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## **II. ELECTRONIC COMMUNICATIONS NETWORKS AND SERVICES**

### **1. Fixed telephone networks and provision of fixed telephone services**

#### ***1.1. Players on the fixed telephony market***

In 2008, the trend of gradual decrease in revenues from fixed voice telephone services retains. This is generally due to two main factors. On the one hand, one part of the public telephone service end-users more and more often prefer the convenience of the mobility of the telephone service provided by means of mobile terrestrial network, as well as the free access to voice over Internet protocol provided by means of specific software applications (Skype, Google Talk, Justvoip etc.), and thus contracting the consumption of traditional fixed telephone services. On the other hand, the behaviour of the players on the fixed telephony market exert influence as well – the increasing competition between undertakings leads to the provision of end-user services with different discounts or the provision of several products in the form of a price package. However, currently the increase rate of the alternative undertakings' market shares, estimated on the basis of number of lines, traffic and revenues, is not sufficient to affect the competitive conditions of the fixed telephone service segment in Bulgaria, where BTC AD maintains traditionally high market shares.

#### ***1.1.1. Operators providing fixed telephone service and access to public telephone service***

In 2008, CRC issues authorizations for use of individually assigned scarce resource – numbers from the National Numbering Plan for the provision of public electronic communications through a public electronic communications network and provision of fixed telephone service<sup>1</sup>, to two new undertakings – VARNA NET OOD and INTERBILD OOD. As a result, as of 31.12.2008, the total number of operators alternative to BTC AD and authorized to provide public telephone services through fixed network, as well as services for access to public telephone services through the carrier-selection service amounted to 22.

Table No. 1 presents a data-sheet on the alternative operators authorized to provide fixed telephone services as well as services for access to public telephone services through the carrier-selection service.

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<sup>1</sup> The issuance of authorizations for the provision of electronic communications pursuant to the LEC replaces the licensing regime in force until May 2007, pursuant to the TA (repealed). On the grounds of § 9, para. 2 of the LEC, undertakings continue to operate on the basis of individual licenses issued pending the issuance of authorizations under the LEC.

Table No. 1

**Data sheet of the alternative undertakings authorized to provide fixed telephone services in the period 2003-2008**

Company name	Undertakings authorized to provide fixed telephone service and access to public telephone service through the carrier-selection service as of					
	31.12.2003	31.12.2004	31.12.2005	31.12.2006	31.12.2007	31.12.2008
<b>Total number:</b>	<b>5</b>	<b>12</b>	<b>20</b>	<b>20</b>	<b>21</b>	<b>22</b>
CABLETEL EAD (up to 31.12.2005 Globaltech Bulgaria EOOD)	√	√	√	√	√	√
EASTERN TELECOMMUNICATION COMPANY AD	√	√	√	√	√	√
NEXCOM-BULGARIA EAD	√	√	√	√	√	√
NETPLUS OOD*	√	√	√	√	√	
ORBITEL EAD	√	√	√	√	√	√
BULGARIA TELECOM NET AD		√	√	√	√	√
VESTITEL BG AD		√	√	√	√	√
SPECTRUM NET AD		√	√	√	√	√
INTERROUTE BULGARIA EAD**		√	√	√	√	√
TRANS TELECOM EAD		√	√	√	√	√
EUROCOM CABLE MANAGEMENT BULGARIA EOOD		√	√	√	√	√
GOLD TELECOM BULGARIA AD		√	√	√	√	√
ITD NETWORK AD			√	√	√	√
COSMO BULGARIA MOBILE EAD			√	√	√	√
MOBILTEL EAD			√	√	√	√
NET IS SAT OOD			√	√	√	√
NOVO EAD			√	√	√	√
SKAT TV OOD			√	√	√	√
TELECOM 1 OOD			√	√	√	√
BTC-NET EOOD			√	√	√	√
GLOBAL COMMUNICATION NET EAD					√	√
VARNA NET OOD						√
INTERBUILD OOD						√

**Source:** CRC

\* By Decision No. 591 of April 19, 2007 CRC revokes the numbers and addresses initially provided to NetPlus OOD with individual license No. 116A-02583/15.10.2004 and individual license No. 116B-02583/15.10.2004

\*\* As of 07.05.2008 the undertaking Telecom Partners Network EAD is renamed to Interoute Bulgaria EAD

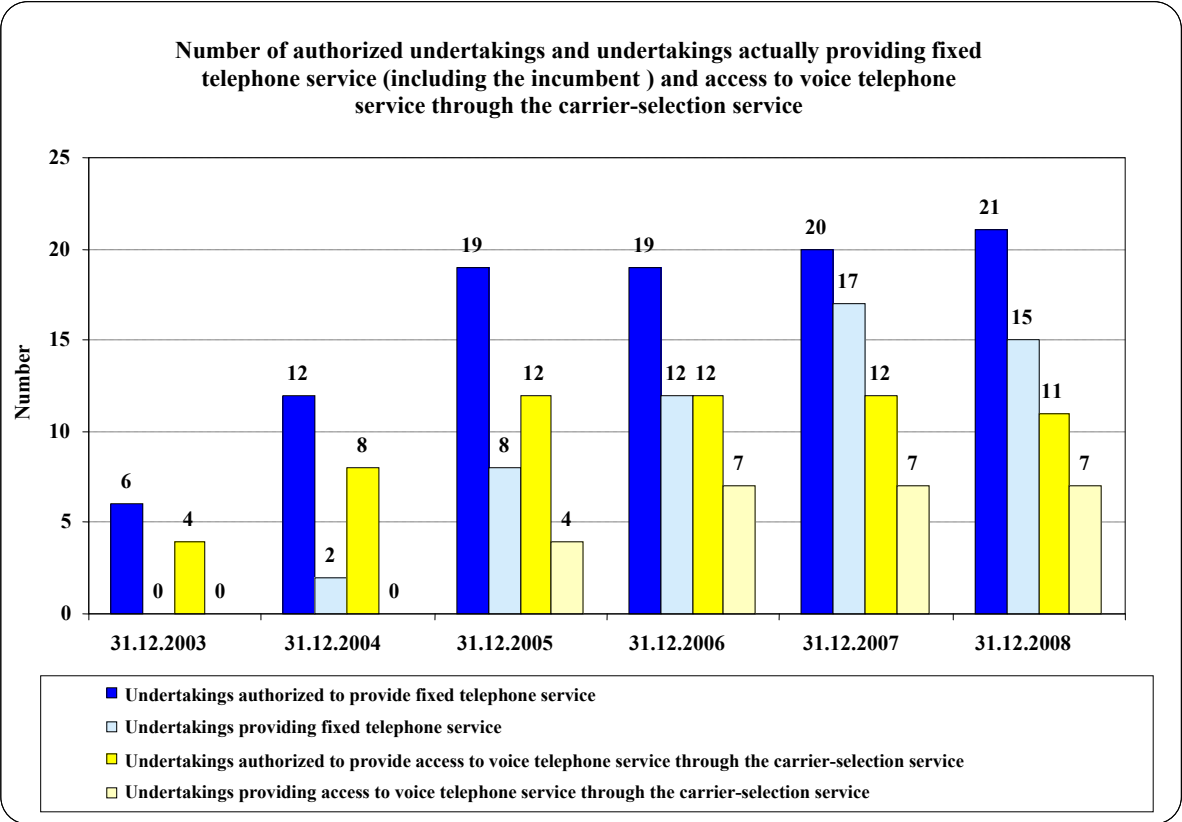
Nine of the undertakings presented in the table above are authorized to provide both fixed telephone service and services for access to public telephone services through the carrier-selection service. They are ITD NETWORK AD, VESTITEL BG AD, EASTERN TELECOMMUNICATION COMPANY AD, CABLETEL EAD, COSMO BULGARIA MOBILE EAD, NEXCOM-BULGARIA EAD, ORBITEL EAD, SPECTRUM NET AD and TRANS TELECOM EAD. In 2008, two undertakings (BTC NET EOOD and GOLD TELECOM BULGARIA AD) did not have geographic numbers for the provision of fixed

telephone service and at that moment were only authorized to provide access to public telephone services through the carrier-selection service.

With regard to the territorial coverage, the activity of all authorized undertakings shall be conducted on the territory of Republic of Bulgaria.

In 2008, 19 new Interconnection Agreements were signed between the alternative to BTC AD undertakings and two Interconnection Agreements between the incumbent and alternative undertakings using individually assigned scarce resource – geographic numbers for providing fixed telephone service. There was one terminated Interconnection Agreement between BTC AD and an alternative undertaking providing fixed telephone services, over the previous year.

Figure 13 presents information about the number of authorized and actually operating undertakings providing fixed telephone services and services for access to public telephone services through the carrier-selection service in the period 2003-2008.



Source: Data submitted to CRC

Figure 13

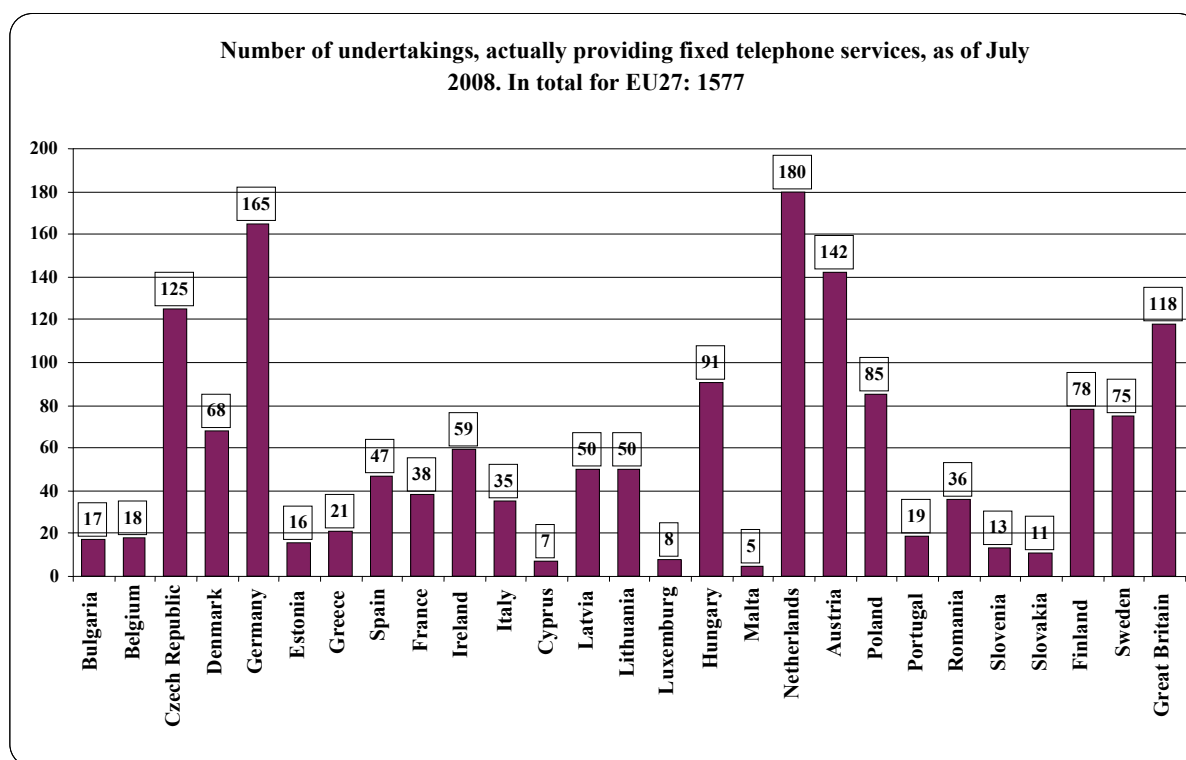
Fourteen alternative undertakings are active in the provision of fixed telephone service in 2008 - ITD NETWORK AD, VESTITEL BG AD, EUROCOM CABLE MANAGEMENT BULGARIA EOOD, EASTERN TELECOMMUNICATION COMPANY AD, INTERROUTE BULGARIA EAD, CABLETEL EAD, COSMO BULGARIA MOBILE EAD, MOBILTEL EAD, NEXCOM BULGARIA EAD, NET IS SAT OOD, ORBITEL EAD, SPECTRUM NET AD, TELECOM 1 OOD and TRANS TELECOM EAD. Two undertakings (BULGARIA

TELECOM NET AD and NOVO EOOD) declare<sup>2</sup> that, in 2008, they were not active in the provision of fixed networks and fixed telephone services.

Seven of the eleven undertakings provided with individually assigned scarce resource – network access code (national short code) for access to public telephone services through the carrier-selection service, actually provided services during the respective period. They are ITD NETWORK AD, BTC-NET EOOD, GOLD TELECOM BULGARIA AD, NEXCOM BULGARIA EAD, ORBITEL EAD, SPECTRUM NET AD and TRANS TELECOM EAD.

Thus, at the end of 2008, the total number of undertakings authorized to provide fixed voice telephone service (including the incumbent) and access to voice telephone service through the carrier-selection service amounted to 23, where 17 of them were actually operating players on the public telephone services market.

For comparison, it may be noted that, in 2008, no significant change was registered in the number of undertakings actually providing fixed telephone service in the EU countries. At mid-year, an increase of 7 percent was reported as compared to the same period of the previous year (Figure 14).



Note: The incumbents are included; data for Bulgaria are valid as of 31.12.2008, and also include the undertakings providing access to public telephone service through carrier-selection.

**Source:** Commission staff working document accompanying the Progress report on the single European electronic communications market 2008 (14th report) Annex 2, p. 44 and according to the CRC data

**Figure 14**

<sup>2</sup> Operators providing electronic communication networks and/or services are obliged to provide information on their activities for the previous year by April 30 of the current year, under the provisions of Art.5, para.1 of the General requirements for provision of public electronic communications (Prom. SG. issue 24 of March 4, 2008, amended, SG. issue 102 of November 28, 2008)

### ***1.1.2. Undertakings providing the „access to publicly available telephone services through public payphones” service***

In 2008, six more undertakings have notified the CRC of their intentions to provide public electronic communications via the „access to publicly available telephone services through public payphones” service. The undertakings holding General license No. 204 according to the repealed Telecommunications Act (TA), or which have submitted notification for their intentions of providing public telephone services through public payphones, as of 31.12.2007 - INTERTEL EOOD, SPECTRUM NET AD, EXTEL OOD and NEXCOM BULGARIA EAD, TRANS TELECOM EAD, BGOPEN.NET OOD and DIALOG EOOD, are also joined by those that have notified the CRC for their intentions in 2008 - ASPEKT 3 EOOD, GET CONNECTED OOD, INTERBILD OOD, CORES GROUP EOOD, NET TEL OOD and STANDART TELECOM OOD. In June 2008, the undertaking BULFON was terminated by merger with BTC MOBILE EAD. Subsequently, after an authorization issued by CRC concerning the transfer of the individual licenses issued to BTC MOBILE to BTC AD<sup>3</sup>, BTC MOBILE EOOD was transformed by merger into the incumbent. Thus, by 31.12.2008, thirteen other undertakings providing public electronic communications, besides BTC AD, have the right to install and operate public payphones and booths. The „access to publicly available telephone services through public payphones” service is actually provided by BTC AD, ASPEKT 3 EOOD, GET CONNECTED OOD, BGOPEN.NET OOD, DIALOG EOOD, NEXCOM BULGARIA EAD, NET TEL OOD, SPECTRUM NET AD, STANDART TELECOM OOD and TRANS TELECOM EAD. BTC AD provides the „access to publicly available telephone services through public payphones” service as part of the obligation for the provision of universal service.

### ***1.2. Fixed telephony market development***

In 2008, the total revenues<sup>4</sup> from the provision of fixed telephone service continued decreasing in comparison with the previous years as well. At the end of 2008, the total revenues from the provision of fixed telephone service, access to public telephone services through the carrier-selection service, and access to publicly available telephone services through public payphones or telephone booths amounted to nearly BGN 661 million. The decrease registered in revenues, by the end of 2007, was nearly 9 percent. The growth in revenues of the alternative undertakings providing fixed telephone service and access to public telephone services through the carrier-selection service, in 2008 compared to 2007, did not reach 2 percent, given the 4 percent increase registered for the previous year.

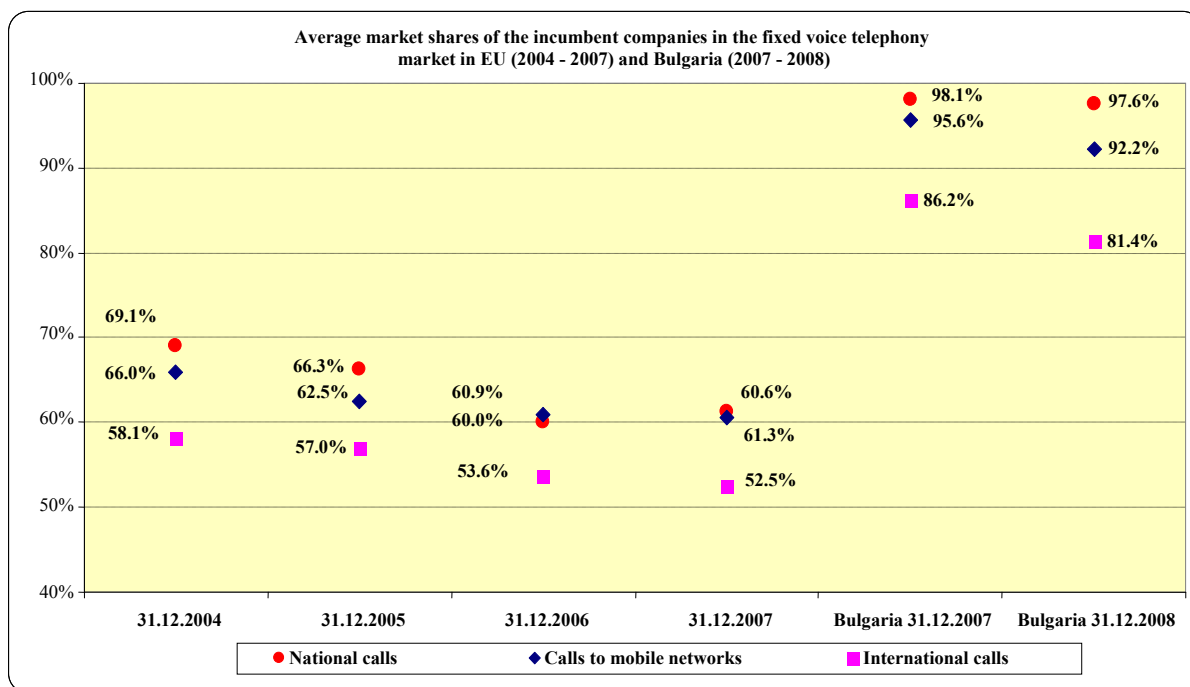
As a result, at the end of 2008, the market share of BTC AD estimated on the basis of revenues from the provision of fixed telephone service and access to public telephone services through the carrier-selection service remained high – 96.1 percent, in spite of the decrease of almost 10 percent in the undertaking’s total revenues<sup>5</sup> from the provision of fixed telephone service, during the year. The variation in the value of the incumbent’s market share, in the period considered, compared to the previous one, was only 0.4 percentage points in decrease.

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<sup>3</sup> Decision of the CRC No. 1391, dated 04.08.2008

<sup>4</sup> Including the revenues from the provision of public telephone services through public payphones.

<sup>5</sup> Include the revenues from retail access, revenues from subscribers to national calls (local and long distance calls, calls to mobile networks and point-to-multipoint networks, and calls to non-geographic numbers), international calls, revenues from wholesale services (provision of the carrier-selection service, termination and transit) and other revenues (revenues from physical implementation of interconnection, revenues from applicants for non-geographic services, from the provision of unbundled access, specific access, etc.)



Note: The latest available data on average market shares of the incumbents in the fixed voice telephone market in EU are current to 31.12.2007

**Source:** Commission staff working document accompanying the Progress report on the single European electronic communications market 2008 (14th report) Annex 2, p. 47 and CRC data

**Figure 15**

Figure 15 presents the variation in the average market shares of the incumbents in the EU countries, estimated on the basis of retail revenues from national and international calls and calls to mobile networks. Although, at the end of 2007, a slight increase in the average market share of the incumbents was registered, estimated on the basis of revenues from subscribers' national calls, generally, data indicate that the share of incumbents decreased over the past three years on average in the EU. Upon comparison of data on the average market shares of the EU incumbents and the respective market shares of BTC AD, at the end of 2007 and 2008, it is obvious that the market shares of the Bulgarian incumbent are still significantly above the average values for the EU.

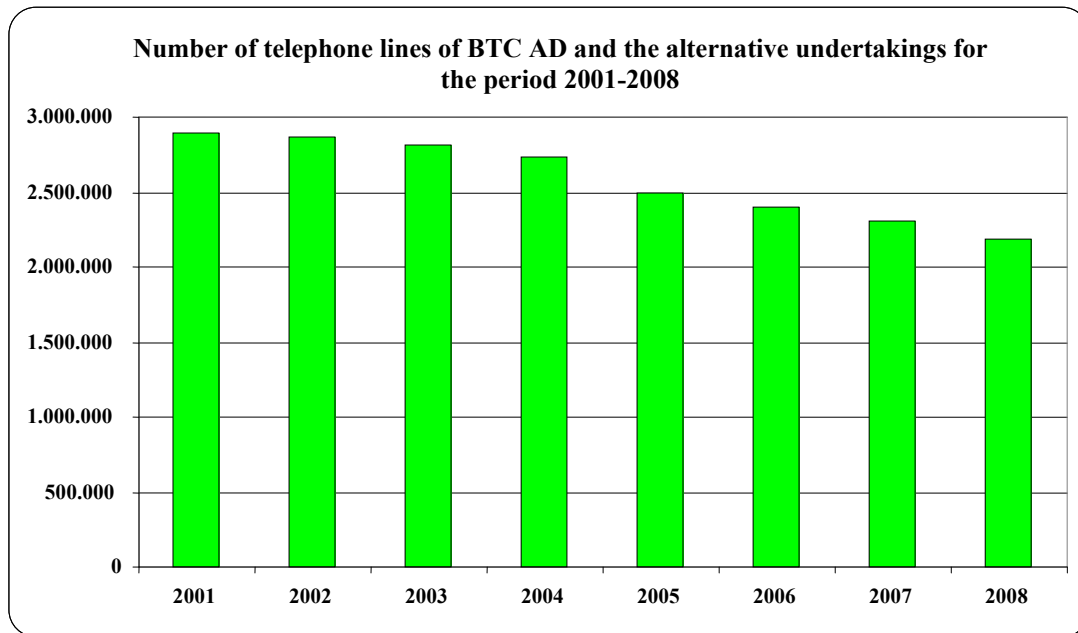
Data submitted to CRC, indicate that the market share of BTC AD, estimated on the basis of total traffic generated by subscribers' national<sup>6</sup> and international calls, decreased by 2 percent, by the end of 2008, compared to the previous year. Meanwhile, subscribers to alternative undertakings generated just over 19 percent more traffic as compared to 2007. This is rather due to the increase in the total number of subscribers' lines of these undertakings, than the carrier-selection service, since in absolute terms, the volume of the traffic generated through the carrier-selection service, in 2008, increased only by 0.2 percent for a one-year period.

<sup>6</sup> Includes local, long distance calls and calls to mobile terrestrial networks, calls to point-to-multipoint networks, and calls to non-geographic numbers.



