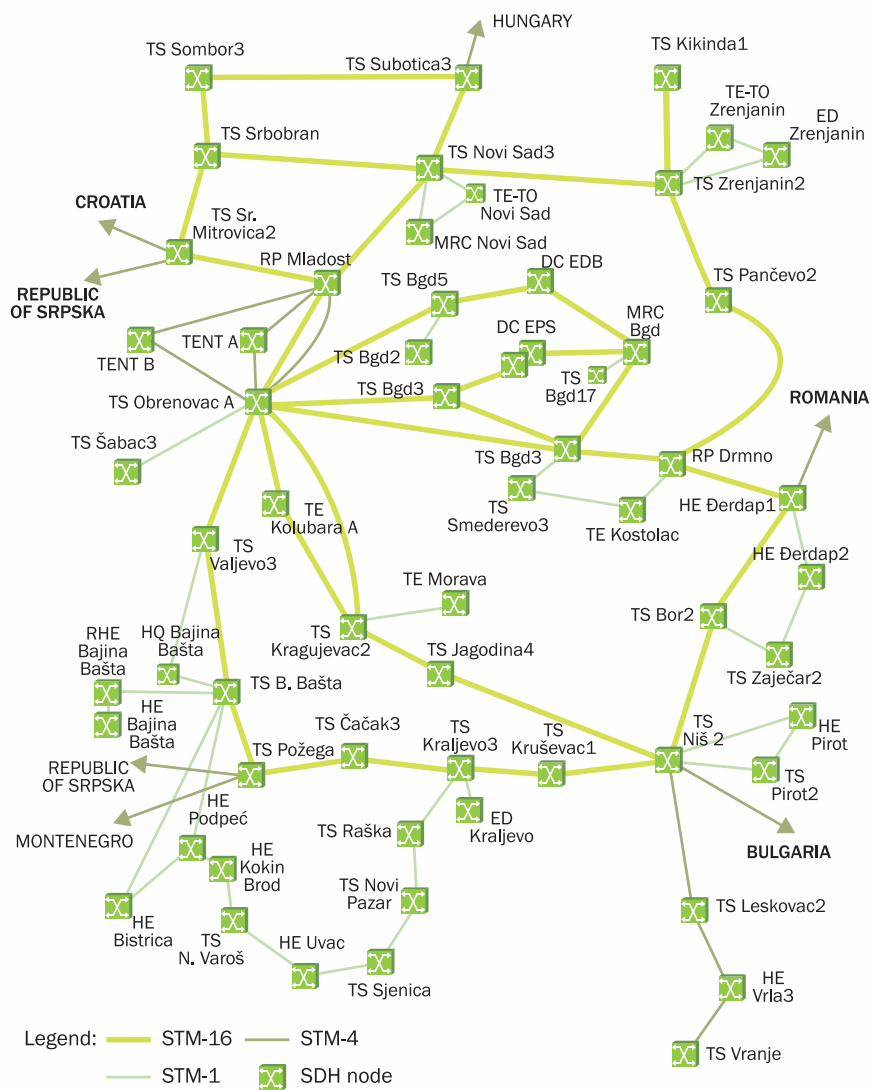
Figure 69 shows all of the nodes with terminal equipment installed and their telecommunications capacities for adequate routes. In accordance with the previously prepared Forwarding Plan, all terminal equipment must perform the transfer of all business and technical data within the power supply system in a satisfactory manner.

9.1.3. IP TELEPHONE NETWORK

Due to long standing problems with the switching equipment within the power supply system, the telephone network being outdated, the modernization of this network was initiated. After multiple rounds of consultations, round tables and discussions, an update of the existing Project Idea for the electrical power system telephone network was performed, now based on IP technologies, as agreed upon by the Board of Experts, thereby making the decision to introduce this technology in the telephone network of the electrical power system.

Figure 69. Schematic Outline of the Locations and Capacities of the New Telecommunications Network

Source: EPS





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This technology allows for the introduction of many other services, but here, its primary purpose will be to solve the problems of telephone communications within the EPS and EMS companies.