### 1.3. Fixed telephone lines

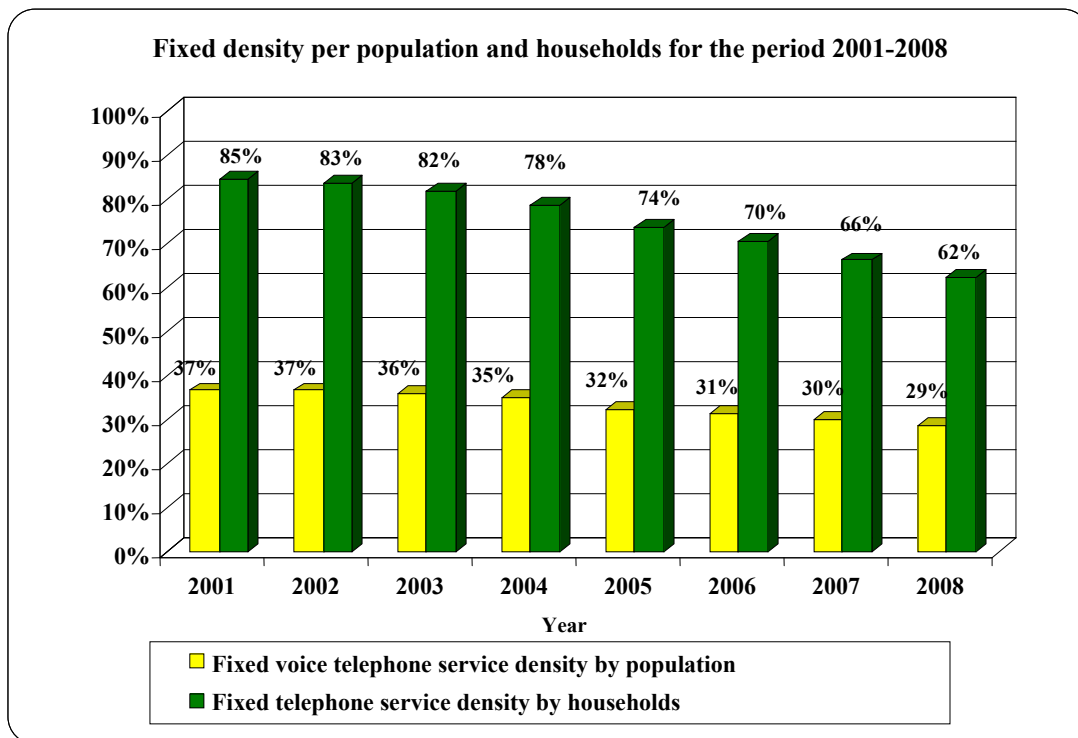
The trend of decrease already established in the number of fixed telephone lines in Bulgaria continued in 2008 as well. By the end of the year, the total number of fixed telephone lines in Bulgaria decreased by overall 5 percent as compared to the previous year (Figure 16). The number of subscribers' lines of the alternative undertakings increased that year as well, and although its rate is lower than the one established in 2007, at the end of 2008, their relative share increased by almost 2 percentage points and reached 4.3 percent. The market share of BTC AD, for the same period, estimated on the basis of fixed telephone lines declined from 97.5 percent to 95.7 percent.



*Source: Data submitted to CRC*

**Figure 16**

The value of the indicators fixed telephone density per population and households continued to decline in 2008 as well (Figure 17). The value decline of the indicator fixed telephone density per population, for the period 2005-2008, was one percentage point per year. Respectively, the indicator estimated on the basis of households declined more significantly – by 4 percentage points annually.



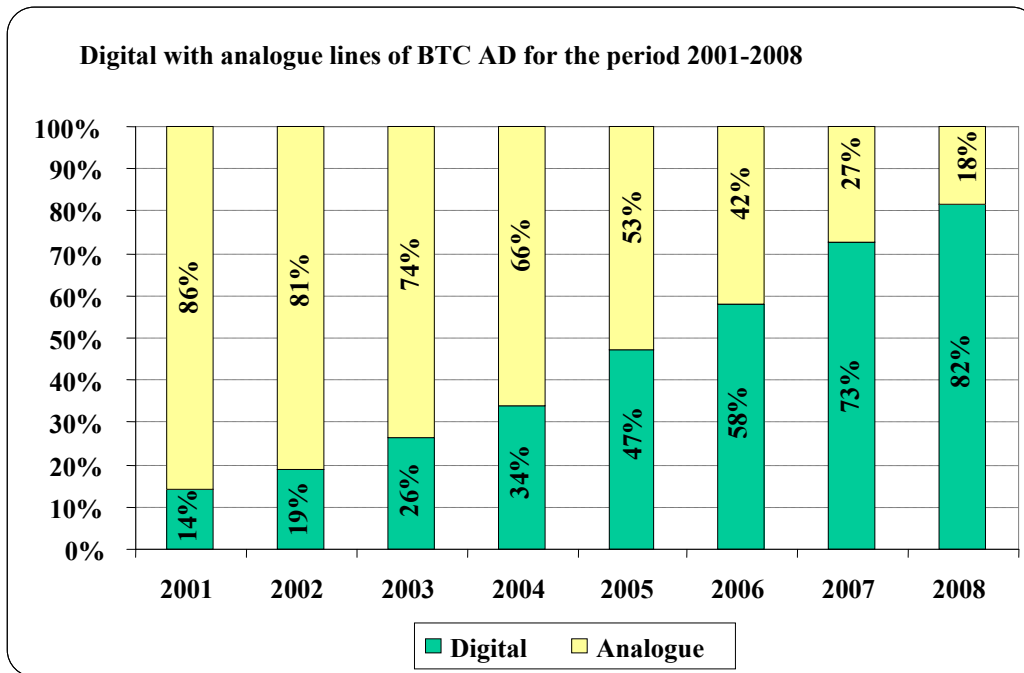
*Source: Data submitted to CRC*

**Figure 17**

In comparison, in 2008, the indicator fixed telephone density estimated on the basis of population registered a decline of 5 percentage points and reached 40 percent on average in the 27 EU member states. In SEE countries<sup>7</sup>, the average telephone density per population reached 26 percent, and varied significantly for the different countries. In the Republic of Croatia and Serbia, the penetration of fixed telephone lines per population was close to the EU-27 level, 38.5 percent and 41.1 percent respectively, while in Kosovo it did not reach 5 percent.

With regard to the degree of digitalization of the incumbent's network, at the end of 2008, the data indicate that 82 percent of the active fixed telephone lines of BTC AD were digital (Figure 18).

<sup>7</sup> Report II – Supply of services in monitoring regulatory and market developments for electronic communications and information society services in Enlargement Countries, June, 2009, p. 21

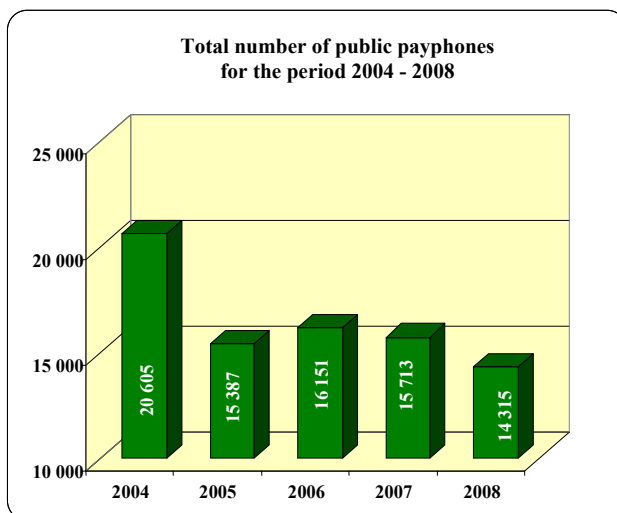


Source: CRC, according to BTC AD data

Figure 18

#### 1.4. Public payphones

According to data of the undertakings, providing access to public telephone services through public payphones, the total number of public payphones and telephone booths, at the end of 2008, decreased by nearly 9 percent, as compared to the number of those devices, registered as of 31.12.2007. (Figure 19)



Source: Data submitted to CRC

Figure 19

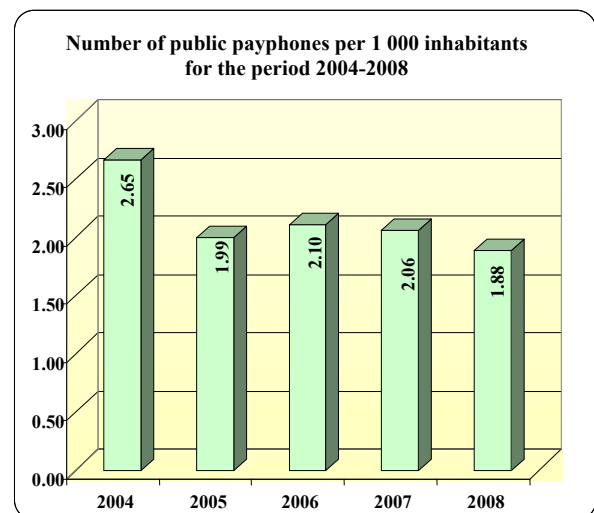


Figure 20

Despite the registered decline in the number of public payphones and telephone booths, in 2008, the value of the indicator number of public payphones per 1 000 inhabitants, in the country, remained traditionally high – 1.88.

According to data of the undertakings providing access to public telephone services through public payphones and booths for public use, the revenues registered by the end of 2008 were

over BGN 8 million. Only three undertakings declared intentions of increasing the number of public payphones and telephone booths during the next year.

### *1.5. Services provided on the fixed telephony market*

In 2008, as well as in 2007, undertakings providing the carrier-selection service are ITD NETWORK AD, BTC NET EOOD, GOLD TELECOM BULGARIA AD, NEXCOM BULGARIA EAD, ORBITEL EAD, SPECTRUM NET AD, and TRANS TELECOM EAD. All of them provided carrier-selection service. Only the subscribers of ORBITEL EAD were using the carrier pre-selection service.

With regard to the carrier-selection service, it should be mentioned that upon the adoption of Rules on procedures for providing carrier-selection service (promulgated, SG, 98/14.11.2008, in force since 14.11.2008), at the end of 2008, the scope of the service was extended. Subscribers to the carrier-selection service can make local calls, long distance calls, calls to mobile terrestrial networks, and calls to point-to-multipoint electronic communications networks of the fixed radio service with national coverage, calls to non-geographic numbers for the provision of services, and international calls, in accordance with Art.5 of the Rules on procedures for providing carrier-selection service.

At the end of 2008, however, data indicated that the carrier-selection service was not yet widespread among the subscribers to fixed telephone services in Bulgaria. The relative share of subscribers of BTC AD using the service did not reach 1 percent. The volume of actual traffic generated also remained virtually unchanged in comparison with the previous year.

In 2008, ITD NETWORK AD joined the eight alternative undertakings , providing fixed telephone service as part of the so called „bundled services” to their subscribers. The service provided to the undertaking’s subscribers included fixed telephone service and service for Internet access (Table No. 2).

**Table No. 2**

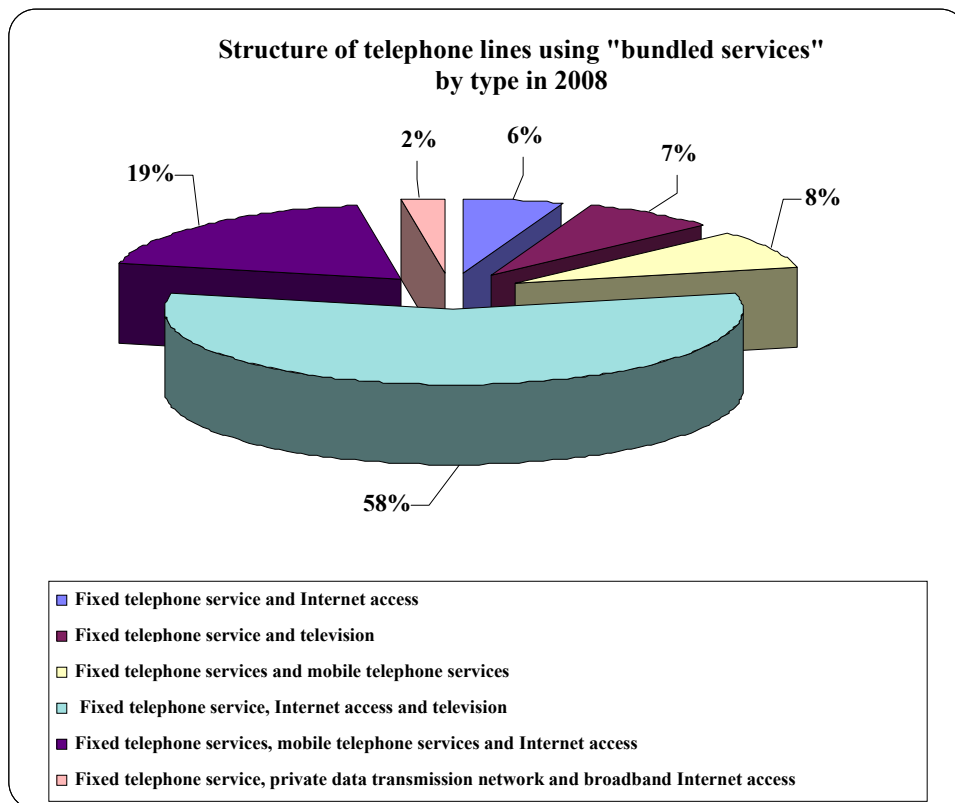
**Undertakings providing bundled services in 2008**

COMPANIES \ SERVICES			DOUBLE PLAY OFFER			TRIPPLE PLAY OFFER		
			Fixed telephone service and Internet access	Fixed telephone service and television	Fixed telephone services and mobile telephone services	Fixed telephone service, Internet access and television	Fixed telephone services, mobile telephone services and Internet access	Fixed telephone service, private data transmission network and broadband Internet access
1.	ITD NETWORK	AD	√					
2.	VESTITEL BG	AD	√	√		√		
3.	EUROCOM CABLE MANAGEMENT BULGARIA	EOOD	√	√		√		
4.	CABLETEL	EAD	√	√		√		
5.	COSMO BULGARIA MOBILE	EAD			√			
6.	MOBILTEL	EAD	√		√		√	√
7.	NEXCOM-BULGARIA	EAD	√					
8.	NET IS SAT	OOD	√					
9.	TRANS TELECOM	EAD	√					

*Source: Data submitted to CRC*

Almost all undertakings providing bundled services offer Double Play offer including fixed telephone service and Internet access. Those undertakings being traditional providers of services for broadcasting of radio and television programs offer to their subscribers Double Play offer in its variety of fixed telephone service and television, as well as Triple Play offer including fixed telephone service, Internet, and television.

Users of these services have doubled in the previous year and the vast majority of them – just below 60 percent, were subscribers to the so-called Triple Play offer. Data show that more and more end-users of electronic communication services are using the convenience of the bundled services – one provider of multiple services, which saves time in the servicing and the payment of monthly fees, as well as the lower package price in comparison with the separate use of each service.



*Source: Data submitted to CRC*

**Figure 21**

Only five of the alternative undertakings active on the fixed telephony market have declared intentions of introducing new electronic communication services of the segment observed. GOLD TELECOM BULGARIA AD declared intentions of providing fixed telephone service besides the services for access to public telephone services through carrier-selection. ITD NETWORK AD and MOBILTEL EAD were aimed at extending the scope of the bundled services they offered in 2008, and INTERROUTE BULGARIA EAD and CABLETEL EAD were planning the introduction of services accessible through non-geographic numbers.

### ***1.6. Regulation of fixed networks and services markets***

In 2008, in accordance with the 2002 European legal and regulatory framework, transposed into the Bulgarian legislation through the LEC and the methodology on rules and procedures for determining, analyzing and evaluating the relevant markets and criteria for determining the undertakings with significant market power, CRC proceeded to determining the electronic communication markets subject to ex ante regulation, in accordance with the EC Recommendations<sup>8</sup>, and analyzing the extent of effectiveness of the competition on the relevant markets.

At the end of 2008, the CRC launched a public consultation on two draft decisions by which the following relevant markets are determined:

- Markets of access to public telephone networks at a fixed location and markets of publicly available telephone services provided at a fixed location (markets No. 1, 2, 3, 4, 5 and 6 of the EC Recommendation 2003/311/EC of February 11, 2003);

<sup>8</sup> EC Recommendation 2003/311/EC of February 11, 2003 and EC Recommendation 2007/879/EC of December 17, 2007

- Markets of call origination at a fixed location on public telephone networks and markets of call termination at a fixed location on individual public telephone networks (markets No. 2 and 3 of the EC Recommendation 2007/879/EC of December 17, 2007, markets No. 8 and 9 of the EC Recommendation 2003/311/EC of February 11, 2003, respectively).

After considering the notes and comments from the public consultation, by Decision No. 2430/19.12.2008, the CRC adopted the results of the public consultation and a draft decision for determining, analyzing and evaluating the market of call origination at a fixed location on public telephone networks and the market of call termination at a fixed location on individual public telephone networks, which was submitted to the EC and the regulatory authorities of the Member States.

As a result of the carried out market analysis aiming at the evaluation of the presence of preconditions preventing the effective competition in the considered markets of call origination and termination from and on individual public telephone networks, the CRC arrived at the conclusion that it should designate:

- BTC AD as an undertaking with significant market power in the wholesale market of call origination at a fixed location on public telephone network;
- All currently active undertakings providing call termination at a fixed location<sup>9</sup> on individual public telephone networks.

With respect to the markets of access to public telephone networks and provision of publicly available telephone services at a fixed location, at the end of 2008, the processing and reporting of notes and comments received from the public consultation has not been completed yet.

### ***1.7. BTC AD prices of fixed voice telephone service***

The CRC approved a change in BTC AD end-user prices by Decision No. 150/25.02.2008, as the company was required to make corresponding changes in prices offered in the interconnection agreements and to sign additional agreements with the other undertakings, having the right to apply the offered prices of the fixed voice telephone service within 2 weeks thereafter. The changes proposed by BTC AD are as follows:

1. Change in the starting time of the off-peak time zone from 9 p.m. to 8 p.m. and the ending time from 7 a.m. to 8 a.m. on working days.
2. Formation of a national off-peak time zone in the standard charging. Call price per minute at off-peak time for long-distance calls becomes equal to that for local calls, i.e. BGN 0.00. The call set up charge of BGN 0.132 (VAT included) remains the same.

By CRC Decision No. 2205/28.10.2008, changes into post-paid plans for residential subscribers came into force as of 01.11.2008, as follows:

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<sup>9</sup> EC explanatory note, page 25, according to which each differentiated product market of call termination at fixed location is of monopolistic nature

1. Minutes included in post-paid plan “BTC At Home 50” and post-paid plan “BTC At Home 150” are valid for local and long distance calls, as well as for international calls from Group I.

2. For “BTC At Home 250” post-paid plan there are changes in the number of minutes included besides the changes in calls destination.

3. Post-paid plan “BTC At Home 350” is no longer offered.

4. Calls made by subscribers to Low user plan, after the consumption of the minutes included in the plan, are charged at standard charging tariffs.

5. Prices for local and long distance calls of subscribers to plan “BTC Minimum” are changed, as a unified price for national calls is being introduced – in peak hours to the amount of BGN 0.10 per minute (VAT excluded), and in off-peak hours – BGN 0.875 per minute (VAT excluded), while for all other calls the standard charging tariffs apply.

The CRC approved the provision of new business customers post-paid plans “BTC Office” and continues the provision of the previous post-paid plans only to subscribers already under contract by the same Decision.

### ***Prices for fixed voice telephone service charged by alternative undertakings***

The undertakings alternative to BTC AD set their prices for the fixed telephone service on the basis of supply and demand, as the obligations of these operators, resulting from the TA (repealed), as well as from the already in force LEC, consist in publishing information about the prices in places visually accessible for the consumers, publishing prices on their Internet websites and notifying CRC of the entry into force of new prices or changes to existing prices. The deadline for such notification has been reduced from seven to three days under the LEC. Generally, the alternative undertakings, which have submitted prices to the CRC in 2008, continue to pursue an aggressive pricing policy related to their market entry and characterized by lower price levels than those of the incumbent, as well as price packages including various services.

### ***Carrier-selection service prices***

In compliance with its obligations of an operator with significant market power, pursuant to TA (repealed), BTC AD allows its subscribers to select the carrier for their national long distance and international calls. Those BTC AD subscribers, who have selected alternative undertakings, pay for their national long distance and international calls at the prices charged by the respective alternative undertaking<sup>10</sup>, which are lower than the prices charged by BTC AD for such calls.

2008 data for the national long distance and international calls of the BTC AD subscribers show that the traffic generated through carrier selection remained the same compared to 2007. In 2008, ORBITEL EAD was still the only undertaking to offer carrier pre-selection.

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<sup>10</sup> Alternative undertakings’ prices for national long distance and international calls are not regulated. They vary depending on the undertakings selected, and for international calls – depending on the chosen destination as well.



### ***Bulgaria – EU comparison of fixed voice telephony prices***

A comparison of the prices for fixed voice telephone service charged by BTC AD, by the alternative undertakings in Bulgaria, and by the incumbents in the EU Member States for 2007 and 2008, is made below. The comparison is made under the following conditions:

- The source of data used is the 2008 EC Progress Report on the Single European Electronic Communications Market (14th Report)<sup>11</sup>;
- Data about Bulgaria and the EU refer to September 2007 and September 2008;
- The prices of a three-minute local call, a three-minute long distance call and a ten-minute international call are used in the price comparison;
- Prices for a monthly subscription and ten-minute international calls are in Euros, while those for three-minute local and long distance call are in Eurocents;
- Data about ORBITEL EAD, which holds the second biggest market share after the incumbent, are taken as representative for the alternative undertakings in Bulgaria;
- Price comparison of monthly subscriptions for residential customers is between the price levels of BTC AD and the EU weighted average price of incumbents in the Member States, since ORBITEL EAD does not offer the service to residential subscribers but only to business clients;
- As the Bulgarian undertakings apply tariffs for international calls, which do not correspond to the distance zones in the tariffs for international calls of the EU Member States, the comparison of these prices is conditional;
- In Bulgaria, the prices for ten-minute international calls do not differ by time zones because neither BTC AD nor the alternative undertakings apply differentiated charges for the international calls made at different hours of the day.

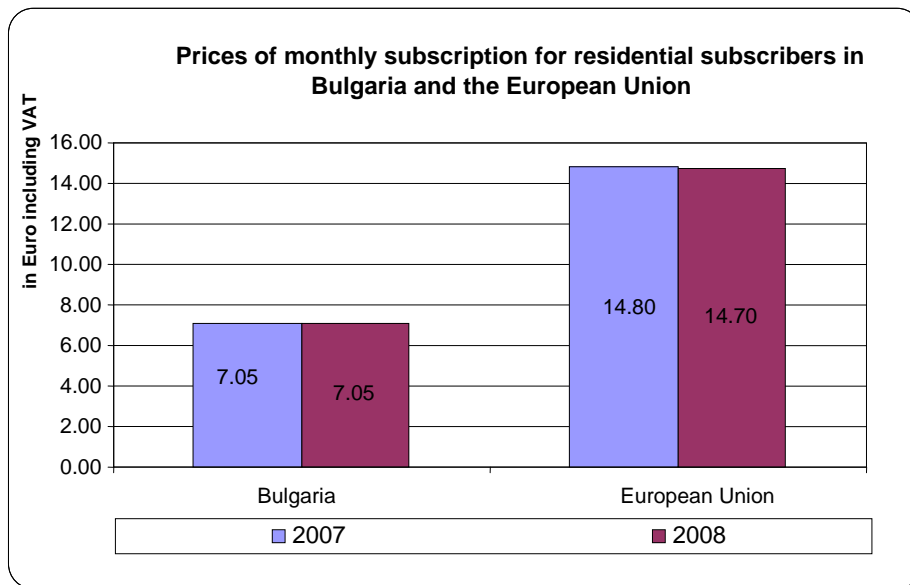
### ***Comparison<sup>12</sup> of monthly subscription prices***

Figure 22 and Figure 23 present the comparison of monthly subscription fees for residential subscribers and business clients of BTC AD in Bulgaria and those of the incumbents in the Member States for 2007 and 2008.