New switching devices (voice routers) will be installed at nineteen locations, with IP-TDM telephone switches in 6 locations and purely packet switches in 13 locations. The introduction of IP telephone systems in the electrical power system also includes the construction of a backbone packet network, in this case comprised of five core routers utilising MPLS technologies, installed in five locations connected in a full-mesh structure through the STM-4 interface of the SDH devices. Control over the telephone communications within the network is implemented by two soft switches, in two locations, connected to the core routers in those facilities. All existing switches of a modern type will be incorporated into the new telephone network, with adequate network interfaces for connections to a packet network, along with older switches to be connected through E1 Qsig interfaces or a four-wire transmitter with E&M signalisation.

The plan is to construct the new network and have it in test deployment by end 2009. Its implementation will significantly improve the telephone communications in a large segment of the power supply system and will create the conditions for the gradual introduction of IP technology on the remaining segments as well.

It bears noting that the introduction of IP technology will place The Electric Power Industry of Serbia among the first electrical power companies to make this transition.

9.2. SERBIAN RAILWAYS, PUBLIC ENTERPRISE

The telecommunications networks of the Serbian Railways, PE utilize the following types of transfer media:

- transfer along aerial cables,
- transfer along ground cables and
- radio transfer.



Aerial cables are still in use as one of the transfer media on the Serbian Railways railroads, even though their use has significantly tapered off. Transfer through aerial lines is present only along non-electrified railroads.

The transfer of telecommunications, signals and stable electric traction facility information along electrified railroads is mostly conducted through STA (with no coaxial tube) and STKA (with coaxial tube) railroad signals-telecommunications cables.

Optical cables were laid down within the Belgrade railroad junctions (the business facilities at Nemanjina 6–Belgrade Passenger–Belgrade Centre) and along the sections Belgrade Centre–Pančevo Main and Požega–Čačak. The total length of optical cables laid is 55 km. Said optical cables have the capacity of 8, 10 and 12 fibres.

The SDH transfer system at the STM-1 level is used within the Belgrade Railroad Junction (business facilities Nemanjina 6–Belgrade Passenger–Belgrade Centre), as well as along the sections Belgrade Centre–Pančevo Main where optical cables were laid down.

HF transfer along main routes is achieved by using 300-channel systems. HF transfer alongside routes is achieved by twelve-channel systems, whereas along non-electrified railroads it is achieved using twelve-channel systems for operation along with aerial lines and three-channel systems.

The Serbian Railways PE makes use of the following frequency bands:

- 147.775-148.300 MHz band paired with 152.275-152.800 MHz for radio networks for communication in traffic control along non-electrified railroads,
- 167.250-167.375 MHz band paired with 171.750-171.875 MHz reserved for the ZGOP radio networks,
- 444.450-445.625 MHz band paired with 454.450-455.625 MHz for local radio networks in larger classification yards and sorting stations, as well as maintenance services,



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- 457.450-458.300 MHz band paired with 467.450-468.300 MHz for the locomotive radio dispatch system enabling communication between dispatchers and engine drivers, in use along all major routes.

A vast array of devices is in use in the radio-systems currently operating on the railroads, from the earliest generation of devices manufactured using transistor components, up to modern microprocessor-based radio devices.

The plans for the investment works for main routes where no copper cables have been laid down (Niš–Dimitrovgrad and Belgrade–Vršac) envisage the laying of copper STA-PV1 4x4x1, 2NF+12x4x0,9NF and optical cables, mostly with 48 optical fibres, into the ground, whereas along other main routes where railroad copper signals-telecommunications cables of the STKA and STA types are in use (Belgrade-Bar, Belgrade-Šid, Belgrade-Niš-Preševo, Indija-Subotica, Belgrade-Mala Krsna-Velika Plana) either pylon contact networks or 48 fibre optical cables will be laid into the ground.

The transfer system network architecture consists of three layers:

- Main
- Distribution
- Access

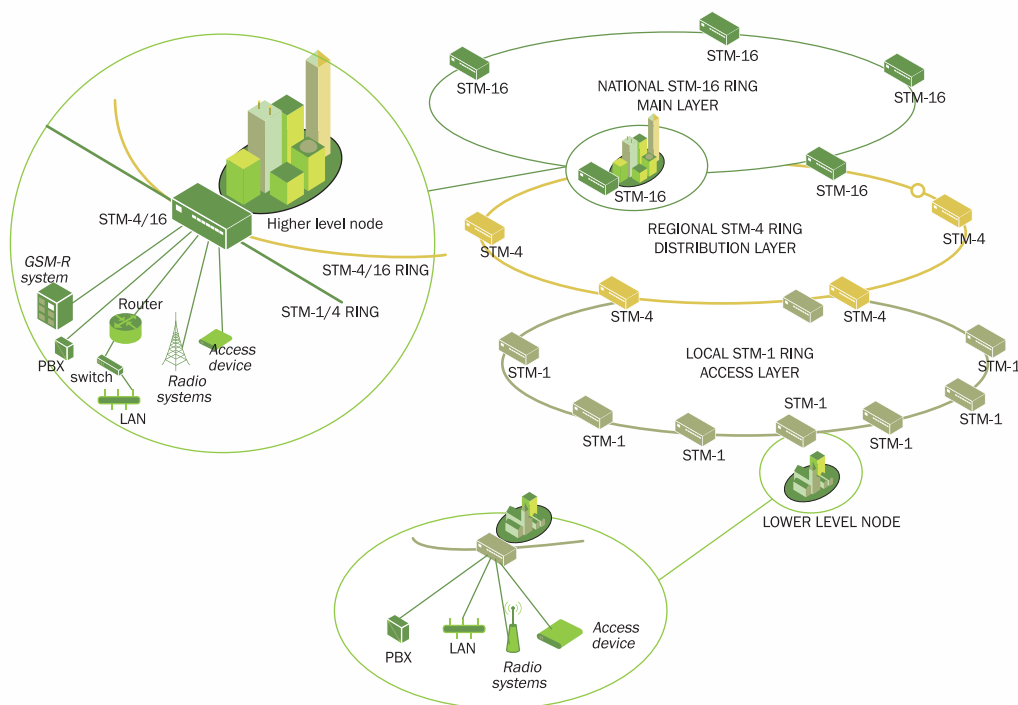
The following total capacities were planned for the main routes on the territory of Serbian Railways:

- STM-1 (Subotica-Sombor, Subotica-Horgoš, Novi Sad-Sombor, Šid-S.Rača, Ruma-Šabac-Zvornik, Prahovo-Zaječar);
- STM-4 (Belgrade-Prijepolje, Niš-Dimitrovgrad, Belgrade.C-Mala Krsna-Velika Plana, Niš-Preševo, Novi Sad-Subotica, Subotica-Kikinda, Subotica-Zrenjanin, Stalać-Kraljevo-Požega, Lapovo-Kraljevo, Kraljevo-Lešak, Beograd-Pančevo-Vršac, Indija-Šid, etc.);

- STM-16 (Belgrade-Niš, Belgrade-Indija-Novi Sad, Belgrade C.-Belgrade-Nemanjina);
- Mid-range radio links were envisaged for redundancy, enabling the closure of the ring structures in the transport network.

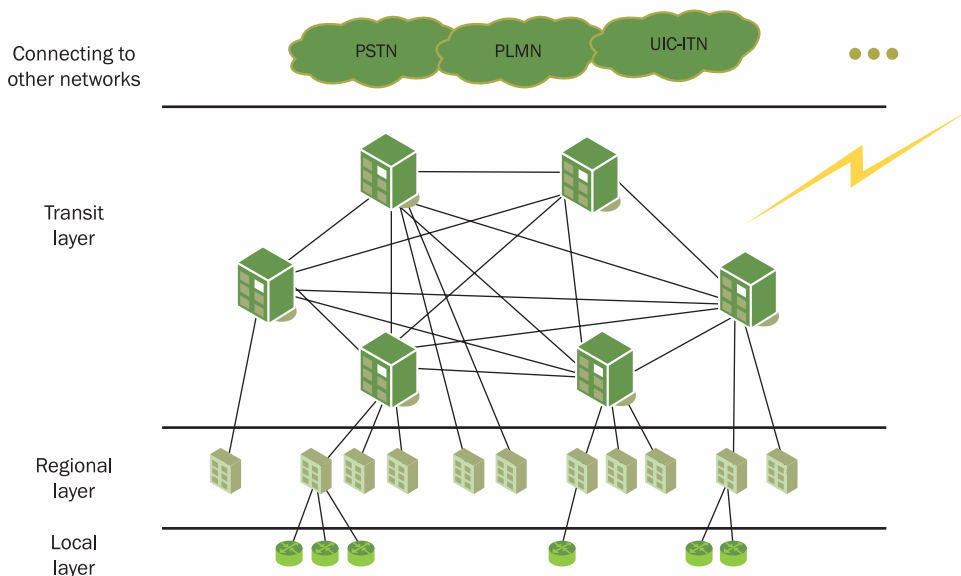
Based on individual user concentration, applications in use, as well as the service they require, the nodes were divided into higher and lower level nodes. Higher level nodes belong to the transport or distribution layer. Lower level nodes mostly belong to the distribution or access layer.