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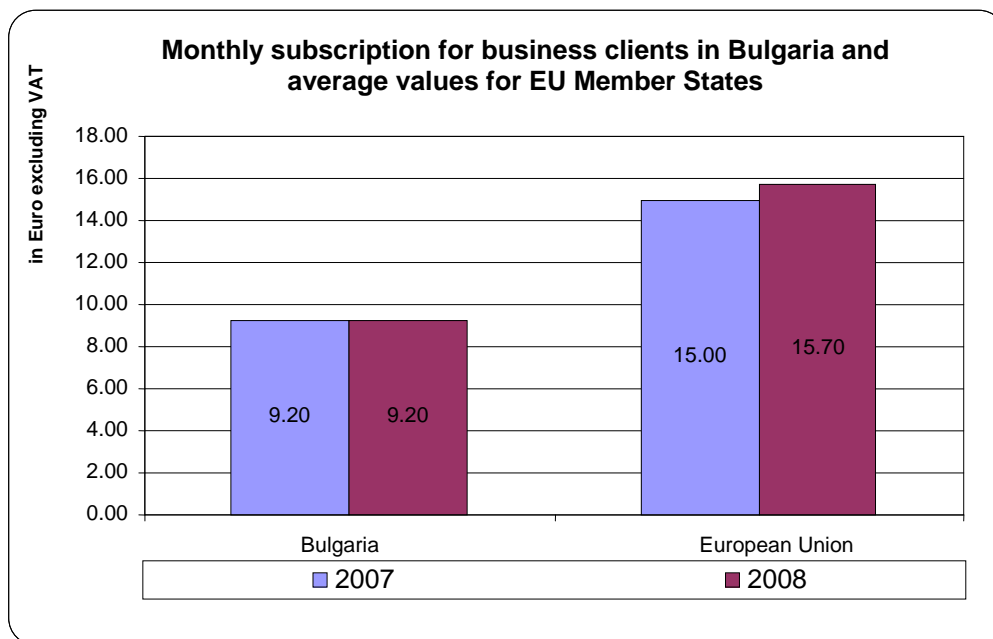
<sup>11</sup> Progress Report on the Single European Electronic Communications Market 2008 (14th Report), [http://ec.europa.eu/information\\_society/policy/ecomms/library/communications\\_reports/annualreports/14th/index\\_en.htm](http://ec.europa.eu/information_society/policy/ecomms/library/communications_reports/annualreports/14th/index_en.htm)

<sup>12</sup> The price for residential subscribers includes VAT, while the price for business clients is given without VAT.



*Source: Commission staff working document accompanying the Progress report on the single European electronic communications market 2008 (14th report)*

**Figure 22**



*Source: Commission staff working document accompanying the Progress report on the single European electronic communications market 2008 (14th report)*

**Figure 23**

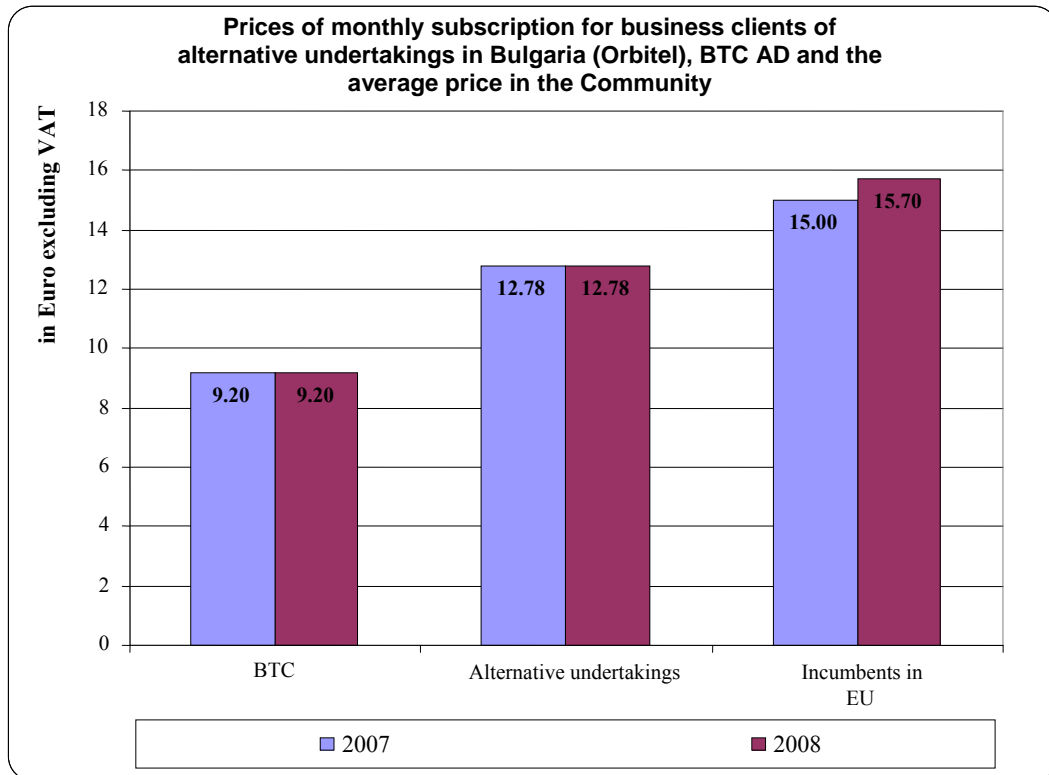
The above charts show that, in 2008, the monthly subscription price of BTC AD for residential subscribers and business clients maintained the same level as that in 2007. It is clear from the data that the monthly subscription price for residential subscribers in Bulgaria was still two times lower than the EU average, and for business clients - about 40 percent.

While in 2008, the monthly subscription prices in Bulgaria have not changed as compared to 2007, the EU average price for monthly subscription has changed as follows:

- Decrease of 0.68 percent in the average price for monthly residential subscription, in 2008, as compared to 2007;

- Increase of 4.67 percent in the average price for monthly business subscription, in 2008, as compared to 2007.

Figure 24 presents comparison of the monthly subscription prices for business clients charged by the alternative undertakings in Bulgaria (ORBITEL EAD), prices charged by BTC AD and EU average price.



*Source: Commission staff working document accompanying the Progress report on the single European electronic communications market 2008 (14th report), CRC data.*

**Figure 24**

As evident, the monthly subscription price for business clients of ORBITEL EAD has not changed compared to 2007. It is 38.89 percent higher than that of BTC AD, but 18.58 percent lower than the EU average.

### *Comparison<sup>13</sup> of call prices*

#### *Comparison of 2007 and 2008 prices of three-minute local and three-minute long distance calls of Bulgarian<sup>14</sup> and Community incumbents.*

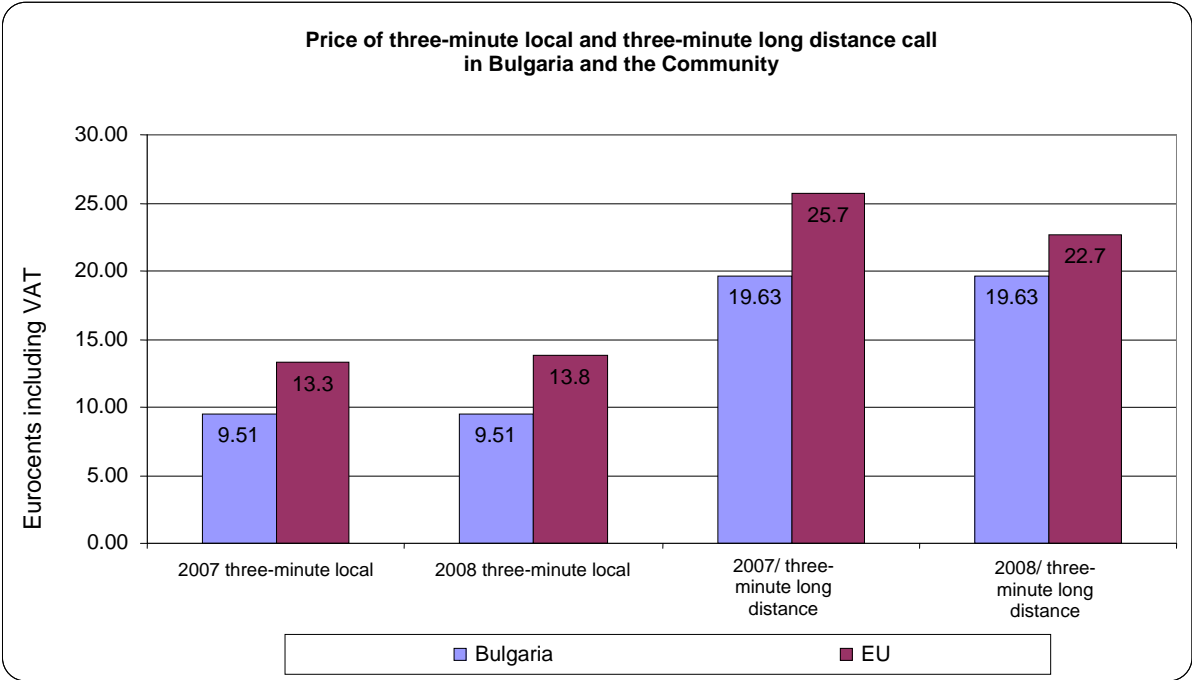
The prices of three-minute calls are compared applying the following correspondences:

- the value of a three-minute 3-km distance call in the EU corresponds to the value of a three-minute local call charged by BTC AD;
- the value of a three-minute 200-km distance call in the EU corresponds to the value of a three-minute long distance call charged by BTC AD;
- the comparison of BTC AD and EU three-minute local and long distance calls refers only to the peak-traffic time zone.

<sup>13</sup> Prices of BTC AD and the alternative undertakings are compared to the average price for the EU Member States per population as per the EC 14th Report.

<sup>14</sup> Standard call tariff for BTC AD subscribers is used in the comparison.

Figure 25 presents the dynamics of the three-minute local and three-minute long distance call prices, offered by BTC AD and the EU incumbents for the period 2007 – 2008.



**Source:** Commission staff working document accompanying the Progress report on the single European electronic communications market 2008 (14th report)

**Figure 25**

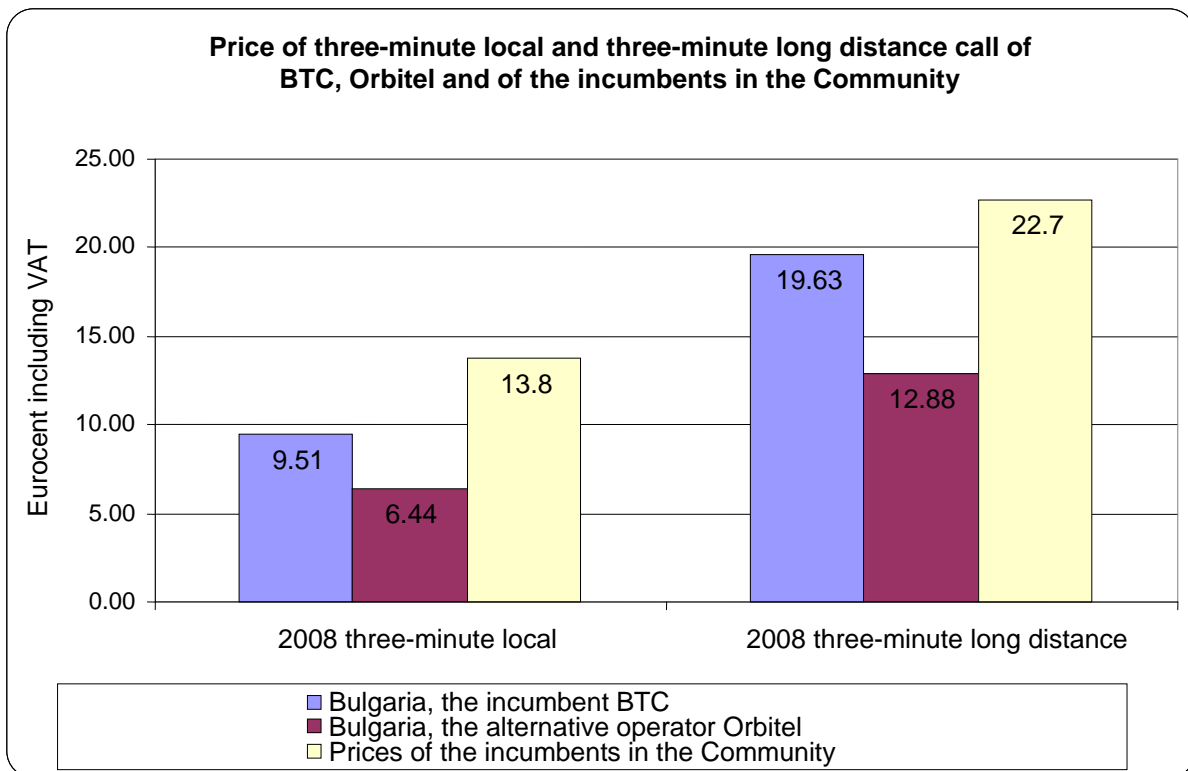
The chart shows that, in 2008, prices for local and long distance calls charged by BTC AD have not changed compared to 2007. Prices for three-minute local and three-minute long distance calls in the Community have changed during the same period, as that for local calls increased by 3.76 percent, while that for long distance calls decreased by 11.67 percent.

In 2008, the price of BTC AD for three-minute call is lower, in comparison with the price for three-minute call in the Community, by 31.09 percent for local and by 13.51 percent for long distance call.

**Comparison of 2008 prices for three-minute local and three-minute long distance calls in Bulgaria (BTC AD and alternative undertakings<sup>15</sup>) and in the Community (incumbents).**

Prices for three-minute local and long distance calls charged by BTC AD, ORBITEL EAD and the average price of the incumbents in the EU are compared in the chart below.

<sup>15</sup> The call price used in the comparison is that for ORBITEL EAD customer under standard plan.



*Source: Commission staff working document accompanying the Progress report on the single European electronic communications market 2008 (14th report)*

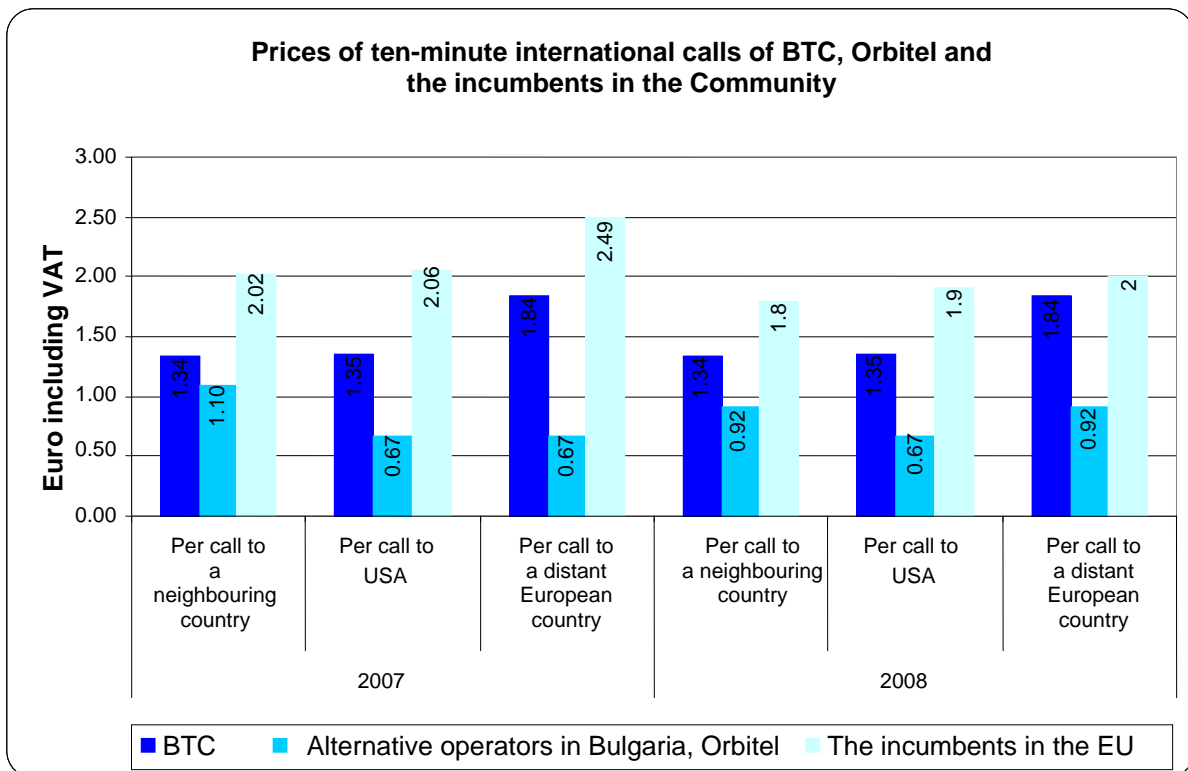
**Figure 26**

It is clear from the data that ORBITEL EAD offers the lowest price for local and long distance calls. The price of a three-minute local call in BTC AD network is 32.28 percent higher than the price of such a call in the networks of the alternative undertakings. The difference in the price of a three-minute long distance call in BTC AD network is almost the same, as the price for such a call is 34.38 percent higher compared to that of the alternative undertakings.

***Comparison of prices for ten-minute international calls in Bulgaria (BTC AD and alternative undertakings) and in the Community<sup>16</sup>***

Figure 27 presents the prices of ten-minute international calls to a neighbour country, a distant European country, and the USA, made by BTC AD customers and customers of the alternative undertaking in Bulgaria, as well as the average prices of such calls charged by the incumbents in the Community.

<sup>16</sup> The average price of international calls charged by EU incumbents according to 14th EC Report data and the prices charged by BTC AD and ORBITEL EAD according to CRC data are used in this comparison.



**Source:** Commission staff working document accompanying the Progress report on the single European electronic communications market 2008 (14th report)

**Figure 27**

The comparison shows that both BTC AD and ORBITEL EAD offer lower prices for international calls as compared to those in the Community. Also, ORBITEL EAD price for calls to a neighbour country records a slight decrease and falls in line with ORBITEL EAD price for calls to a distant European country. While BTC AD prices for calls to a neighbour country and to the USA are almost equal, while the price for calls to a distant European country is 27.17 percent higher.

## 2. Mobile cellular networks and services

### 2.1. Market players

At the end of 2008, those undertakings operating on the Bulgarian market for mobile cellular networks and services are no longer four but three – MOBILTEL EAD, COSMO BULGARIA MOBILE EAD, and BTC AD. The main reason for this is that, by Decision No. 1064/26.06.2008 and Decision No. 1391/04.08.2008, the CRC gave permission for the devolution of individual license No. 114-01053/04.11.2004 for providing telecommunications through public telecommunication mobile cellular network under NMT and/or CDMA standards with national coverage granted to RTC EOOD<sup>17</sup>, individual license No. 110-02889/14.10.2005 for providing telecommunications through public telecommunication mobile cellular network under GSM standard and individual license No. 111-03082/23.03.2006 for providing telecommunications through public telecommunication mobile cellular network under UMTS standard with national coverage granted to BTC MOBILE EOOD to BTC AD. In accordance with the decisions, the provision of electronic

<sup>17</sup> According to data submitted to the CRC, as of 31.12.2008, BTC AD has no end-users under NMT/CDMA standard.

communications, on the basis of the individual licenses specified, as a set of rights and obligations, henceforth will be carried out by BTC AD.

## **2.2. Infrastructure of the mobile cellular networks**

The table below presents the mobile networks coverage as of 31.12.2008.

**Table No. 3**

<b>operator</b>  <b>indicator</b>	<b>Mobiltel EAD</b>		<b>Cosmo Bulgaria Mobile EAD</b>		<b>BTC AD</b>	
	<b>GSM</b>	<b>UMTS</b>	<b>GSM</b>	<b>UMTS</b>	<b>GSM</b>	<b>UMTS</b>
<b>Coverage per territory</b>	98.80 %	12.40 %	98.92 %	38.58 %	95.40 %	4.40 %
<b>Coverage per population</b>	99.92 %	61.39 %	99.96 %	75.69 %	99.70 %	43.00 %

*Source: Data submitted to CRC*

At the end of 2008, COSMO BULGARIA MOBILE EAD was once again the undertaking with the highest UMTS network coverage by territory and by population – 38.58 percent and 75.69 percent respectively, representing an increase, in comparison with 2007, by approximately 15 and 27 percentage points.

## **2.3. Development of the mobile telephone services market**

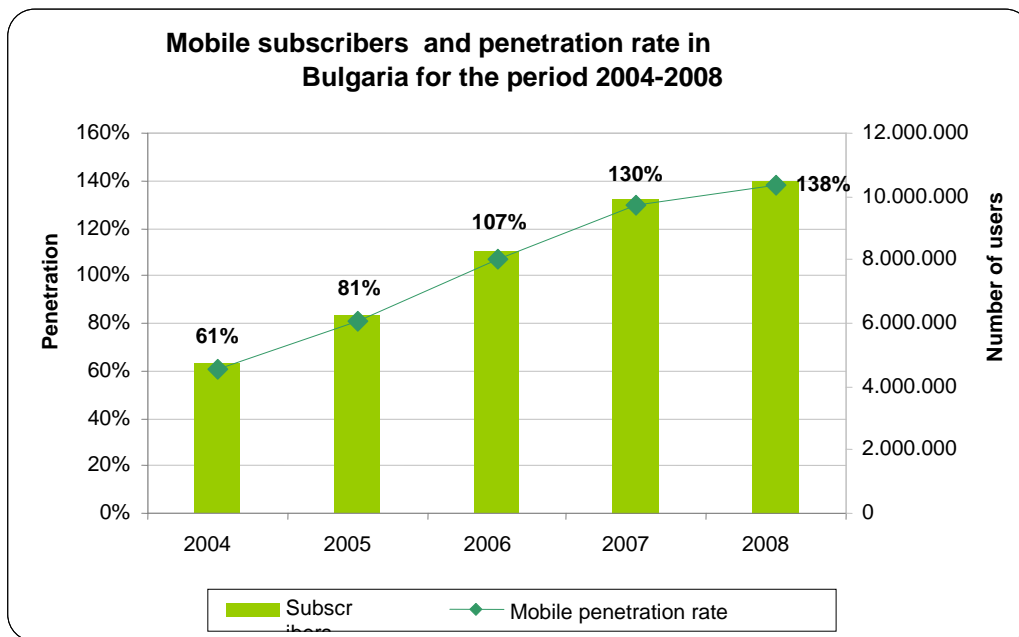
### ***Dynamics and market development***

The Bulgarian mobile networks and services segment is a leader in total market volume for another year and keeps developing dynamically under the conditions of intense competition and market saturation.

Total revenues from the provision of mobile services continue growing: for a one-year period, they have increased by 8.2 percent and, at the end of 2008, amounted to BGN 2.2 billion (62.7 percent of total Bulgarian electronic communications market volume).

The number of mobile subscribers has increased by 6 percent as compared to the end of 2007, which is 14 percentage points less in comparison with the increase in 2007 compared to 2006, as their total number at the end of the year reached 10 500 186<sup>18</sup>. The downward growth rate in users' number, as well as the significant penetration rate of mobile services on the market, clearly indicates that the market is highly saturated, and enters upon the maturity phase of the product life cycle.

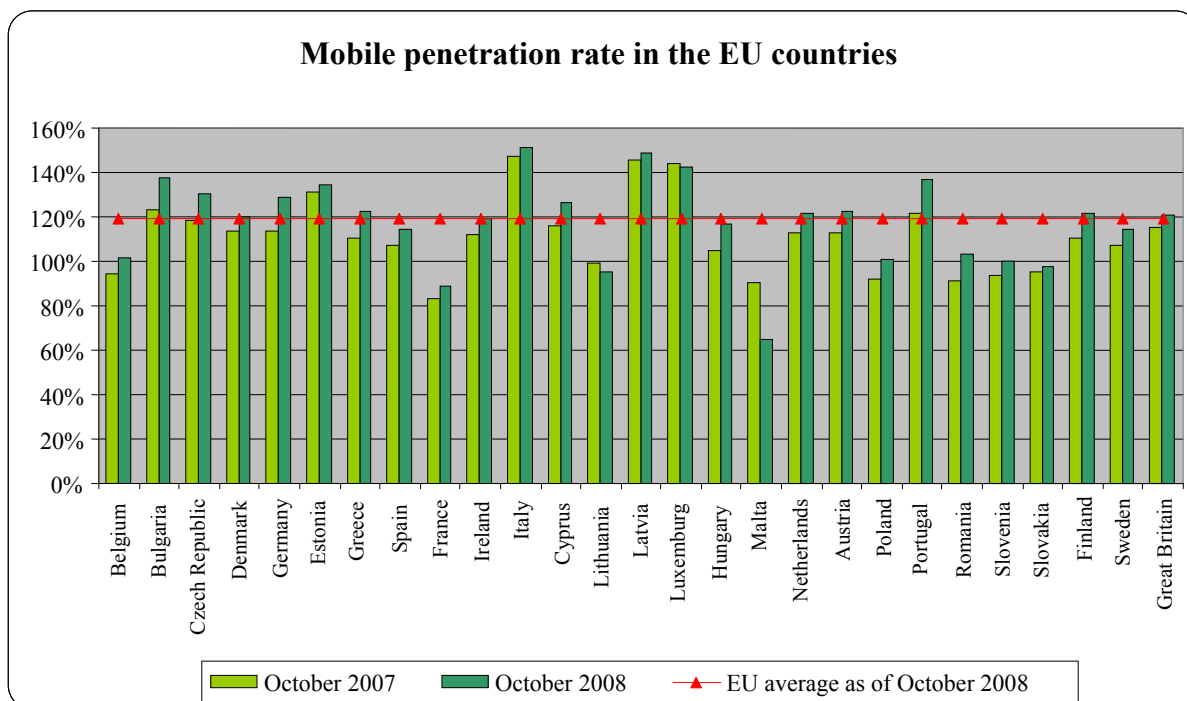
<sup>18</sup> Includes number of active subscribers under contract and number of active pre-paid cards (valid within a period of 12 months)



Source: Data submitted to CRC

Figure 28

Mobile services penetration rate has increased by eight percentage points for a one-year period, and by the end of 2008, this indicator reached 138 percent of the population in the country, which means that the number of consumers using more than one SIM card is growing. Bulgaria has already outpaced the majority of EU Member States by mobile telephone penetration indicator (Figure 29).



Source: Commission staff working document accompanying the Progress report on the single European electronic communications market 2008 (14th report)

Figure 29

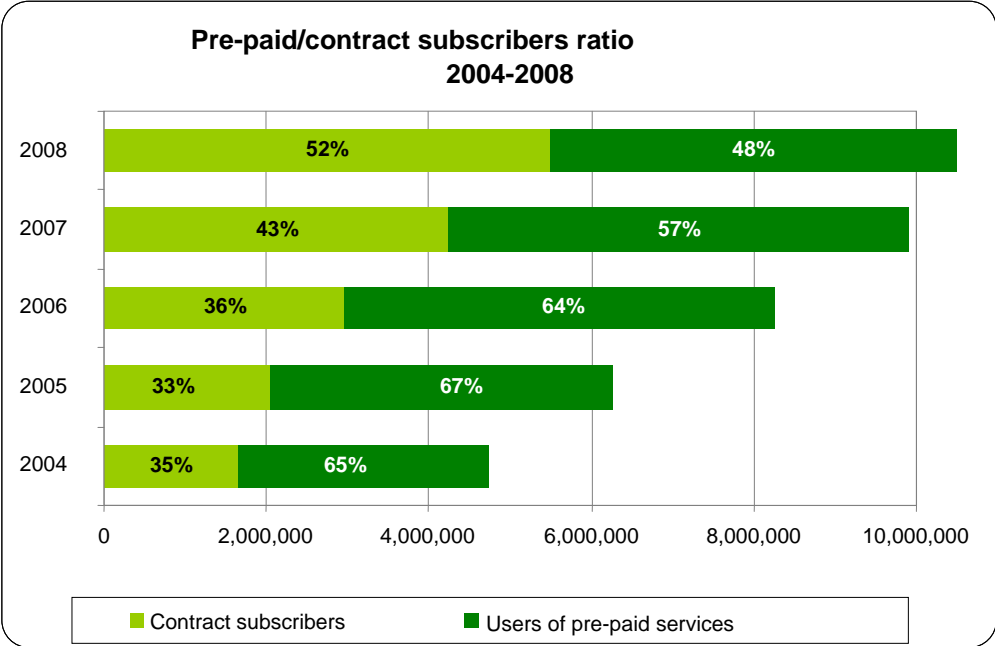
It should be noted, however, that the method of reporting pre-paid cards as active users influences the value of the „mobile telephone services penetration rate” indicator – in some



EU countries as active are considered the users that have made or received a call or sent an SMS in the last 6 or 9 months, while in other countries this period is only 3 months<sup>19</sup>. Mobile undertakings in Bulgaria report as active all users of prepaid services, having purchased and recharged a SIM card credit at least once every 12 months, which is a relatively long period compared to the European Union countries.

**Pre-paid/ contract subscribers ratio**

In 2008, for the first time, as shown in the chart below, contract subscribers are more than the users of pre-paid services (52/48). At the end of 2008, the new clients entered into contract during the year were already 43 percent, while in 2007 they were only 36 percent.



*Source: Data submitted to CRC*

**Figure 30**

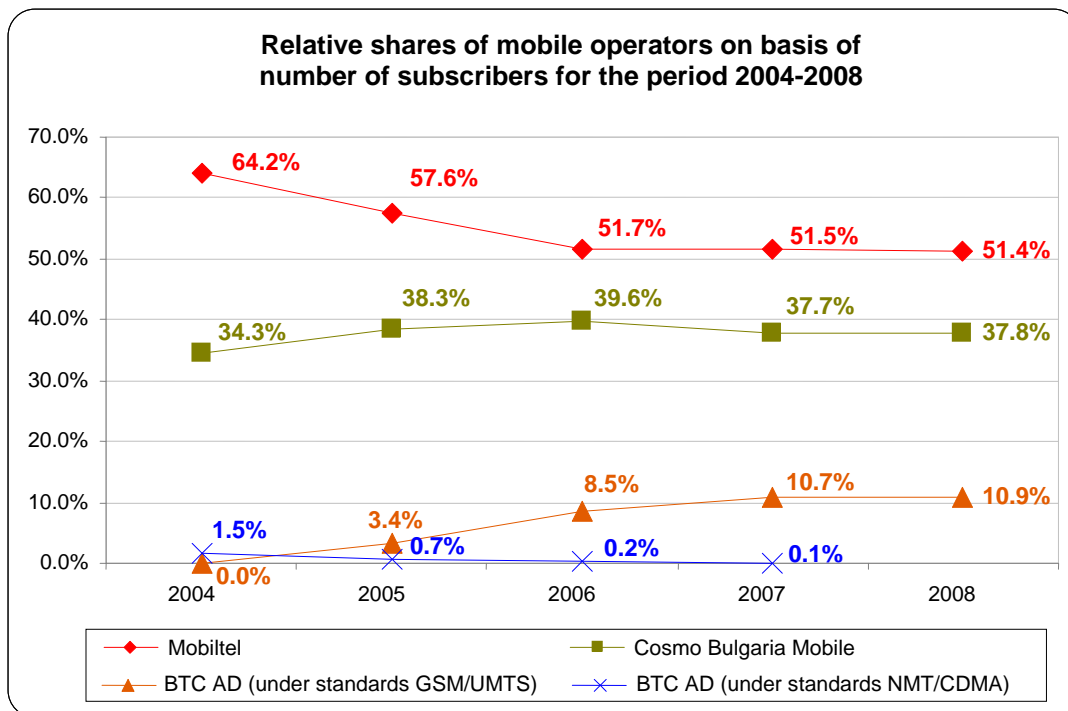
The average EU pre-paid/contract subscribers ratio is 58/42, varying significantly by countries - in Italia and Malta, for example, about 90 percent of all mobile clients use pre-paid cards, whereas in Finland the share of pre-paid users is only 10 percent.<sup>20</sup>

**Relative shares**

Changes in undertakings relative shares estimated on the basis of subscribers’ number, as well as revenues from the provision of voice telephony and other services through their mobile networks, for the period 2004-2008, are presented in Figure 31 and Figure 32.

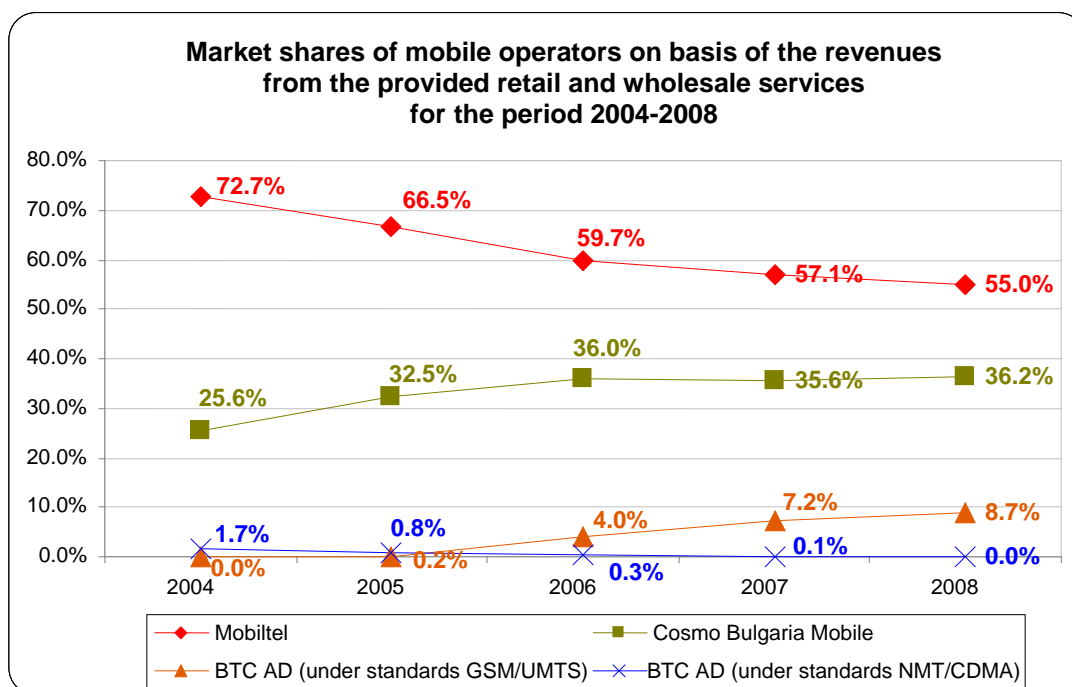
<sup>19</sup> Commission staff working document accompanying the Progress report on the single European electronic communications market 2008 (14th report)

<sup>20</sup> Commission staff working document accompanying the Progress report on the single European electronic communications market 2008 (14th report)



Source: Data submitted to CRC

Figure 31



Source: Data submitted to CRC

Figure 32

The analysis of the relative shares estimated on the basis of the number of subscribers of each undertaking clearly indicates that the market structure existing hitherto is maintained, as practically no changes are registered compared to the previous year.

With regard to the relative shares estimated on revenues basis, a negligible redistribution of income from the provision of mobile networks and/or services was observed. Within a one-year period, the market share of the dominant undertaking has fallen by just over 2 percentage points, while the market shares of COSMO BULGARIA MOBILE EAD and BTC AD increased by 0.6 and 1.5 percentage points respectively, in comparison with the previous year.

### *Undertakings with significant market power*

After carrying out of an analysis and the designation of undertakings with significant market power, it will be possible to impose obligations for cost orientation, including in respect of charges for mobile termination.

Pursuant to § 7 of the Transitional and Final Provisions of the LEC, the obligations imposed under TA (repealed) on MOBILTEL EAD and COSMO BULGARIA MOBILE EAD, which are designated undertakings with significant market power, remain effective until the CRC decisions, imposing specific obligations on undertakings designated as having significant market power, under the LEC, enter into force.

Meanwhile, in the transitional period until the relevant markets analyses are completed, by Decision No. 2/03.01.2008, CRC imposed obligations on MOBILTEL EAD and COSMO BULGARIA MOBILE EAD to abide by a downward glide path of fixed to mobile termination charges<sup>21</sup>.

By its Decision No. 1962/11.09.2008, CRC adopted a draft decision for determining the market of voice call termination on individual mobile networks as relevant market susceptible to ex ante regulation, analyzing and evaluating the presence of effective competition in the relevant market, designating the undertakings with significant market power and imposing specific obligations on those undertakings, and launched a public consultation on this draft decision. After considering the notes and comments from the public consultation, by Decision No. 2429/19.12.2008, CRC adopted the results of the public consultation and a draft decision for determining, analyzing and evaluating the market of voice call termination on individual mobile networks, which was submitted to the EC and the regulatory authorities of the EU Member States.

As a result of the market analysis carried out, aiming at the evaluation of the presence of preconditions preventing the effective competition in the considered market of voice call termination on individual mobile networks, CRC arrived at the conclusion that it should designate:

- MOBILTEL EAD as an undertaking with significant market power in the wholesale market of voice call termination on its own mobile network under GSM and UMTS standards;
- COSMO BULGARIA MOBILE EAD as an undertaking with significant market power in the wholesale market of voice call termination on its own mobile network under GSM and UMTS standards;
- BULGARIAN TELECOMMUNICATION COMPANY AD as an undertaking with significant market power in the wholesale market of voice call termination on its own mobile network under GSM and UMTS standards;
- BULGARIAN TELECOMMUNICATION COMPANY AD as an undertaking with significant market power in the wholesale market of voice call termination on its own mobile network under NMT and/or CDMA standards, and impose the following specific

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<sup>21</sup> Specific prices can be found in the above Decision

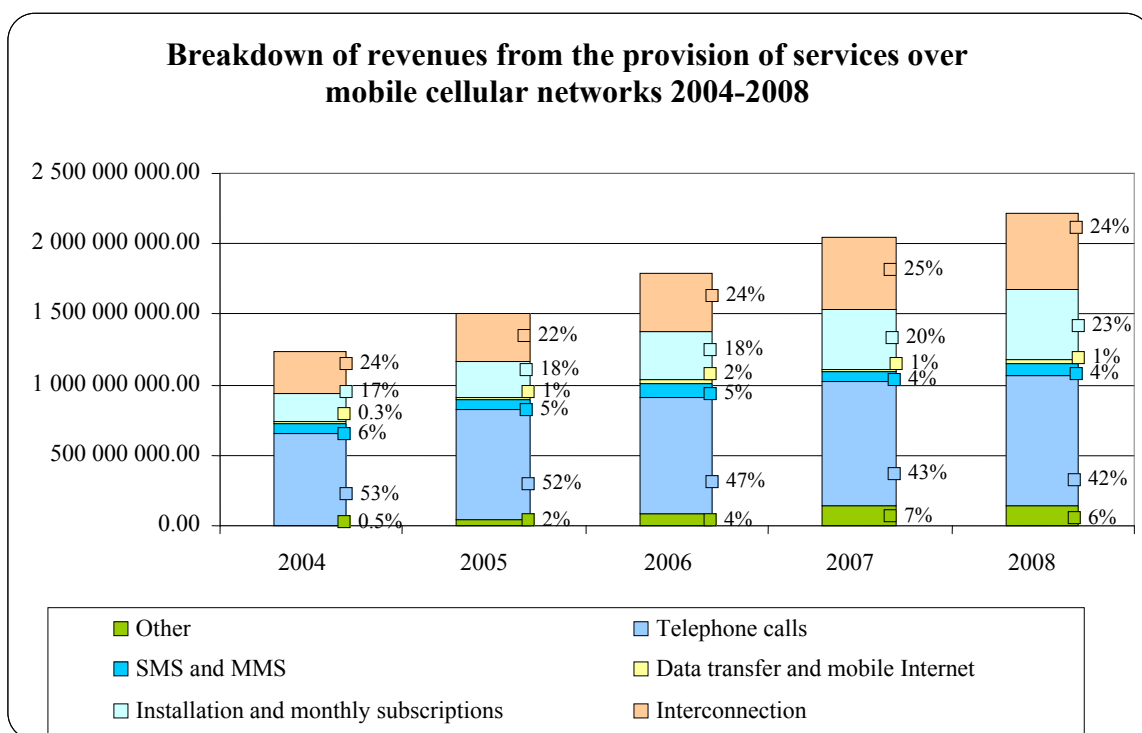
obligations on undertakings with significant market power:

- obligation for access to and use of necessary network facilities and equipment;
- transparency;
- non-discrimination;
- accounting separation;
- cost-oriented prices and price restrictions;

## 2.4. Services

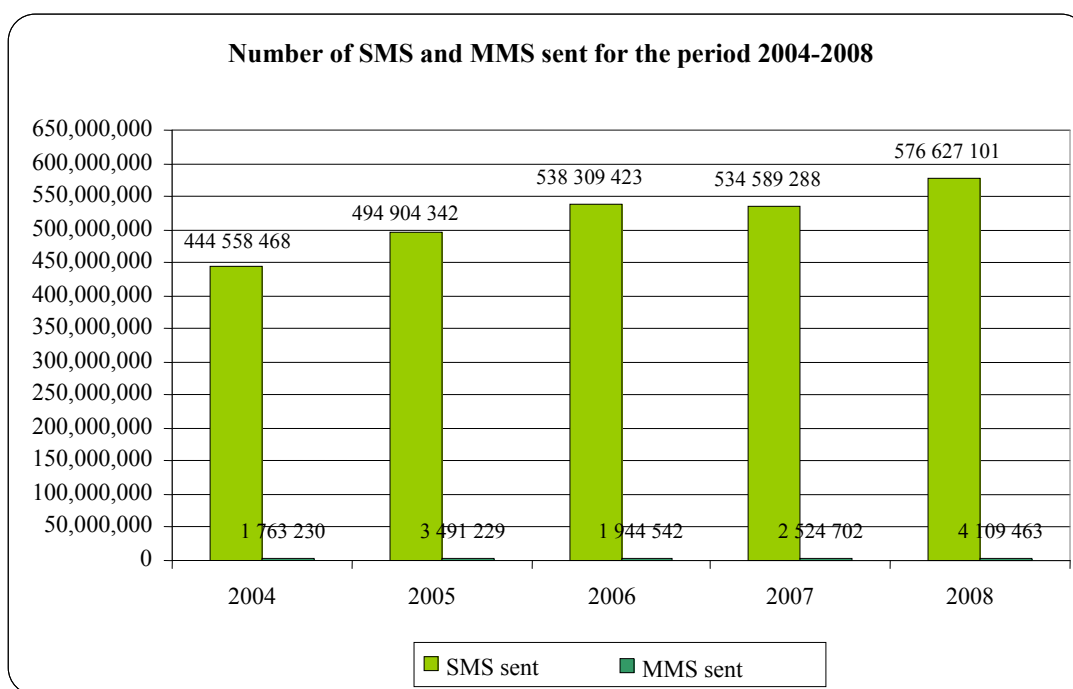
### *Breakdown of revenues from services provided through mobile networks*

Voice telephony remains operators' main source of revenues, accounting for about 42 percent of the total revenues from mobile services. The actual share of voice services is even higher, given that revenues from call minutes included in tariff plans are accounted as revenues from monthly subscriptions – in 2008 these revenues have increased by 3 percentage points and represented 23 percent of the total revenues. The share of data services - mobile Internet, SMS and MMS services has not been subject to any changes in 2008 – together they generated only 5 percent of mobile companies' revenues (Figure 33).



*Source: Data submitted to CRC*

**Figure 33**



*Source: Data submitted to CRC*

**Figure 34**

In 2008, the total number of multimedia messages sent (MMS) has increased by 63 percent as compared to 2007, and text messages sent (SMS) were 8 percent more than the previous year.

***New services offered by mobile undertakings in 2008***

In 2008, the mobile undertakings continued to offer many new services including bundled and integrated services based on new technology applications, data services, and mobile access to content and services (Table No. 4).

**Table No. 4**

**New electronic communications services offered in 2008**

Operator	Service
<b>MobilTel EAD</b>	<ul style="list-style-type: none"> <li>• M-Tel Spot</li> <li>• Extra SIM</li> <li>• Mobile.bg</li> <li>• Ticket booking</li> <li>• M-Tel HomeBox</li> <li>• M-Tel OfficeBox</li> <li>• M-Tel VoiceBox</li> </ul>
<b>Cosmo Bulgaria Mobile EAD</b>	<ul style="list-style-type: none"> <li>• FROG Mobile</li> <li>• Globul National Contact</li> <li>• Globul Mobile Meeting</li> <li>• Student Zone</li> <li>• Online again</li> <li>• Go Web bundles</li> <li>• Automated b-connect recharge through the web portal MyGLOBUL</li> </ul>
<b>BTC AD</b>	<ul style="list-style-type: none"> <li>• Online again</li> <li>• Mobile facebook</li> <li>• Business SMS</li> </ul>

*Source: Data submitted to CRC*

One of the trends observed also in 2008, is the ongoing practice of mobile undertakings to rely on converged and/or bundled services that combine mobile and fixed communications.

COSMO BULGARIA MOBILE EAD was the first operator offering an integrated telephone service with both mobile and fixed numbers in a single mobile handset within a user-defined area – initially only for business clients in 2007 (Office Zone), and in 2008, a similar service (Student Zone) was offered to separate private user segments - students and lecturers in some of the larger university cities in the country.

In the beginning of the year, MOBILTEL EAD also commenced offering fixed telephone service bundled with mobile number and Internet - the VoiceBox service including fixed and mobile number in a single end-user device, as well as the HomeBox service and the OfficeBox service providing fixed wireless access to Internet in addition to the voice service for home and business clients respectively.

BTC AD launched new bundled service as well – the “Harmonia” service combining mobile connection and Internet (ADSL).

### *New services expected in 2009*

Mobile undertakings keep on renewing their portfolios and offering new services in addition to the mobile telephony. In 2009, some of the undertakings are expected to enter new market segments such as cable TV and fixed Internet. The provision of joint services along with other undertakings – Internet providers, providers of television services and content, emerges as a trend.