Figure 70. Telecommunication Transmission System



The telephone network in Figure 71 would operate as a three-tiered network. It would be comprised of the transit, regional and local layer.

Figure 71. Switching Network



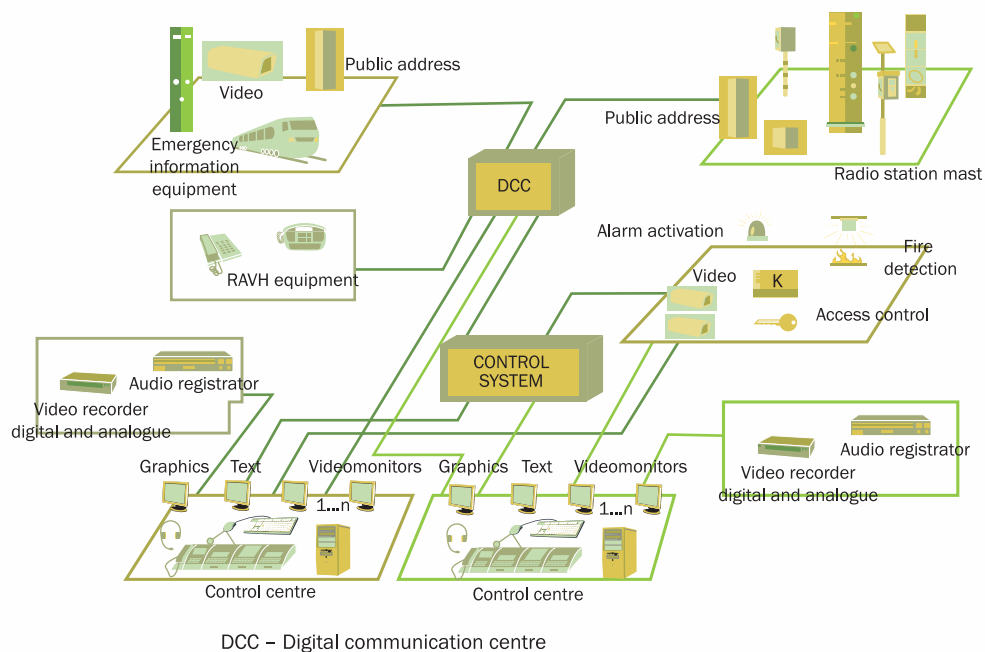
Nodes in the transit layer are mutually partially networked and are mostly located in the headquarters of the railroad organizational units. Each regional node contains local software enabling full autonomous control and full call processing for all its users. Local layer nodes would most frequently be located along the railroad in smaller official facilities. Connection to other railroad office networks would only be possible through the Belgrade transit switch. Connection to the public network would, most likely, be achieved through the transit layer, although the option of connecting from some of the regional nodes should also be planned for.

The investment works envisage the setup of modern railroad telephony systems manufactured using digital integrated technologies.

New systems with digital communication nodes (DCN) will be used along electrified international corridor railroads. The installation of a new generation of railroad telephony systems includes changes to current rulebooks and manuals.

Figure 72 shows the systems that can be integrated within the DCN nodes and the dispatcher centres of the Dispatcher Systems of Traffic and Electrical Traction.

Figure 72. Digital integrated railroad telephony systems



This solution provides for the traffic and electrical traction dispatchers to communicate with traffic and driving personnel in stations and along the railroad in order to regulate railroad traffic along a dispatcher section and provide for infrastructure maintenance. The system enables selective connections with call identification between nodes and the dispatcher centre.

The main DCN would be located in the dispatcher centre, whereas first-level digital switching nodes would be installed along the railroad in most stations. Communication between the main DCN in the dispatcher centre with nodes along the railroad is established through first-level DCNs. Other, smaller stations would house station and railroad connection concentrators



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connected to first-level DCNs by multiplexers on copper cables. The main DCN and the first-level DCNs are to be connected by optical cables, while communication will be conducted along a digital transfer system where an access bandwidth of 2Mbit- should be planned for at each node and for mutual communication. The input and output signals, road crossings and railroad telephones should be fitted with intercom-style telephones.