## **2.5. Prices and pricing policy**

### *Mobile service usage baskets*

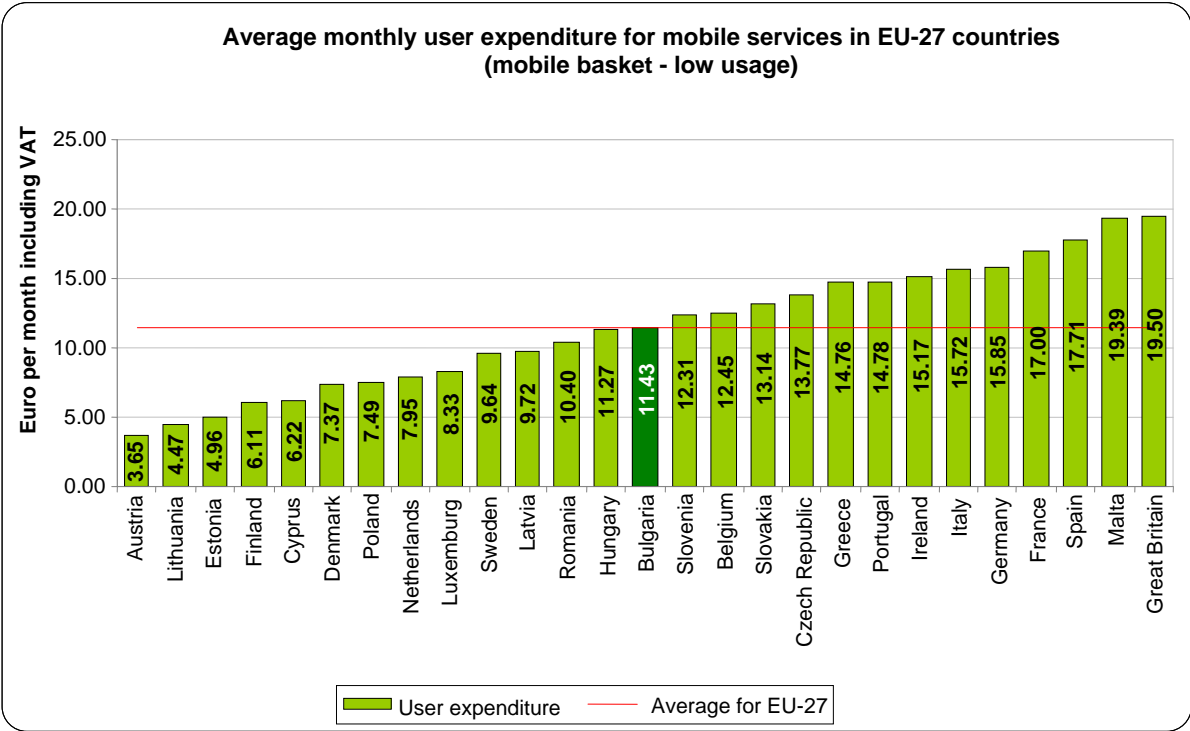
The charts below present the expenditure of mobile service users in Bulgaria and in the other EU Member States, as of 01.10.2008, estimated on the basis of the three mobile baskets - for low, medium, and high usage, of the Organization for Economic Cooperation and Development (OECD), revised in the beginning of 2006. The average monthly expenditure is given in Euro and is estimated on basis of installation charges, monthly subscription, one-minute call charges, and SMS and MMS charges, corresponding to the tariff plan considered. Each basket contains OECD-established average usage pattern including the following elements:

- low usage basket: it contains 33 short text messages and 30 outgoing calls per month, 22 percent of the calls being to fixed telephone lines, 70 percent - to mobile phones (48 percent on-net calls and 22 percent off-net calls) and 8 percent - for voicemail;
- medium usage basket: it contains 50 short text messages and 65 outgoing calls per month, 21 percent of the calls being to fixed telephone lines, 72 percent - to mobile phones (48 percent on-net calls and 24 percent off-net calls) and 7 percent - for voicemail;
- high usage basket: it contains 55 short text messages and 140 outgoing calls per month, 20 percent of the calls being to fixed telephone lines, 73 percent - to mobile phones (47 percent on-net calls and 26 percent off-net calls) and 7 percent - for voicemail.

Each basket has a specific pattern of peak and off-peak time calls, as well as different call duration.

Tariff plans of the two largest undertakings (based on number of subscribers) in each country are used for the estimation of expenditure levels in different states, exclusive of any discount packages. For each usage level, the charts present the most advantageous option (the cheapest tariff plan for the usage pattern chosen) for each country including Bulgaria.

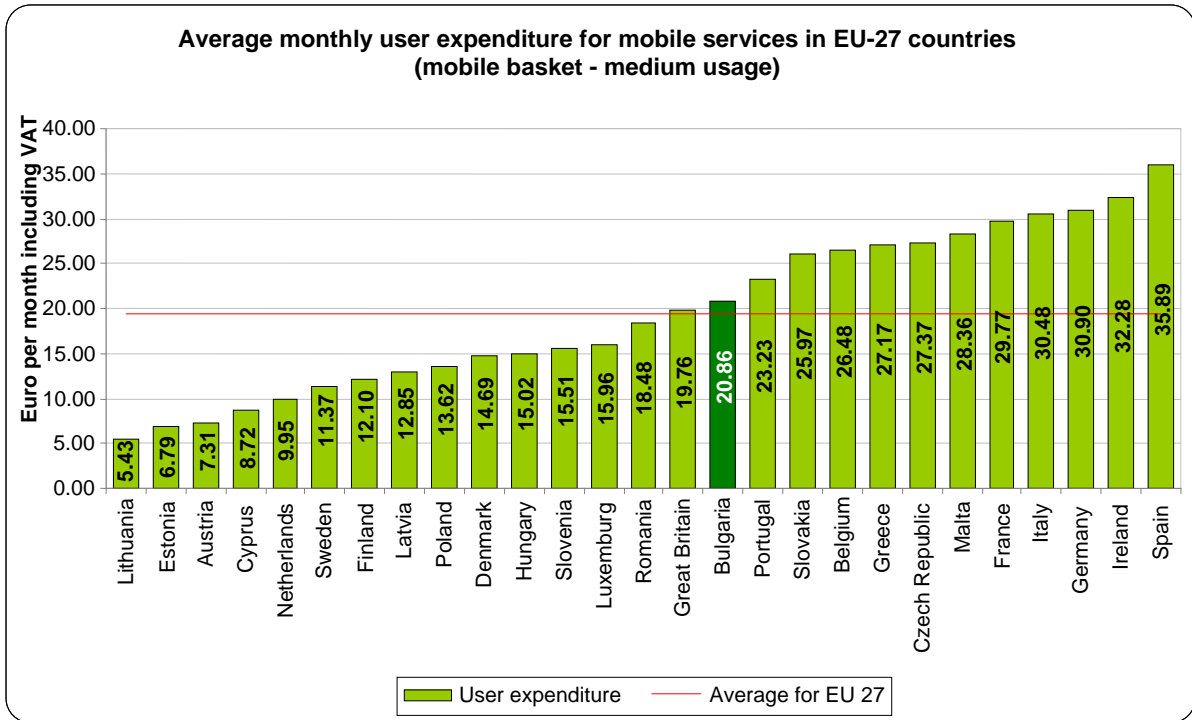
Full description of the baskets can be found on the website of Teligen Ltd<sup>22</sup>.



**Source:** Commission staff working document accompanying the Progress report on the single European electronic communications market 2008 (14th report)

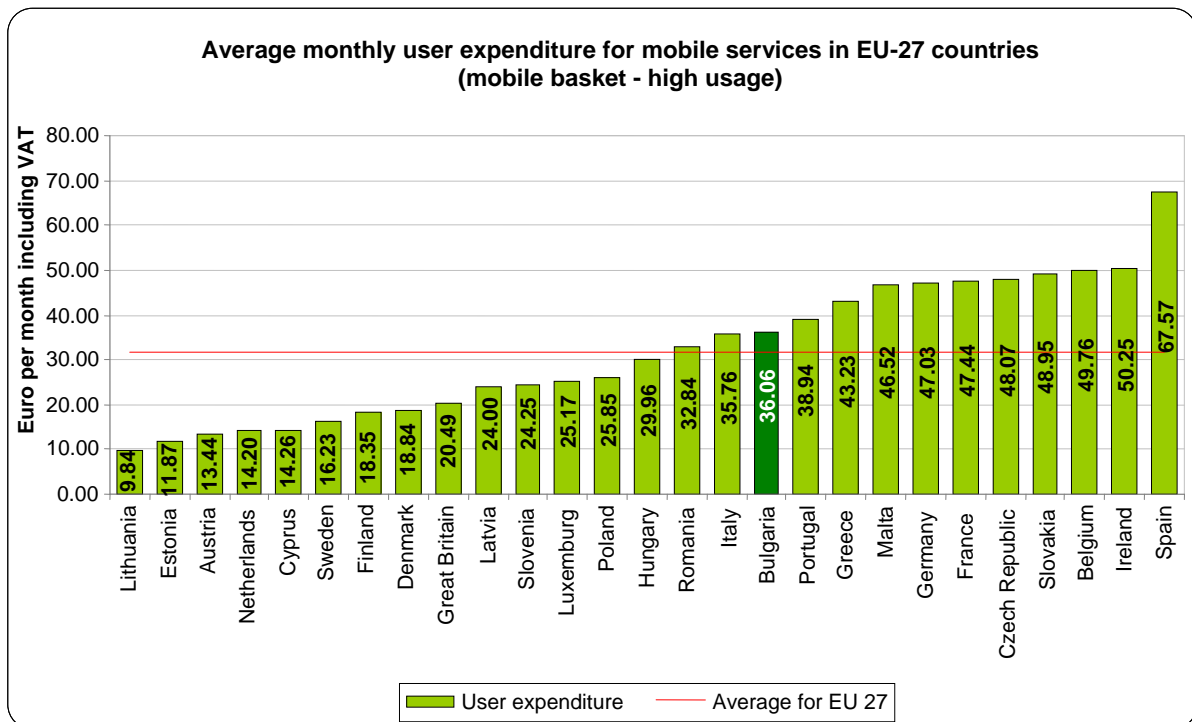
**Figure 35**

<sup>22</sup> <http://www.teligen.com/publications/oecd.pdf>



*Source: Commission staff working document accompanying the Progress report on the single European electronic communications market 2008 (14th report)*

**Figure 36**



*Source: Commission staff working document accompanying the Progress report on the single European electronic communications market 2008 (14th report)*

**Figure 37**

As evident from the figures above, the average monthly expenditure of mobile service users in Bulgaria estimated on the basis of low usage basket is slightly below the average European level, amounting to 11.43 Euros, while in the other two baskets it is above the EU average by



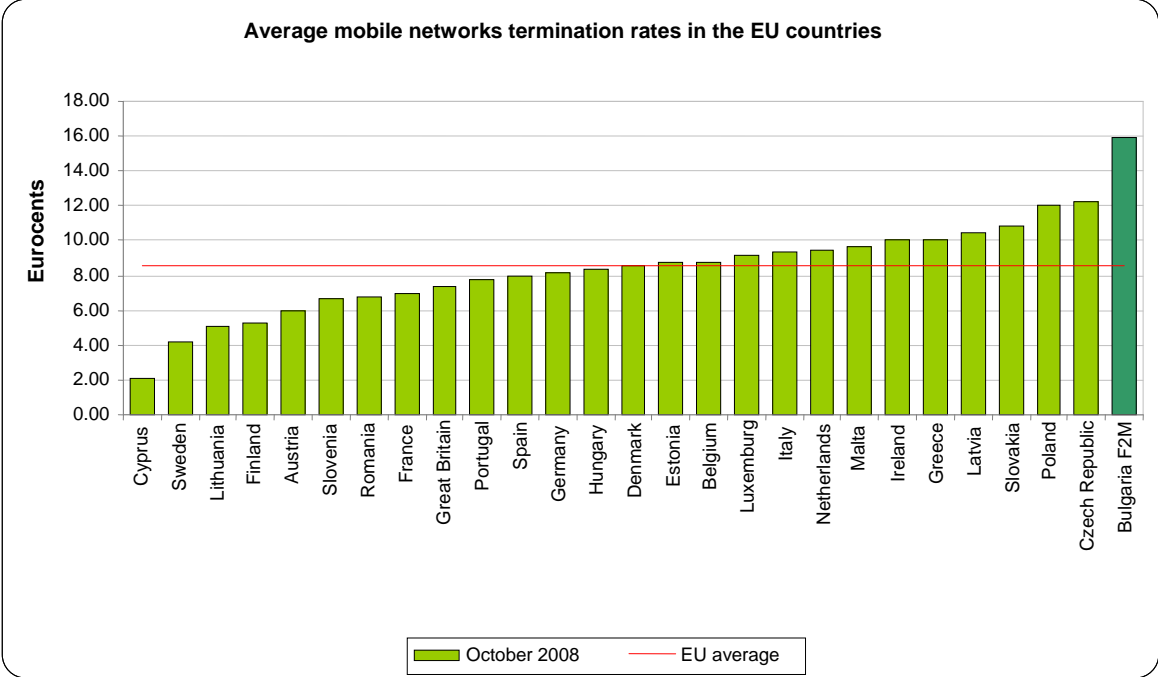
7 percent and 13 percent respectively. According to data from a survey<sup>23</sup> conducted by Alpha Research, almost half (47 percent) of the mobile undertakings' subscribers have average monthly expenditure for mobile services up to BGN 20 (about EUR 10.3), wherefrom an inference can be made that, although in the estimation of user expenditure are used average usage levels for the OECD countries, which do not take account of the specific usage in Bulgaria, the low usage basket is the most suitable. This is proved by the 2008 monthly weighted average revenue per user<sup>24</sup> of mobile operators in Bulgaria, which is about 18 percent lower than the value in the low usage basket (Figure 35) of BGN 18.30 (€9.35) per month in Bulgaria.

It should be noted that both mobile undertakings in Bulgaria offer a variety of promotions to end-users, related to monthly subscriptions discounts for certain tariff plans, additional minutes for outgoing calls, etc., which, accordingly, lower the average monthly users' expenditure presented above.

***Charges for traffic termination on the mobile undertakings' networks***

End-user prices for mobile services depend both on the pricing strategies of the companies themselves, and on the agreements for interconnection of BTC AD, the alternative fixed undertakings and between mobile undertakings.

Figure 38 presents a comparison of charges for fixed to mobile termination to those in the other European countries.



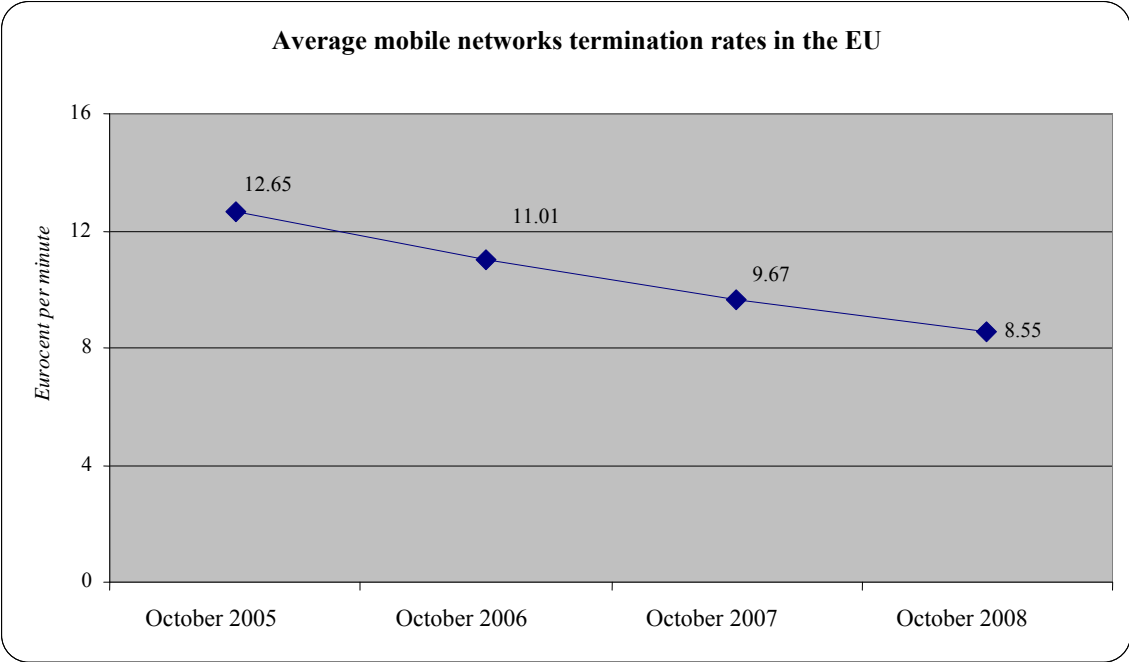
**Source:** Commission staff working document accompanying the Progress report on the single European electronic communications market 2008 (14th report)

**Figure 38**

<sup>23</sup> A research conducted by Alpha Research – Mobile Communications, dated 06.03.2008 ([http://www.aresearch.org/mobile\\_communications/1489.html](http://www.aresearch.org/mobile_communications/1489.html))

<sup>24</sup> Average Revenue per User (ARPU) of mobile operators weighted by the number of their users. The indicator is estimated on basis of 2008 ARPU values submitted by mobile undertakings

As apparent from the chart, as of October 2008, Bulgaria was the country with the highest prices for call termination on mobile networks although for the period of one year they have decreased by approximately 15 percent.



**Source:** Commission staff working document accompanying the Progress report on the single European electronic communications market 2008 (14th report)

**Figure 39**

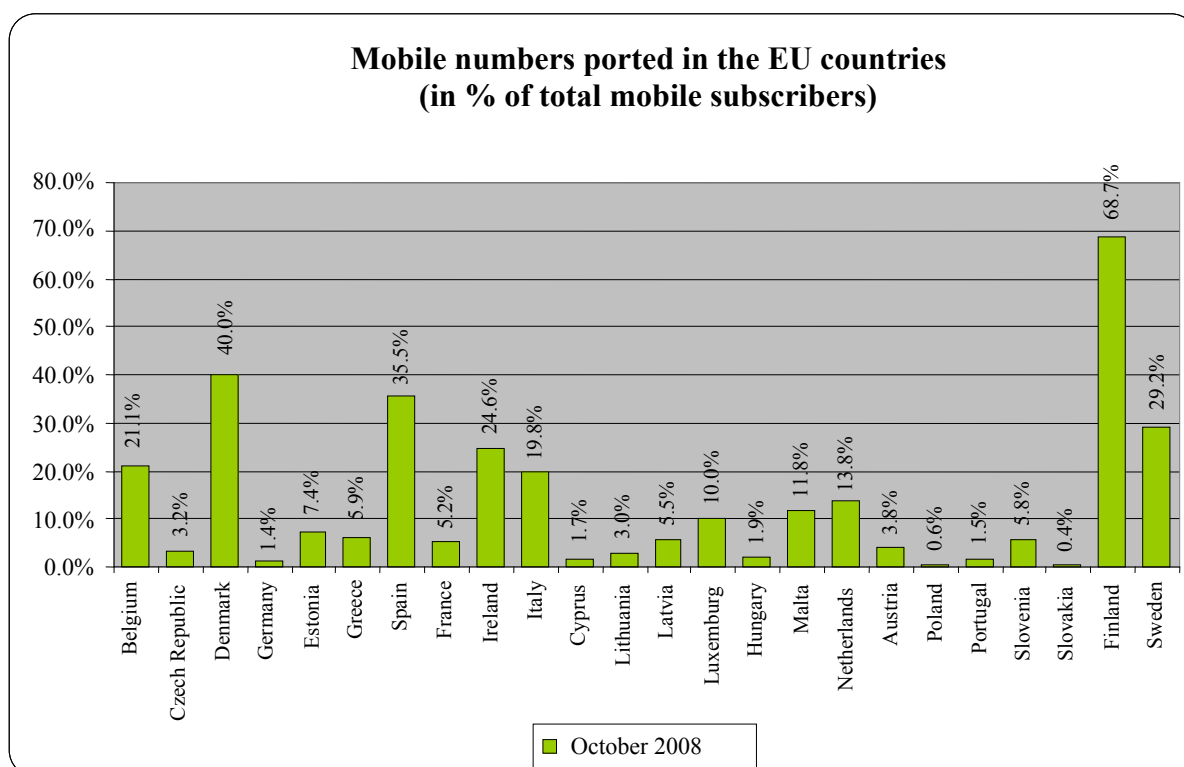
The chart above shows that average mobile termination rates in EU countries (2007 data for Bulgaria and Romania are included) are 11.6 percent down for a one-year period.

According to the CRC Decision, mentioned in para. 2.3., of 01.01.2009, fixed to mobile termination rates in the country should decrease, compared to those valid from 01.02.2008, by 17 percent and 23 percent for peak and off-peak time respectively.

**Development outlook**

The future development of the mobile networks and services market will be focused, to a greater extent, on the redistribution of current subscribers, and to a lesser extent, on attracting new customers (with lower purchasing power, hence less attractive ones).

Since the introduction of the number portability service (April 2008), by the end of the year, there were approximately 24 000 ported numbers between the undertakings providing mobile services in the country, but they still represented a very small proportion of the total number of mobile services customers - about 0.25 percent.



*Source: Commission staff working document accompanying the Progress report on the single European electronic communications market 2008 (14th report)*

**Figure 40**

As evident from the chart, the number of ported numbers is the highest in Finland – 69 percent of the total number of subscribers, followed by Denmark (40 percent) and Spain (36 percent). In the new EU Member States, the service is still less popular which is due to the late introduction of number portability in those countries.

On the other hand, CRC believes that the specific obligations imposed on the undertakings, having significant market power on the market for voice call termination on individual mobile networks, will have impact on the achievement of more effective competition in the mobile networks and services market.

### **3. Interconnection and unbundled access**

The obligations for cost-oriented prices for interconnection and for unbundled access, under the TA (repealed), remained in force in 2008 too. In pursuance of the obligation specified, BTC AD applies a cost accounting system, approved by CRC Decision No. 1049/15.04.2004 and amended by CRC Decision No. 158, dated February 28, 2008. The cost accounting system is based on the Fully Allocated Costs methodology (FAC), as depreciation costs are calculated on the basis of current value of fixed assets, and is based on the cost causation principle, which means that costs shall be attributed to the services that caused them, using the ABC (Activity Based Costing) method.

#### **3.1. Interconnection charges**

By Resolution No. 1647, dated 13.02.2008, the Supreme Administrative Court (SAC) delivered a final judgment on the litigation between BTC AD and the regulator regarding the Reference Interconnection Offer (RIO), approved by CRC Decision No. 572/30.03.2006, confirming the decision of the CRC. The RIO price restrictions imposed by the CRC came into force, and virtually, in 2008, BTC AD renewed the interconnection agreements

concluded with the competitors, in accordance with the non-discrimination principle of the company obliged.

Notwithstanding the foregoing, in 2008 with the change of off-peak hours, BTC AD proposed a downward glide path of termination rates at local, metro, single, and double segment, as well as in carrier-selection charges for single segment on the BTC AD network in off-peak hours. The reduction in interconnection charges is a result of the CRC regulatory intervention during the assessment of the company's proposal for amendment of fixed voice telephony charges, approved by Decision No. 150/25.02.2008. The interconnection charges under the agreements concluded in 2008 are given in the table below:

**Table No. 5**

Charges for traffic services (BGN per minute)	2008 charges according to interconnection agreements under Decision No. 572 / 30.03.2006	
	Peak time	Off-peak time
Fixed-to-fixed termination on the BTC AD network:		
Local level	0.0165	0.0145
Metro level	0.0230	0.0208
Single transit	0.0270	0.0240
Single transit – termination of international calls	dropped	dropped
Double transit	0.0600	0.0530
Double transit - termination of international calls	dropped	dropped
Mobile-to-fixed termination on the BTC AD network	0.0600	0.0530
Transit traffic		
Single transit	0.024	0.024
Double transit	0.055	0.055

The downward glide path of termination rates and carrier selection prices in off-peak hour, proposed by BTC AD and approved by CRC, is given in the table below:

**Table No. 6**

Segment for termination BGN/min.	Active prices	Valid from:				
		April 2008	August 2008	December 2008	July 2009	December 2009
Local	0.0170	0.0140	0.0115	0.0110	0.0100	0.0095
Metro	0.0208	0.0180	0.0140	0.0120	0.0110	0.0100
Single	0.0240	0.0180	0.0140	0.0120	0.0110	0.0100
Double	0.0530	0.0370	0.0250	0.0210	0.0180	0.0160
Carrier-selection (CS)	0.0260	0.0195	0.0152	0.0130	0.0119	0.0118
Carrier pre-selection (CPS)	0.0286	0.0215	0.0167	0.0143	0.0131	0.0130

In September 2008, by Decision No. 1963, CRC launched a public consultation on a decision and a draft market analysis regarding the markets of call origination and call termination from/at a fixed location on public telephone networks. Given the results of the analysis, CRC decided in favour of continuation of the obligation for cost-orientation of termination rates. Noting the fact that call origination rates are not listed in the approved RIO, and that call origination costs correspond to call termination costs on the BTC AD network, as the difference is in transmission direction, namely from end-user to interconnection point, the

regulator imposed origination rates that are reciprocal to the termination rates. Until the determination of cost-oriented prices, CRC chose to impose an obligation for price limits in the form of downward glide path of charges in order to reach the average European level. This measure is considered appropriate in view of counteraction to the anti-competitive behavior of BTC AD reflected in excessive and/or predatory prices, which would lead to closed network traffic and consequently to market closure.

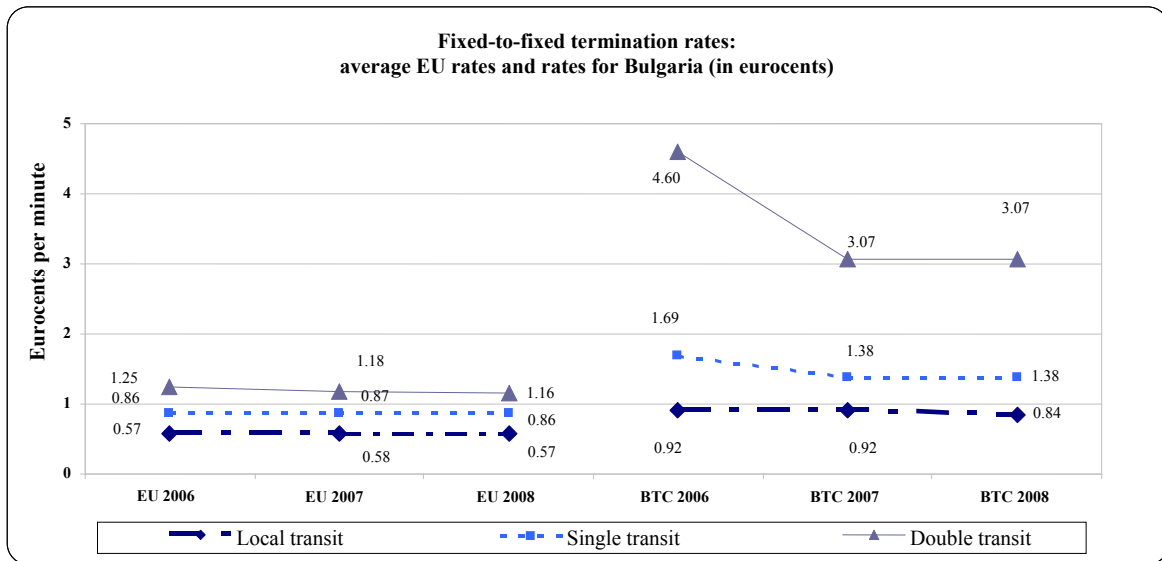
After the conclusion of the public consultation, in December 2008, CRC notified the EC and submitted the said analysis for recommendations and comments from the EC and the regulatory authorities of the Member States.

#### ***Bulgaria - EU comparison of termination rates***

As mentioned above, the level of some interconnection charges in Bulgaria, in 2008, dropped primarily as a result of the CRC regulatory intervention, as call termination rates in off-peak hours on the BTC AD network at local, metro, single and double segments, at the end of the year, decreased as compared to the previous valid rates by 24 percent, 42 percent, 50 percent and 60 percent respectively. Call-by-call carrier-selection rates and carrier pre-selection rates registered a 50 percent decrease in off-peak time.

Stabilization in termination rates was observed at European level. Nevertheless, it should be mentioned that a slight decrease in prices is registered compared to 2007, as for local segment the average price decreased by 1.72 percent, for single segment - by 1.15 percent, and for double segment - by 1.69 percent. The decrease in termination rates in the Member States was due to the regulatory intervention in consequence of market research and analysis and the modification for the cost accounting systems used by the incumbents for setting of cost-oriented prices.

Figure 41 presents a comparison of the average termination rates on the EU incumbents' fixed networks (2006, 2007 and 2008) and the termination rates on the BTC AD network (2006, 2007 and 2008). Average rates are estimated for peak traffic hours, and Bulgarian rates are re-estimated in eurocents.



**Source:** Commission staff working document accompanying the Progress report on the single European electronic communications market 2008 (14th report), Volume 2, Annex 2 Market Overview; CRC data

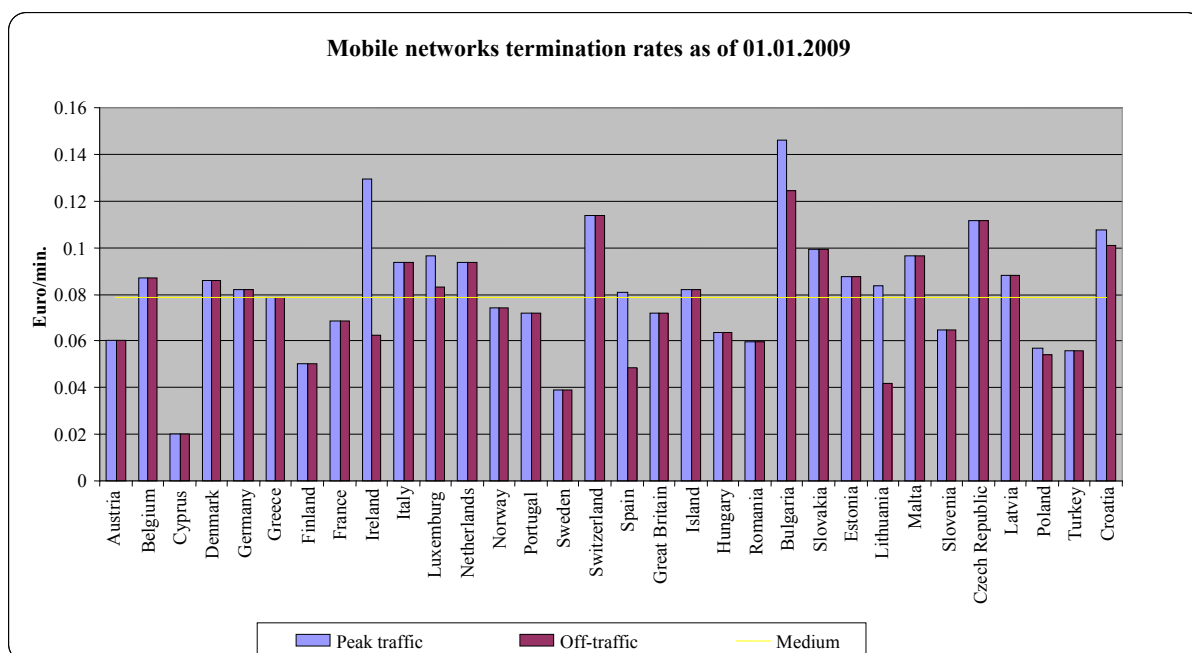
**Figure 41**

As evident from the data presented in the figure, BTC AD rates are considerably higher than the average rates of the EU Member States, especially with regard to the termination rates in the double segment, even if the agreed price reductions resulting from the CRC regulatory intervention in 2006 were taken into account. The alternative undertakings carry traffic between their networks by using H.323 and SIP protocols, and negotiate prices lower than those charged by BTC AD. This is the reason why there is a difference between the BTC AD fixed network call termination rates and those of the alternative undertakings.

Bulgaria is the only EU Member State having differentiated charges depending on the origin of the traffic, because the price restrictions imposed by the regulator in 2006 failed to take effect due to litigation. Given the higher mobile call termination rates, the alternative undertakings, as well as BTC AD, negotiated higher termination rates for traffic originating on mobile networks, in comparison with the termination rates for traffic originating on fixed networks.

#### ***Termination rates for traffic originating on the mobile undertakings' networks***

End-user prices for mobile services depend both on the pricing strategies of the undertakings themselves, and on the interconnection agreements of BTC AD, the alternative fixed operators and between the mobile operators themselves. Comparison between fixed-to-mobile termination rates of the mobile operators and those in other European countries are presented in Figure 42.



Source: ERG (09) 23 MTR Snapshot - 1 January 2009

Figure 42

The data are a result of the European Regulators Group (ERG) survey and are estimated as countries' average per consumers and termination rates of each mobile operator. The majority of the undertakings from the counties included in the survey apply uniform termination rates regardless of the type of network where the call is outgoing (fixed or mobile). Exceptions were Bulgaria and Slovenia, and Bulgaria was once again the country with the highest average fixed-to-mobile termination rates.

In the last quarter of 2007, CRC has launched a new round of talks with the mobile undertakings concerning a reduction in the termination rates for traffic in mobile cellular networks originating in the networks of the undertakings providing fixed voice telephone service. As a result, an agreement was reached, and by CRC Decision No. 2, dated 03.01.2008, a downward glide path of mobile termination rates was adopted as follows:

Table No. 7

**Fixed to mobile networks termination rates**

	Peak time BGN/min.	Off-peak BGN/min.
as of 01.07.2008	0.32	0.29
as of 01.01.2009	0.29	0.25
as of 01.07.2009	0.25	0.19

In the determination of the price levels, CRC adopted an approach, which provides certainty and predictability of the undertakings while taking into account the necessity of implementation of the investments planned by them and maintaining the innovation incentives.

In September 2008, by Decision No. 1962, CRC launched a public consultation on a decision and a draft market analysis regarding the markets of call termination on individual mobile networks. Taking into account the results of the analysis, CRC imposed an accounting separation obligation and an obligation for cost-oriented prices concerning the mobile call termination rates. Pending the determination of cost-oriented prices, CRC chose to impose an obligation for price limits in the form of a downward glide path of charges in order to reach

the average European level. This measure is considered appropriate in view of the need of a timely reaction of the regulator, given the fact that mobile call termination rates in Bulgaria are the highest in EU and thus create conditions for the closure of network traffic and generally for market closure.

After the conclusion of the public consultation in December 2008, CRC notified the EC and submitted the said analysis for recommendations and comments from the EC and the regulatory authorities of the Member States.

### ***International roaming***

Bulgarian undertakings providing mobile services apply the following prices in pursuance of Regulation 717/2007 of the European Parliament and of the Council on international roaming on public mobile telephone networks within the Community (the Regulation), dated 30.08.2008:

**Table No. 8**

Eurotariff	Company		
	Mobiltel EAD	Cosmo Bulgaria Mobile EAD	BTC AD
Outgoing calls charge, BGN/min.	1.08	1.08	1.079
Incoming calls charge, BGN/min.	0.510	0.516 <sup>25</sup>	0.516
Charging method	The charging interval is one minute. Every commenced interval is charged as full interval. The charging method is the same for both post-paid and pre-paid subscribers and is applied to incoming and outgoing calls.		

In Bulgaria, only MOBILTEL EAD offers to its new and present subscribers Roaming Voice Bundles: M-Tel Euro Talk –M-Tel Euro Talk 30, M-Tel Euro Talk 120 and M-Tel Euro Talk 240. The M-Tel Euro Talk bundles may be activated in all roaming tariff plans and its validity period is one month from the bundle activation. The bundles are not automatically reactivated the next month.

CRC prepares and regularly submits reports to the EC concerning the compliance with the requirements for international roaming charges, in accordance with the provisions of the Regulation. CRC has published on its web site up-to-date information on the application of the Provision.

### ***3.2. Charges for local loop unbundling***

By Resolution No. 54, dated 08.04.2008, SAC delivered a final judgment on the litigation between BTC AD and the regulator regarding the Reference Unbundling Offer (RUO), approved by the CRC Decision No. 1459/11.07.2006, confirming the decision of the CRC. In this period, local loop unbundling charges imposed by the CRC remained unchanged, since early in 2006 the Court rejected the company's request for suspension of provisional enforcement of the regulator's decision, by which, regardless of the litigation, the minimum price limits imposed by CRC came into force. Although BTC AD proposed the renewing of the local loop unbundling agreements in 2007 including connectivity services charges consistent with the limits imposed by the CRC, the alternative undertakings concluded the new agreements as late as 2008, as BTC AD reduced further the monthly subscription rates

<sup>25</sup> For users of prepaid services, the price is 0.52 BGN/min.



for shared and for fully unbundled access by 30.5 percent and by 10.2 percent respectively, in relation to the restrictions imposed.

The table below presents a comparison of local loop unbundling charges according to the charges in the agreements concluded and the upper limit of local loop unbundling charges imposed by the CRC Decision No. 1459/11.07.2006.

**Table No. 9**

Prices for local loop unbundling services (in BGN)	Prices as per contract concluded		Price limits imposed by CRC Decision No. 1459/11.07.2006. <sup>26</sup>	
	For shared access	For fully unbundled access (LLU)	For shared access	For fully unbundled access (LLU)
Internal tie cable – installation for 100 pairs	2 900	1 200	up to 2 900	up to 1 200
Internal tie cable – monthly fee for 100 pairs	43	43	up to 43	up to 43
Twisted copper pair – installation per pair	68	35	up to 68	up to 35
Twisted copper pair – monthly fee per pair	5.90	17.50	up to 8.50	up to 19.50

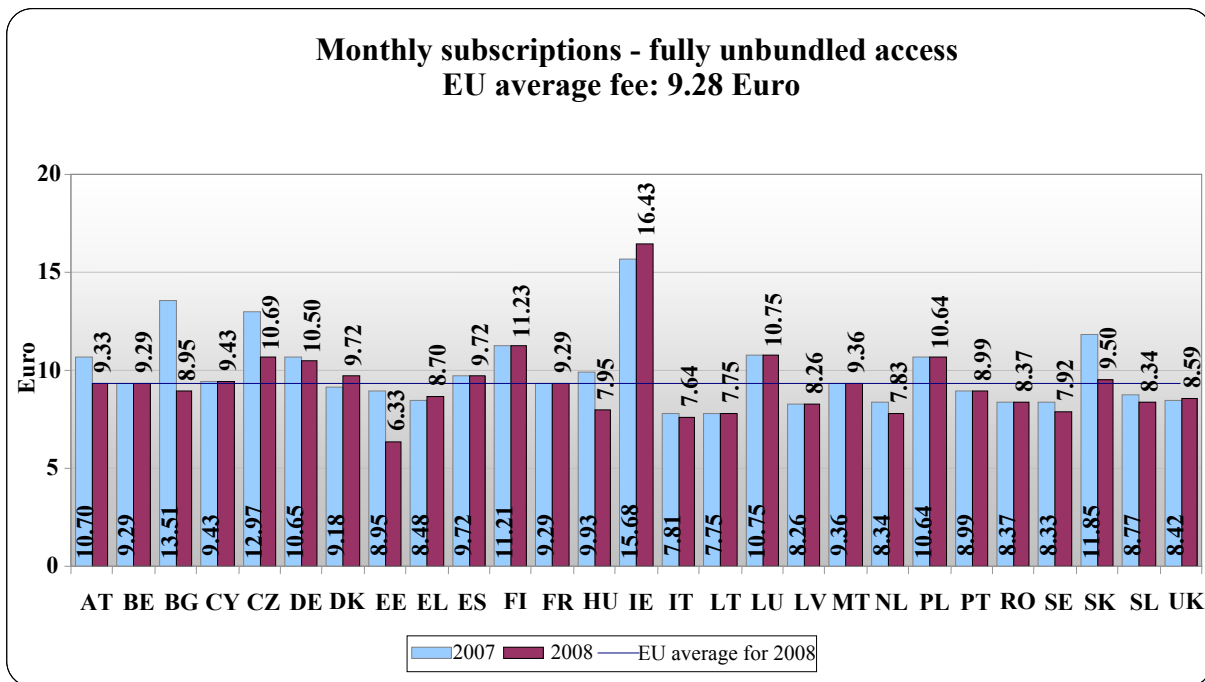
***Bulgaria – EU comparison of monthly subscription rates for twisted metallic pair***

The figures below present the monthly subscription rates for twisted metallic pair in Euro, VAT excluded, for Bulgaria, for the EU Member States and the EU average.

Figure 43 presents data on monthly subscription for fully unbundled access, and Figure 44 – data on shared access. The names of the Member States in the figures are replaced by their country codes in Latin<sup>27</sup>.

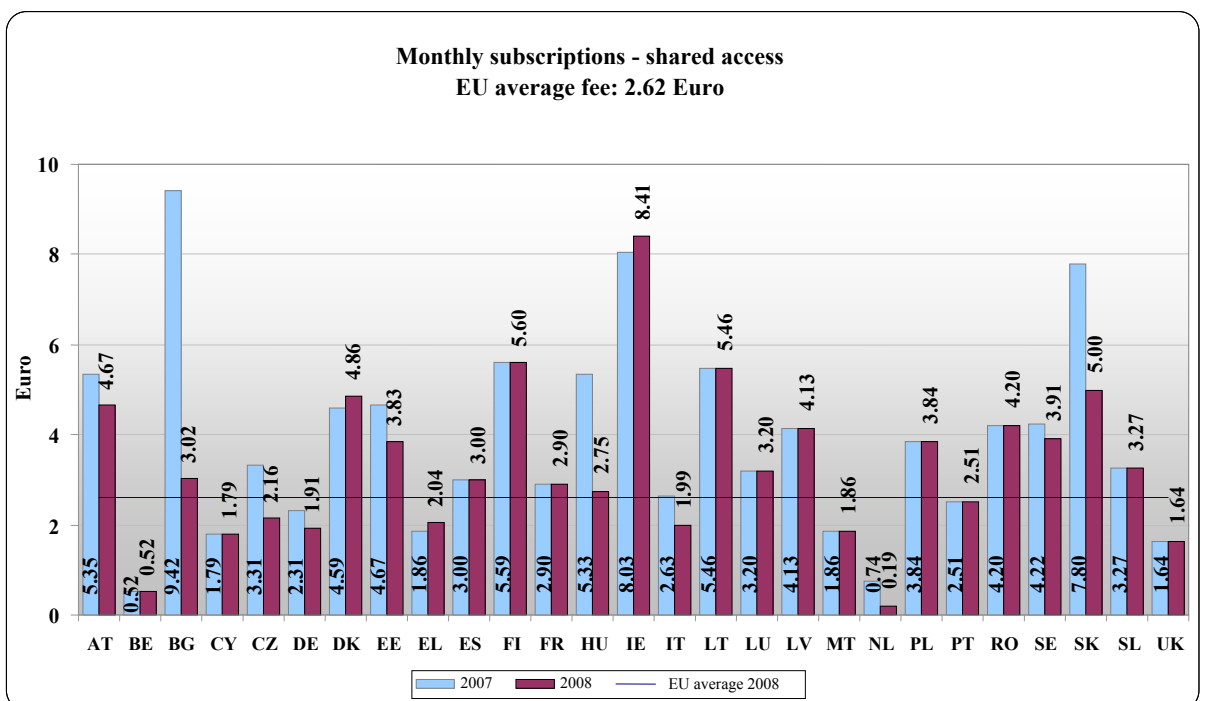
<sup>26</sup> Prices are in force throughout 2008

<sup>27</sup> BG- Bulgaria, BE- Belgium, CZ- Czech Republic, DK- Denmark, DE- Germany, EE- Estonia, EL- Greece, ES- Spain, FR- France, IE- Ireland, IT- Italy, CY- Cyprus, LV- Latvia, LT- Lithuania, LU- Luxembourg, HU- Hungary, MT- Malta, NL- Netherlands, AT- Austria, PL- Poland, PT- Portugal, SL- Slovenia, SK- Slovakia, SE- Sweden and UK- United Kingdom.



*Source: Commission staff working document accompanying the Progress report on the single European electronic communications market 2008 (14th report), Volume 2, Annex 2 Market Overview, CRC data*

**Figure 43**



*Source: Commission staff working document accompanying the Progress report on the single European electronic communications market 2008 (14th report), Volume 2, Annex 2 Market Overview; CRC data*

**Figure 44**

The comparison between 2008 monthly subscription rates for twisted metallic pair maintenance in Bulgaria and the average rate in the EU Member States shows that the monthly rate for fully unbundled access (for BTC AD amounting to 8.95 Euro, BG in the figure) was slightly below the European average (9.28 Euro), while regarding the shared

access it was above the average European level – 3.02 Euro for BTC AD (BG in the figure) as against 2.62 Euro for the EU Member States.

### 3.3. Bitstream access charges

Under §7 of the TFP of the LEC, the obligations pursuant to the TA (repealed) of the undertakings with significant market power in relation with the specific (bitstream) access remained into force pending the CRC decisions' entry into force, which imposed specific obligations on undertakings designated as such with significant market power in the relevant market under the LEC. The obligations imposed with individual license No. 100-00001/28.01.2005 on BTC AD provide for the specific/bitstream access charges to be determined in compliance with the transparency and the cost-orientation principles therefore the specific/bitstream access charges formed by BTC AD fall into the scope of regulated prices. In this context, charges for the provision of specific/bitstream access services, in accordance with the agreements concluded in 2008, are consistent with the price restrictions imposed by CRC<sup>28</sup>, as currently BTC AD has concluded 7 agreements with competitors.

For the period from the conclusion of the agreements to the end of 2008, BTC AD offered the undertakings using bitstream access the same conditions as the conditions under which it provides retail broadband access promotions to its own clients.

BTC AD reduced the prices of some services, as the determined prices were negotiated between the undertakings without BTC AD proving their cost-orientation. Current prices are presented in Table No. 10:

**Table No. 10**

<b>1. Initial fees</b>		<b>Price in BGN, excluding VAT</b>
<b>1.1.1.</b>	<b>Technical inquiry of the submitted application for ADSL PoP</b>	<b>5 000 for whole country's territory/100 for one point</b>
<b>1.1.2.</b>	<b>Technical inquiry of the submitted application for ADSL PoP outside the MAN network</b>	<b>390.00</b>
<b>1.2.</b>	<b>One time installation of DSLAM port</b>	<b>100.00</b>
<b>1.3.</b>	<b>Technical examination and installation per subscriber line</b>	<b>10.00</b>
<b>1.4.</b>	<b>Installation of aggregation MAN port</b>	<b>53.00</b>
<b>1.5.1.</b>	<b>Definition and configuration of VLAN</b>	<b>106.00</b>
<b>1.5.2.</b>	<b>Definition and configuration of VLAN for all service profiles of one MAN</b>	<b>333.00</b>
<b>2. Monthly fees</b>		
<b>2.1 Monthly rental for a specific (bitstream) access in accordance with the client's profile:</b>		
<b>2.1.1.</b>	<b>ADSL 6144-A (1:50 profile's bit rate)</b>	<b>4.75</b>
<b>2.1.2.</b>	<b>ADSL 12288-A (1:50 profile's bit rate)</b>	<b>8.05</b>
<b>2.1.3.</b>	<b>ADSL 6144-B (1:20 profile's bit rate)</b>	<b>13.42</b>
<b>2.1.4.</b>	<b>ADSL 12288-B (1:20 profile's bit rate)</b>	<b>18.18</b>

<sup>28</sup> CRC Decision No. 1358/15.11.2007

<b>1. Initial fees</b>		<b>Price in BGN, excluding VAT</b>
<b>2.2 Monthly rental for aggregation MAN port</b>		
<b>2.2.1.</b>	<b>10/100 Mbps port</b>	<b>81.00</b>
<b>2.2.2.</b>	<b>1000 Mbps port</b>	<b>130.00</b>
<b>2.3 Monthly rental for VLAN</b>		<b>60.00</b>
<b>2.4 Monthly rental for a specific (bitstream) access ADSL PoP outside the area in accordance with the client's profile:</b>		
<b>2.4.1.</b>	<b>ADSL 512-A (1:50 profile's bit rate)</b>	<b>11.54</b>
<b>2.4.2.</b>	<b>ADSL 1024-A (1:20 profile's bit rate)</b>	<b>15.40</b>
<b>3. Other prices</b>		
<b>3.1.</b>	<b>Client's profile change (Upgrade/Downgrade)</b>	<b>30.00</b>

In December 2008, by Decision No. 2364, CRC published for public consultation a decision and a draft market analysis concerning the market for provision of wholesale (physical) access to network infrastructure (including full and shared unbundled access) at a specific location and the market for provision of wholesale broadband access. Given the results of the analysis, CRC decided on the maintenance of the cost-orientation obligation for bitstream access charges. Pending the determination of cost-oriented prices, the regulator chose to impose price restriction obligation regarding the bitstream access charges in the form of limitation of price growth to a pre-determined price cap. This measure is considered appropriate in view of counteraction to the anti-competitive behavior of BTC AD reflected in the creation of a price squeeze and/or margin squeeze. The approach chosen is suitable for fast-growing markets where demand for certain service profiles is dynamic and volume forecasts are more difficult than those of long time established products.