Further choices for integrated mobile communications are digital radio based on the GSM-R networks and bands within the designation of allocated bands were reserved to this end. As for migration routes, the choice for the mobile segment is to equip the entire pool of vehicles with locomotive radio stations, noting that dual-mode stations shall be procured, supporting both analogue operation at 450 MHz and the GSM-R network.

10. LIST OF BYLAWS

- Rules on procedure for radio-station licence issuance and on data and documentation to be submitted together with radio-station licence request (*Official Gazette of RS*, no. 100/05)
- Rules on form for telecommunications and radio-broadcasting controllers' identification cards (*Official Gazette of RS*, no. 111/05)
- Rules on costs for radio-station licence issuance (*Official Gazette of RS*, no. 08/06)
- Rules on form contents for radio-broadcasting controllers' report (adopted by the RATEL Managing Board on 10.02.2006, available on website www.ratel.rs)
- Rules on determining types of public telecommunications services for which licence is required (*Official Gazette of RS*, no. 29/06)
- Rules on compliance control of telecommunications networks, systems and facilities with prescribed standards and regulations (*Official Gazette of RS*, no. 29/06)
- Rules on procedures for the issuance of licence for public telecommunications networks and public telecommunications services and on register keeping (*Official Gazette of the RS*, no. 29/06)
- Rules on form and contents of the form for the report on radio station technical inspection and of the form for the report on telecom networks, systems and facilities technical inspection (*Official Gazette of RS*, no. 34/06)
- Rules on technical permits – certificate issuance (*Official Gazette of RS*, no. 34/06)
- Rules on technical inspection procedure in the field of telecommunications (*Official Gazette of RS*, no. 34/06)
- Rules on costs for technical permits – certificate issuance and for technical inspection of radio stations, telecom networks, systems and facilities (*Official Gazette of RS*, no. 41/06)



- Rules on fees and costs for licence and authorization issuance (*Official Gazette of RS*, no. 58/06)
- Rules on public telecommunications networks and public telecommunications services for which authorization is required (*Official Gazette of RS*, no. 60/06)
- Rules on conditions for the work of amateur radio stations (*Official Gazette of RS*, nos. 06/07 and 20/09)
- Rules on classes of radio-stations for which radio-station licence is not required (*Official Gazette of RS*, no. 26/07)
- Rules on Administering the Numbering Plan for Telecommunications Networks (*Official Gazette of RS*, no. 87/07)
- Rules on general terms and conditions for interconnection of public telecommunications networks (*Official Gazette of RS*, no. 53/08)
- Numbering Plan of the Republic of Serbia for Telecommunications Networks (*Official Gazette of RS*, nos. 57/08, 77/08, 105/08 and 107/08-corr.)
- Rules on terms and conditions and the procedure for the issuance of authorization to a public telecommunications operator for interconnection of a national telecommunications network with a telecommunications network of another country (*Official Gazette of RS*, no. 94/08)
- Rules on terms and conditions for the issuance of authorization for public telecommunication networks and contents of authorization (*Official Gazette of RS*, no. 94/08)
- Rules on terms and conditions for provision of voice transmission services over the Internet and the contents of authorization (*Official Gazette of RS*, no. 94/08)
- Rules on terms and conditions for the Internet services and other data transmission services provision and on contents of authorization (*Official Gazette of RS*, no. 100/08)
- Rules on the application of the cost-accounting principle, separate accounts and

reporting of a telecommunications operator with significant market power (*Official Gazette of RS*, no. 103/08)

- Rules on forms for radio-station licences (*Official Gazette of RS*, no. 111/08)
- Rules on radio frequency usage fees (*Official Gazette of RS*, no. 06/09)
- Instructions on the public bidding procedure for license issuance (*Official Gazette of RS*, no. 12/09)
- Decision on the amount of the annual fee for using the assigned numbers and addresses from the Numbering Plan (*Official Gazette of RS*, nos. 16/09 and 23/09)
- Rules on terms and conditions for radio and television programme distribution service provision and contents of the authorization (*Official Gazette of RS*, no. 26/09)

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REPUBLIC OF SERBIA
IN 2008



Republic of Serbia

RATEL

Republic Telecommunication
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