Considering the possibilities of the undertaking with significant market power for changing the parameters (profiles) for retail service end-users, CRC finds that in order not to create a price squeeze in the case of broadband access market BTC AD should set bitstream access charges on the basis of the respective retail charges.

The adoption of the final CRC decision is forthcoming.

### ***3.4. Prices for shared use of premises and facilities***

Access to the infrastructure of the undertaking with significant market power is a precondition for the use of services provided to the alternative undertakings. The shared use of premises and facilities, which BTC AD provides in accordance with the regulatory requirements, can be provisionally divided into the following services:

- shared use in interconnection – the service is described in the Reference Interconnection Offer of BTC AD;
- shared use in unbundled access – the service is described in the Reference Unbundling Offer of BTC AD;
- shared use in specific access – the service is a part of the services for specific access;
- shared use of premises and facilities on the basis of general terms and conditions approved by the CRC.

Pursuant to the requirements of the TA (repealed), prices for shared use of premises and facilities should be cost-oriented. The list, Annex 1.1 to the System, approved by CRC Decision No. 1049/15.04.2004, includes the co-location service, which summarizes all the

above-mentioned services for shared use of premises, facilities, ducts, towers and others. The impossibility to divide costs for shared use of premises and facilities for the services specified in the System is the reason why in determining prices BTC AD uses costs documents and prepares calculations for the cost price of each service outside the System. As a result, the proof of prices' cost-orientation is not precise therefore CRC imposed price restrictions, concerning the shared use prices, in the approval of the Reference Interconnection Offer and the Reference Unbundling Offer of BTC AD. Determination and proving of cost-oriented prices for shared use in specific access is imminent.

The general conditions for shared use of BTC AD premises and facilities, approved by the CRC in 2007, also including prices for use of the respective services, have not been changed in 2008.

**4. Provision of universal service**

Obligation for provision of the universal service (US) is imposed on BTC AD based on the provisions of the TA (repealed) by individual license No. 100-00001/28.01.2005. The obligation remained in force, in 2008 as well, on the grounds of § 7 of the TFP of the LEC. It concerned the provision of the following services at specified quality and affordable prices, according to the national law, throughout the country:

1. connection at a fixed location to the public fixed telephone network and access to fixed voice telephone services (subscription), allowing the making of local, long distance and international calls;
2. access to fixed voice telephone service through public payphones (PP);
3. telephone directory of the numbers of subscribers to fixed networks and provision of telephone directory enquiry services for the numbers of subscribers to fixed and mobile networks;
4. free access to emergency call services;
5. provision of access to fixed voice telephone services under special conditions and/or provision of terminal devices, where appropriate, for disabled or disadvantaged persons.

Under the current provisions of the LEC, the US is a set of services, of specified quality, available to all end-users regardless of their geographical location on the territory of the country, at an affordable price, as the scope of US includes not only the obligation for the provision of free emergency calls to national numbers, but also the obligation for the provision of emergency calls, free of charge, to the single European emergency call number 112.

The breakdown of villages without telephone connection depending on the number of inhabitants, according to BTC AD data, as of 31.12.2008, is as follows:

**Table No. 11**

<b>Number of non telephoned settlements /with 0 telephone lines/</b>					
<b>Settlements with more than 1 000 residents</b>	<b>Settlements with more than 500 residents</b>	<b>Settlements with more than 200 residents</b>	<b>Settlements between 200 and 50 residents</b>	<b>Settlements with less than 50 residents</b>	<b>Settlements with less than 20 residents</b>
-	-	31	42	109	342

*Source: BTC AD data submitted to CRC*

**Table No. 12**

<b>Number of settlements with up to 2 active telephone lines</b>					
<b>Settlements with more than 1 000 residents</b>	<b>Settlements with more than 500 residents</b>	<b>Settlements with more than 200 residents</b>	<b>Settlements with between 200 and 50 residents</b>	<b>Settlements with less than 50 residents</b>	<b>Settlements with less than 20 residents</b>
-	7	51	42	58	38

*Source: BTC AD data submitted to CRC*

The penetration rate of the fixed voice telephone service is over 90 percent based on the number of settlements, as according to BTC AD data, as of 31.12.2008, 524 settlements of a total of 5 302 territorial units<sup>29</sup> in the country do not have telephones installed, as these are mainly settlements of less than 20 and less than 50 inhabitants. In some cases, there are settlements with number of inhabitants amounting between 50 and 200 and over 200, without telephones installed. Installed telephones are available in all Bulgarian settlements with over 500 and over 1000 inhabitants.

During the next year, CRC will continue to monitor the fulfilment of BTC AD obligation for the provision of universal service, particularly the part for the provision of access to public telephone services.

According to BTC AD data, the telephone density rate per households<sup>30</sup> is just above 60 percent, recording a decrease of 4.84 percent compared to the previous year, attributable to the smaller number of residential customers, which in 2008 decreased by 7.39 percent as compared to 2007.

#### ***4.1. Connection at a fixed location to the public fixed telephone network and access to fixed voice telephone services (subscription), allowing the making of local, long distance, and international calls***

The connection obligation is related to the provision of connection at a fixed location to the public telephone network and access to a public telephone service upon the submission of reasonable application by an end-user, pursuant to Art. 3, paragraph 2 of Regulation No. 6 on the requirements and parameters of the universal service quality, the special measures for people with disabilities and the procedures for the selection of undertakings providing public electronic communications networks and/or services, and on the imposition of the universal service provision obligation, issued by the Chairman of the State Agency for Information Technology and Communications, prom., SG. 32/25.03.2008. (Regulation No. 6). In the provision of connection to the public telephone network, it is required 24 hours a day, 7 days a week end-users to be able to:

- receive and make local, long distance and international calls from/to geographic and non-geographic numbers, as well as receive and transmit facsimile;
- transfer data at a speed suitable for functional Internet access (28.8 Kbit/s minimum speed).

<sup>29</sup> According to data of the National Statistical Institute (NSI) of the Unified classifier of the Administrative-Territorial and Territorial units (UCATTU), in force from 14.02.2009, in Bulgaria there are 5 302 Territorial units/settlements.

<sup>30</sup> The density per household indicator is measured by dividing the total number of residential lines by the number of households in the country. The number of households is taken according to the latest officially published NSI data as of 2001.

Given the cost-intensiveness of the verification of the information relating to whether the application submitted is for a first telephone line within the construction limits of the settlement and whether it refers to the permanent access of the end-user, BTC AD considers all applications from residential customers reasonable.

According to BTC AD data, as of 31.12.2008, the number of reasonable applications for connection to the public fixed telephone network at a fixed location and access to fixed voice telephone services was 59 263, of which 2 122 applications were submitted by disabled people.

The number of pending applications as of that date were 6 515 or 11 percent. BTC AD states as main reasons for rejection the lack of technical possibility to provide the service or the unpaid accounts of the applicants.

#### **4.2. Access to fixed voice telephony through public payphones (PP)**

According to the obligations arising from the individual license of the company, BTC AD is required to provide PP for providing access to fixed voice telephone service on a uniform basis and in proportion to the number of the population of the territory served. Regulation No. 6 indicates that the presence of at least 1 public payphone per 500 inhabitants in municipalities with over 500 inhabitants and at least 1 public payphone per 1500 inhabitants in municipalities with over 1500 inhabitants is considered sufficient.

Considering the statistical data on the number of municipalities with less than 500, from 500 to 1500 and with over 1500 inhabitants, as well as taking into account BTC AD data on the PP<sup>31</sup> installed, as of 31.12.2008, a comparison is made concerning the fulfilment of the undertaking's regulatory obligation to provide a sufficient number of public payphones:

**Table No. 13**

	<b>Number of municipalities</b>	<b>Number of installed PP</b>	<b>Sufficient number of PP<sup>32</sup></b>
Less than 500 residents	1 427	871	0
from 500 to 1500 residents	1 198	1 446	1 544
More than 1500 residents	548	11 568	3 903
<b>Total:</b>		<b>13 885</b>	<b>5 447</b>

It is obvious that for the compliance with the requirement for PP accessibility for end-users in municipalities with number of inhabitants from 500 to 1500, the company needs 98 more PP, while in the other municipalities the PP installed are significantly more than the minimum required.

Considering that until meeting the criteria for accessibility 365 public payphones and booths of other undertakings providing public electronic communications should be included to the PP of the undertaking obliged, we find that there is a sufficient number of PP provided which satisfies the needs of the end-users in terms of geographical coverage and number of population.

<sup>31</sup> Included is the number of the public telephone booths according to Article 7 of Regulation No. 6.

<sup>32</sup> Sufficient PP number turned out as an amount of necessary minimum PP to each municipality under the requirements of Regulation No. 6 based on the breakdown of the settlements by municipalities and by the number of population, as of 2008, according to NSI data.



In 2008, 97 percent of the total number of public payphones, amounting to 14 315 (of which 4 116 are telephone booths), were owned by BTC AD, and only 3 percent were owned by the alternative undertakings.

The number of public payphones in the country has decreased by nearly 9 percent as compared to the previous year, due mainly to the reduced number of public payphones and telephone booths for public use owned by BTC AD (decrease by approximately 11 percent). In 2008, one part of the market players have installed new public devices for the provision of voice calls (DIALOG EOOD, NET TEL OOD), and SPECTRUM NET AD has increased the number of devices used. During the year, GET CONNECTED OOD and STANDART TELECOM OOD started activities for the provision of access to publicly available telephone services through public payphones under the agreement concluded with BTC AD for the provision of telephone services through public payphones/booths.

As of 31.12.2008, public payphones owned by BTC AD incorporating facilities for users with impaired hearing and blind users or users with impaired vision covered over 72 percent of the total number in the country. Some of them are equipped with text or other type of connection for persons with impaired hearing or speech and are installed at appropriate places accessible by disabled users in wheelchairs.

At the end of 2008, BTC AD reported a high rate – over 92 percent, of PP in good working order.

Over the past year, the provision of telephone service through PP was accessible to users upon purchase of phone cards<sup>33</sup> at the following prices:

**Table No. 14**

<b>Card</b>	<b>25 credits</b>	<b>50 credits</b>	<b>100 credits</b>	<b>200 credits</b>	<b>300 credits</b>
Price (BGN)	2.90	4.90	7.50	13.00	17.90

Note: Prices are VAT included.

#### ***4.3. Telephone directory of the numbers of subscribers to fixed networks and provision of telephone directory enquiry services***

Pursuant to the provisions of Article 182, paragraph 2, item 3 and 4, and Article 185 of the LEC, BTC AD is obliged to provide a telephone directory of the numbers of all subscribers to public telephone services in the approved by CRC format, as well as to provide telephone directory enquiry services available to all end-users according to the requirements of Regulation No. 5 on the terms and procedures for publication of telephone directories, including the operation, transfer and use of databases, and for provision of telephone directory enquiry services, prom., SG, 1/ 04.01.2008.

In accordance with the obligations specified, in February 2008, BTC AD submitted a request to the CRC for the co-ordination of the telephone directory format. By Decision No. 214/19.03.2008, the regulator approved the electronic format of the telephone directory for 2008, taking into account the problems related with the insufficient time for printing of a full edition and the upcoming changes related to the digitalization of BTC AD network. It is accepted that these changes would lead to inaccuracy and lack of up-to-date information in the printed directory form.

<sup>33</sup> The prices given are for MOBICA and BULFON cards.



These are the reasons why, in 2008, BTC AD has maintained only a telephone directory in electronic format and has not prepared, updated and published a telephone directory in printed format, and therefore there were no prices for telephone directory set.

#### ***4.4. Provision of directory enquiry services for the numbers of subscribers to fixed and mobile networks and free of charge access for end-users to emergency call services***

In accordance with the legislation, BTC AD is obliged to provide end-users 24-hours-a-day access to telephone enquiry service for the numbers of all subscribers listed in the telephone directory.

The telephone enquiry services offered by BTC AD are charged at the price of local calls amounting to BGN 0.00 per minute in off-peak hours and to BGN 0.018 per minute in peak hours, after the payment of initial charge of BGN 0,132, as prices include Value Added Tax.

The use of telephone enquiry services used by end-users is low and amounts to 0.6 percent of the total local call traffic of residential and business customers.

Since the free of charge emergency call services are used by end-users only when necessary, the volume of calls, measured in minutes, is negligible, reaching only 0.09 percent of the national call traffic.

#### ***4.5. Provision of Internet access through the public electronic communications network of BTC AD***

In 2008, BTC AD provided dial-up Internet access through specific access numbers. In the charging of calls<sup>34</sup> to numbers: 0134 100, 0134 000, 0134 111, 01331 and 01333, connection to Internet is charged separately. Call value includes call set up charge, equal to the set up charge for national calls, as well as charge per minute, equal to the charge for local calls to local Internet and VoIP service providers. In the free Internet access via numbers: 0134 200 and 0134 300, connection to Internet is included in the call value. The call set up value is again equal to the call set up charge for national calls, and the charge per minute is higher than the charge for local calls to local Internet and VoIP service providers, by 20 percent in peak hours and 25 percent in off-peak hours respectively.

Traffic of calls to access numbers 134xx covers 0.33 percent of the total national calls traffic.

In the second periodic review of the scope of the US, conducted by the EC in 2008, in accordance with Article 15 of the Universal Service Directive (Directive 2002/22/EC), the EC has tabled the issue of need to encourage the development of broadband access for all Europeans and consideration of its possible inclusion in the scope of the US. Purpose of the change is updating the existing regulations in conformity with the technological progress and eliminating the 56 Kbit/s limit for data transmission speed in the existing definition of effective Internet access, in order to accelerate the development of broadband access.

#### ***4.6. Universal service charges***

The requirements for affordability of the US charge, in 2008, were set on the basis of the valid for the period Methodology, approved by Council of Ministers' Decree No. 229/31.08.2004, prom. SG, 78/2004 (repealed).

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<sup>34</sup> Standard charging prices are used in the comparison.

According to the repealed Methodology, affordability requirements apply to initial connection, monthly subscription, local, long distance, and international calls charges, which are set by analogy with the fixed voice telephone service charges on basis of a consumer price basket. The increase of basket prices is restricted by a common price cap with a maximum value equal to the product of the consumer price index and the gross domestic product index. The US basket elements are the same as the elements of the price basket for the fixed voice telephone service. According to BTC AD data, at the end of the year, service costs were three times higher than service revenues.

Charges for calls through public payphone were up to 20 percent higher than charges for the same calls made through residential or business telephone lines.

It should be noted that, at the end of October 2008, Methodology for determining the universal service prices and price packages, prom. SG, 94/31.10.2008, was adopted by Council of Ministers' Decree No. 254 of 23.10.2008, after which the company obliged defines as affordable prices for:

- connection at a fixed location to the public telephone network relating to a reasonable request for connection submitted by an end-user;
- maintenance of access to public telephone services (monthly subscription/standard plan);
- price package for people with disabilities (with an established level of reduced working capacity or reduced capability for social adaptation of 50 percent and over 50 percent);
- price package for people with special social needs;
- price package for people with low incomes;

In accordance with the legislation, BTC AD is obliged to provide affordable price packages different from those offered under the usual commercial terms, as in 2008 the company continued offering the following price packages for:

- **low-income users** (Low User plan, according to the package name, published by BTC AD in the price list)

The package is available to socially disadvantaged persons, who are entitled to social assistance or have documents from the administrative bodies authorized to issue documents certifying that a person is socially weak. The package price of BGN 3.10, Value Added Tax excluded, includes local calls with total volume of 20 minutes or 10 pulses (for telephone lines with no time charging capability) per month, charged at zero BGN per minute/pulse.

Along with the change of prices and price condition of the BTC AD fixed voice telephone service from 01.11.2008, the terms of Low User price package are also changed, as for calls in excess of the minutes included in the package are charged prices equal to the call prices for subscribers using BTC AD standard plan.

- **customers with disabilities with more than 90 percent reduced working capacity or reduced capability for social adaptation** (Handicap plan, according to the package name published by BTC AD in the price list)

The package is available upon presentation of relevant documents proving permanent disability. The package price of BGN 1.50, Value Added Tax excluded, includes local calls with total volume of 160 minutes or 80 pulses per month, charged at zero BGN per minute/pulse. For calls exceeding the minutes/pulses included in the package are charged prices equal to the call prices for subscribers using BTC AD standard plan.

- **customers with special social needs, accommodated in social and healthcare organizations** (Social and Healthcare Organizations plan, according to the package name published by BTC AD in the price list)

The package is available to social and healthcare organizations determined by a list of the relevant ministry, which is updated annually by January 30. The package price of BGN 3.50, Value Added Tax excluded, includes local calls with total volume of 1000 minutes or 500 pulses per month, charged at zero BGN per minute/pulse. For calls exceeding the minutes/pulses included in the package are charged prices equal to the call prices for subscribers using BTC AD standard plan. BTC AD further provides free dial-up Internet access through number 0800.

#### ***4.7. Quality of the universal service provided***

The universal service quality is specified by the requirements and parameters laid down in Regulation No. 6. Under its license obligations, BTC AD is required to ensure quality of the services provided, consistent with the regulations, standards, and technical specifications valid in the Republic of Bulgaria.

Individual license No. 100-00001/28.01.2005 of BTC AD and Section V of Regulation No. 6 stipulate that in the provision of fixed voice telephone service the company shall provide specified US quality parameters. BTC AD has declared the implementation of the relevant parameters, as values are listed in the table below.

**Table No. 15**

#### **Quality parameters of the Universal Service provided in 2008**

<b><i>I. Initial connection at a fixed location to the public telephone network and access to fixed voice telephone services</i></b>		
1. Supply time for initial connection	in days	20
2. Fault rate per access line		
2.1. for digital subscriber lines	in %	0.93
2.2. for analogue subscriber lines	in %	2.9
3. Fault repair time – average value	in hours	5.39
4. Unsuccessful calls rate	in %	0.13
5. Connection time	in seconds	0.59
6. Call set up time (response) by calls to operator services – average response time	in seconds	39
7. Call set up time (response) by calls to directory enquiry services	in seconds	8.5
8. Percentage of bill correction complaints	in %	49
9. The voice quality assessment factor (R factor)		
9.1. for wire access technology		75
9.2. for wireless access technology		70
10. One-way voice delay	milliseconds	Not greater than 150
<b><i>II. Access to fixed voice service through PP</i></b>		
1. Fault repair time – average value	in hours	03:54:37
2. Unsuccessful calls rate	in %	0
3. Call set up time	in seconds	0.5
4. Call set up time (response) by calls to operator services – average response time	in seconds	39
5. Call set up time (response) by calls to directory enquiry services	in seconds	8.5
6. Percentage of the public payphones in good condition	in %	92.39

**Source:** Data submitted to CRC

[www.btc.bg/public/files/gen\\_conditions\\_articles/114/file.pdf](http://www.btc.bg/public/files/gen_conditions_articles/114/file.pdf)

Data in the table above show that BTC AD fulfils its quality obligations under the license and reports higher US quality, compared to 2007, by the following parameters:

- the fault repair time has been reduced by over 17 percent;
- the unsuccessful calls rate has been reduced by over 0.28 percent;
- the connection time has been reduced by over 65 percent;
- the call set up time (response) of calls to directory enquiry services has been reduced by 9.57 percent;
- the percentage of bill correction complaints has been reduced by 18 percent.

In 2008, BTC AD reported lower quality of the „Call set up time (response) by calls to operator services” parameter, as compared to the previous year, the average response time has increased by 30 seconds.

#### ***4.8. Complaints and complaints satisfaction***

Under the general conditions concerning the relationship between BTC AD and the end-users, the company provides to the customers opportunities to independently monitor and control their own costs via the following:

- provision of free of charge itemized bills;
- free selective outgoing calls restriction;
- deferred payment for connection to public telephone networks;

According to company data, as of 31.12.2008, the number of subscribers to lines with no time charging capability amounted to 188 126, representing 10.62 percent of the total household customers number. These lines are connected to analogue telephone exchanges with no time charging capability and because of the technical impossibility, subscribers are deprived of their right to receive detailed data sheet on the number, type, and duration of the calls made. Therefore, they cannot monitor and control their costs.

In 2008, the company received a significant amount of complaints in relation to the provision of the US, over 24 000 representing 1.37 percent complaints compared to the total number of residential customers.

As main reasons are indicated disputes concerning the correctness of the bills, technical faults, non-receipt of invoices, breach of contractual clauses. The percentage of complaints concerning the bill correctness, compared to the total number of complaints, registered a significant decrease of 18 percent.

BTC AD has replied to all submitted complaints within the regulated period of 30 days and the rate of satisfied complaints is 24.

#### ***4.9. Compensation of net costs of universal service provision***

In 2008, BTC AD was the only company in Bulgaria with obligation imposed by the CRC to provide all services covered by the US throughout the country. Under the provisions of the LEC, undertakings obliged to provide US may request a compensation for proven net costs when the provision of the US represents an unfair burden to them by submitting application to the CRC.

By Decision No. 2252 of 06.11.2008, the CRC adopted Rules for calculation of the net costs of universal service provision, prom. SG, 100/2008, that determines: net costs calculation and intangible assets valuation method, documents for determining and proving the net costs, verification and evaluation of the net costs calculated by the undertaking and determination of the existence of an unfair burden.

During the year, CRC has not received any application for the compensation of net costs of US provision therefore, there is no legal ground for taking action on its compensation. In this respect, the Management Board of the Universal Service Compensation Fund (the Fund) has not taken any decision about the total amount of the compensation, as well as the particular amount of each applicant. The Fund has not dealt with funds and does not have a bank account.

It should be mentioned that, in the past 2008, CRC studied six retail markets and submitted to the EC draft market analyses concerning the markets of access to public telephone network and publicly available telephone services at a fixed location (markets 1-6, according to EC Recommendation 2003/311/EC). Meanwhile, in compliance with § 4 of the Transitional and Final Provisions of Regulation No. 6, dated 13.03.2008, on the requirements and parameters of the universal service quality, the special measures for people with disabilities and the procedures for the selection of undertakings providing public electronic communications networks and/or services, and on the imposing of universal service provision obligation, the US designation process starts within one month period after the conclusion of the relevant retail markets analysis.

Upon the adoption of the final CRC decision concerning the retail access markets and the public telephone services at a fixed location markets, the procedure under the LEC should be launched, which may lead to the replacement of the undertaking obliged to provide US, and the imposing of obligations regarding the provision of services within the scope of US on other undertakings.

## **5. Leased lines**

### ***5.1. Market players***

A total of 30 undertakings notified the CRC of their intentions to provide the leased lines service, including international leased lines, with a presumed start date of the activity not later than 31.12.2008. According to data submitted to the CRC, 15 of them were actually active on this market:

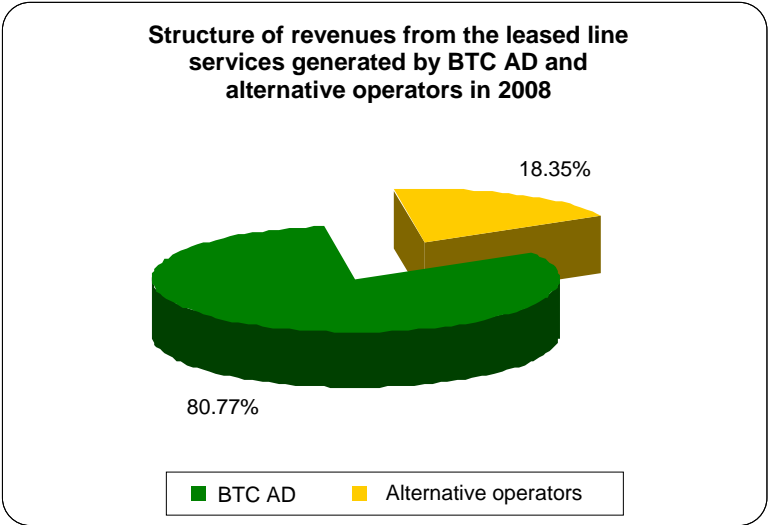
- BULGARTEL EAD
- BTC AD
- VESTITEL BG AD
- GLOBAL COMMUNICATION NET EAD
- EUROCOM CABLE MANAGEMENT BULGARIA EOOD
- INVITEL INTERNATIONAL BULGARIA EOOD
- INTERROUTE BULGARIA EAD
- NETWORKS-BULGARIA OOD
- COSMO BULGARIA MOBILE EAD
- MOBILTEL EAD
- NETERRA EOOD
- NOVATEL EOOD
- PLADI COMPUTERS OOD
- RACOM AD
- SOFIA COMMUNICATIONS EAD

As a comparison, at the end of 2007, the undertakings that had notified their intentions of entering the market amounted to 21, 13 of which were actually operating in 2007. Undertakings that started activity in 2008 are INTERROUTE BULGARIA EAD, PLADI COMPUTERS OOD and NETWORKS-BULGARIA OOD, while EST AD has terminated its activity.

### ***5.2. Market volume and market shares***

In 2008, the revenues from providing leased lines services amounted to BGN 102.4 million, representing a decrease of 33 percent in comparison with 2007. The large drop is mainly due

to two reasons. In the first place, one may point out the reduction in revenues from the provision of wholesale leased lines (to other undertakings providing public electronic communications), which fell by 36.7 percent, attributable to the tendency of Bulgarian undertakings providing public electronic communications to prefer more and more often to invest in the construction of their own infrastructure, and thus to rely less on hiring it from other undertakings. On the other hand, a major influence on the market volume was exerted by the decrease in total revenues generated by BTC AD from the provision of the wholesale and retail leased lines service, which in 2008 fell by 41.33 percent. Although there was an increase of 64 percent in total revenues generated by the alternative undertakings, it could not balance the significant decrease in market volume.



Source: Data submitted to CRC

Figure 45

The relative share of the incumbent on the leased lines market (Figure 45), calculated on the basis of revenues generated from this activity, decreased significantly compared to previous periods, and in 2008 was 80.77 percent (with a share of 92.15 percent in 2007).

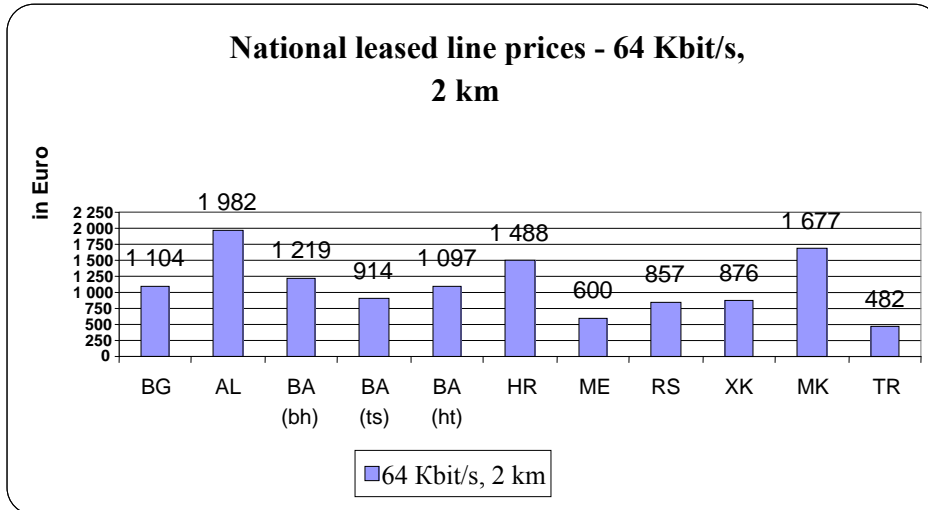
5.3. Prices of leased lines services

Prices for the minimum package of leased lines service, provided via the fixed public telephone network of BTC AD, fall within the scope of charges regulated by the CRC. They should be publicly known and consistent with the undertaking’s costs incurred in the provision of the service. In 2008, the prices as enforced by Reference Leased Lines Offer approved by CRC Decision No. 1487, dated 15.07.2004, remained unchanged.

Figures 46 to 49 present the average annual retail prices for national leased lines provided by the incumbents in Bulgaria and the other SEE<sup>35</sup> countries, estimated on the basis of monthly subscription for 12 months. Prices are given in Euro and excluding VAT and any discounts offered by negotiations. National leased lines prices in the SEE countries are as of April 2008.

<sup>35</sup> For Bosnia and Herzegovina the prices quoted by the three incumbents operating in the different regions are given as follows: BH Telecom (BH) – in the Federation of Bosnia and Herzegovina as a sole operator in some regions, and in cooperation with Hrvatske Telekomunikacije Mostar (HT) in other; Telekom Srpske (TS) – in the Republic of Serbia; Hrvatske Telekomunikacije Mostar (HT) - in the Federation of Bosnia and Herzegovina as a sole operator in some regions and in cooperation with BH Telecom in other.

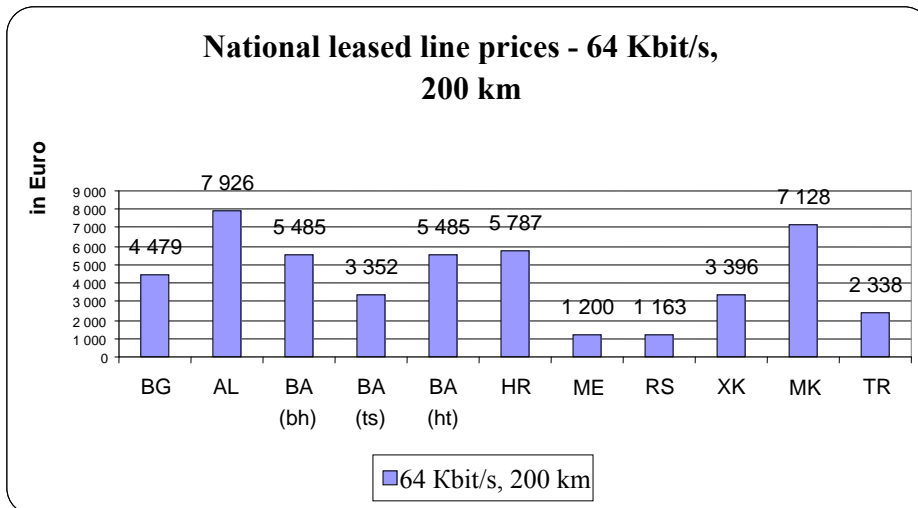




**Source:** Cullen International, *REPORT I Supply of services in monitoring regulatory and market developments for electronic communications and information society services in Enlargement Countries September 30 2008, BTC AD prices*

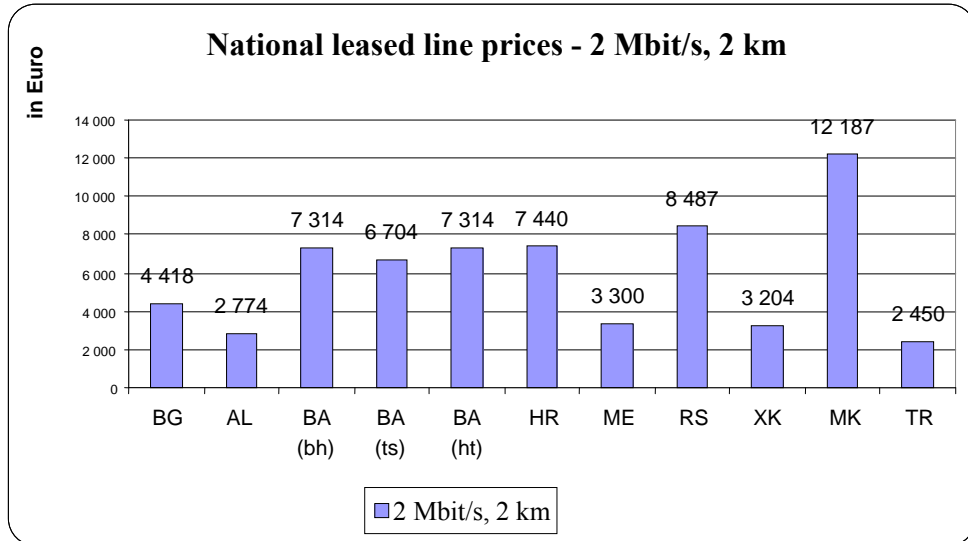
**Figure 46**

Country names are replaced by their Latin codes in the charts: AL - Albania, BA - Bosnia and Herzegovina: (bh) - BH Telecom, (ts) - Telekom Srpske, (ht) - Hrvatske Telekomunikacije, BG - Bulgaria, HR - Croatia, ME - Montenegro, RO - Romania, RS - Serbia, XK - Kosovo, MK - Macedonia, TR - Turkey.



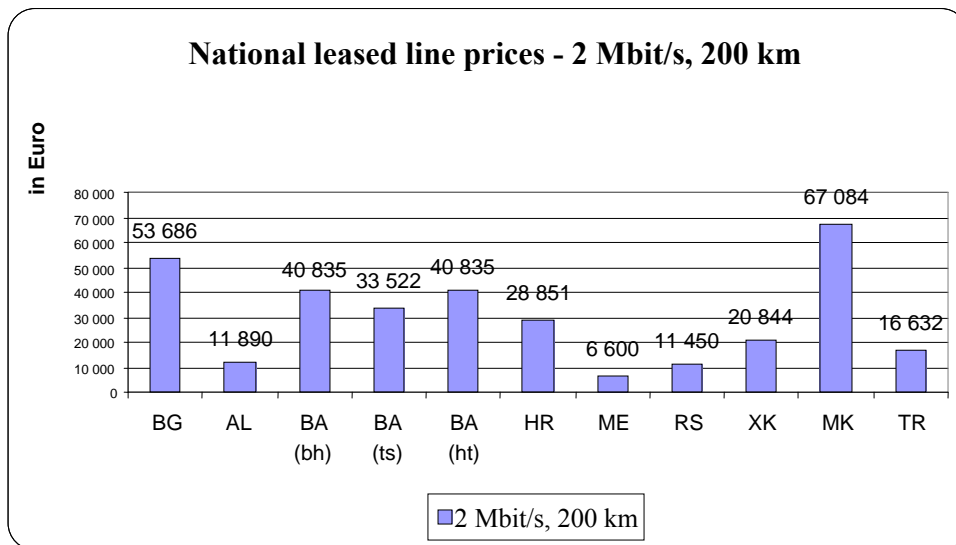
**Source:** Cullen International, *REPORT I Supply of services in monitoring regulatory and market developments for electronic communications and information society services in Enlargement Countries September 30 2008, BTC AD prices*

**Figure 47**



*Source: Cullen International, REPORT I Supply of services in monitoring regulatory and market developments for electronic communications and information society services in Enlargement Countries September 30 2008, BTC AD prices*

**Figure 48**



*Source: Cullen International, REPORT I Supply of services in monitoring regulatory and market developments for electronic communications and information society services in Enlargement Countries September 30 2008, BTC AD prices*

**Figure 49**

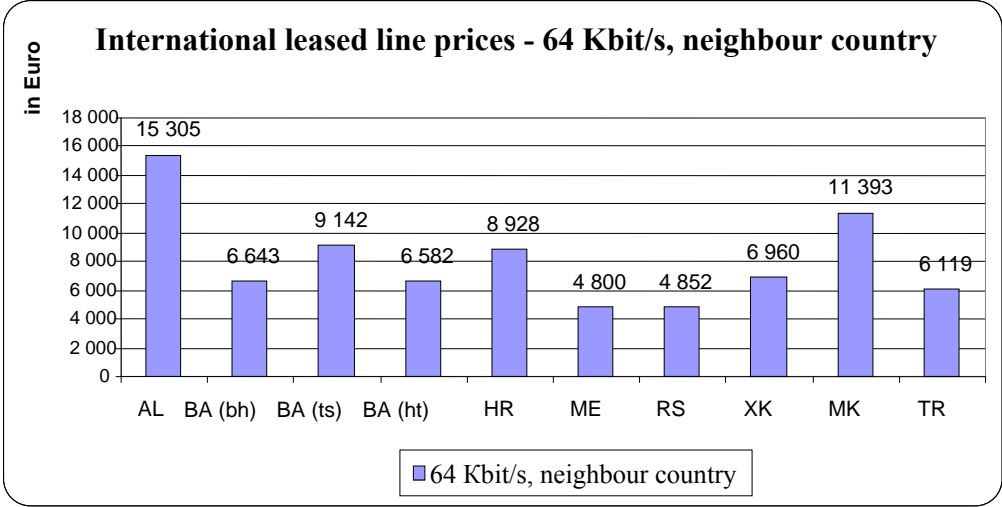
In all the SEE countries, except for Albania, prices for 2 km 64 Kbit/s national leased lines were lower than the EU average in the passed 2007, and for other line types they varied by country and region. The lowest prices were offered by the incumbents in Serbia and Turkey (for 2 km 64 Kbit/s lines), in Montenegro and Serbia (for 200 km 64 Kbit/s lines) and Montenegro, Kosovo, Albania and Turkey (for 2 Mbit/s high-speed lines).

The highest prices were those of the incumbents in Albania (for 64 Kbit/s lines) and Macedonia (for 2 Mbit/s high-speed lines). Except for the prices for 200 km 2 Mbit/s leased lines, BTC AD prices remained at average level compared to the prices of the SEE countries.

The annual average prices (monthly subscription for 12 months) for international leased lines provided by incumbents in the SEE countries are shown in Figures 50 to 53. For comparison

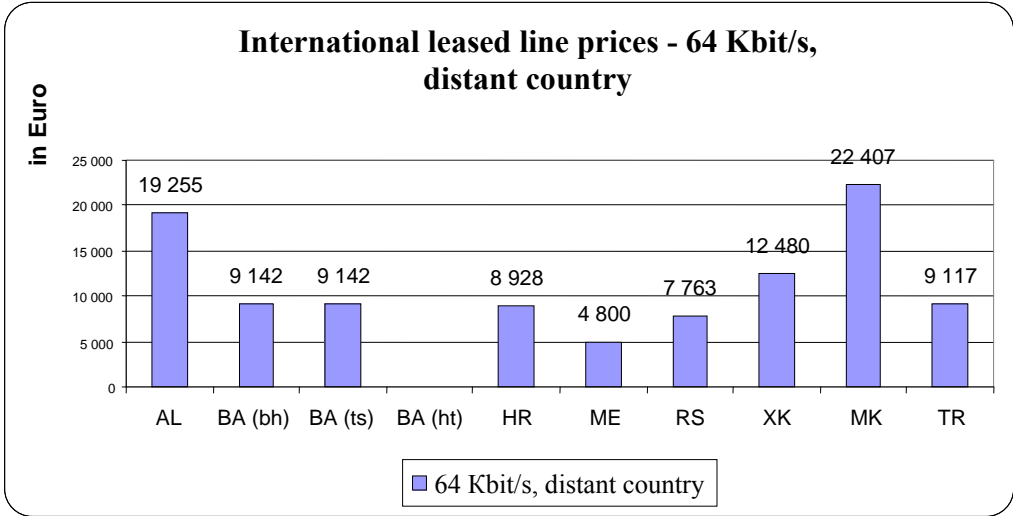


the prices to the United Kingdom are taken as reference for prices to a distant country. SEE prices for international leased lines are as of April 2008.



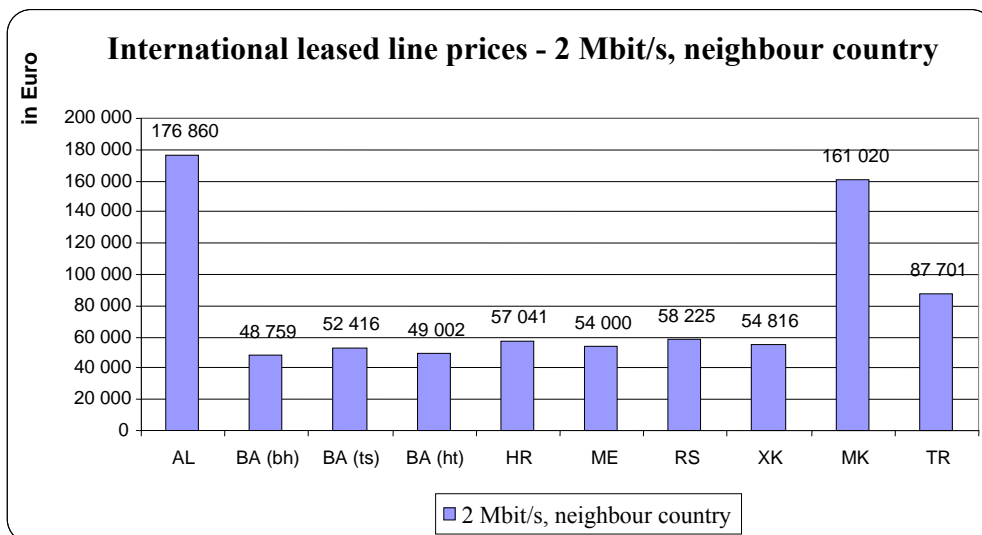
*Source: Cullen International, REPORT I Supply of services in monitoring regulatory and market developments for electronic communications and information society services in Enlargement Countries September 30 2008, BTC AD prices*

**Figure 50**



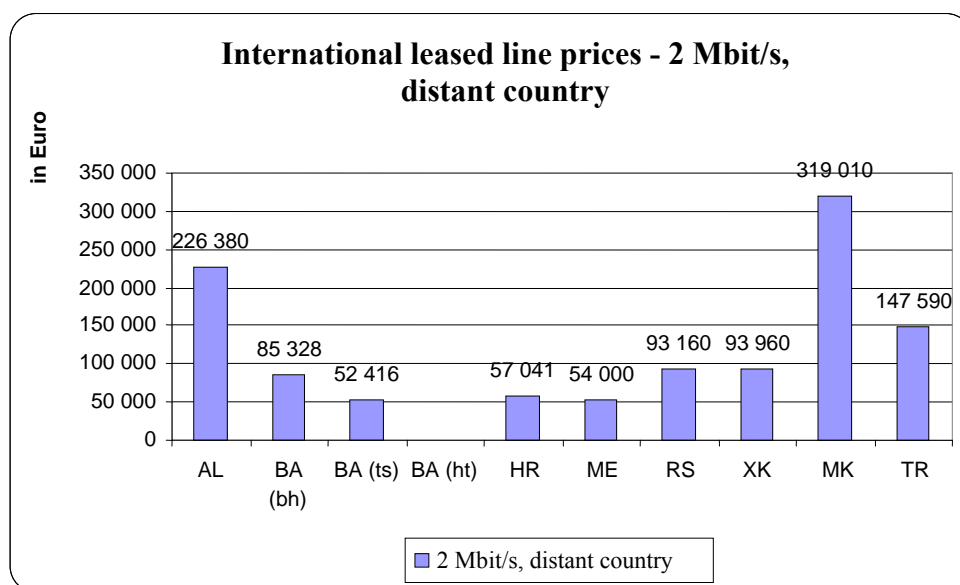
*Source: Cullen International, REPORT I Supply of services in monitoring regulatory and market developments for electronic communications and information society services in Enlargement Countries September 30 2008, BTC AD prices*

**Figure 51**



*Source: Cullen International, REPORT I Supply of services in monitoring regulatory and market developments for electronic communications and information society services in Enlargement Countries September 30 2008, BTC AD prices*

**Figure 52**



*Source: Cullen International, REPORT I Supply of services in monitoring regulatory and market developments for electronic communications and information society services in Enlargement Countries September 30 2008, BTC AD prices*

**Figure 53**

It should be noted that BTC AD no longer publishes international leased lines prices. These prices are subject to negotiations even though BTC AD has been designated as an undertaking with significant market power on the leased lines market under the TA (repealed) and should adhere to the transparency obligation.

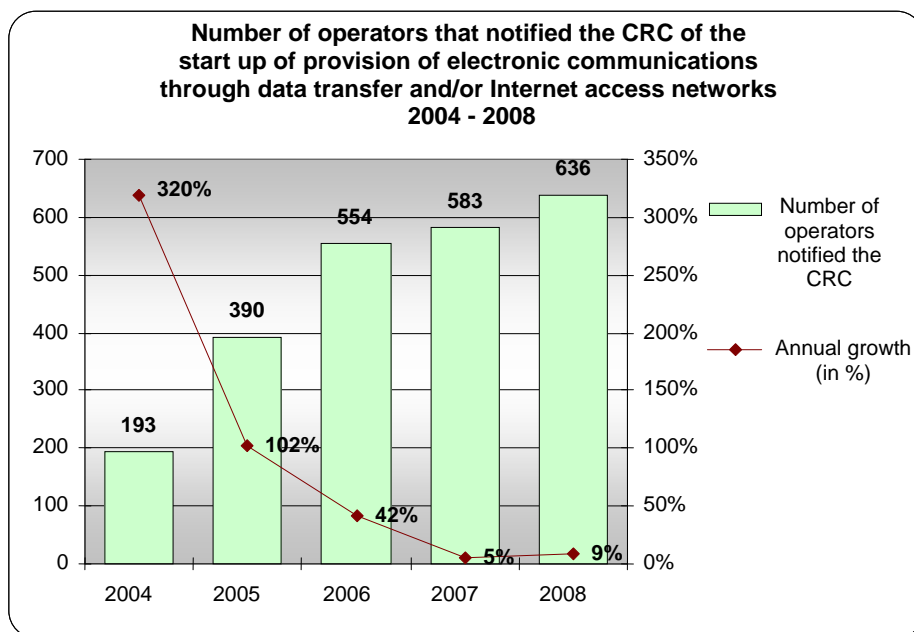
## 6. Networks for data transfer and provision of Internet access services

### 6.1. Networks for data transfer

Along with the adoption of the LEC, a change in licensing regime has been introduced: the entities who want to provide electronic communications without the use of a scarce resource are required to submit to the CRC notification for starting up the provision of electronic communications. Registrations under general license for provision of Internet access services and data transfer via data transfer networks without the use of a scarce resource were replaced by notification for the provision of public electronic communications via cable networks for data transfer, mobile terrestrial network, and/or Internet access services. In 2008, notifications for activity start up were submitted to the CRC as follows:

- Via cable networks for data transfer: 99
- Via wireless networks (RLAN): 48
- Internet access services: 119
- Data transfer services: 83

At the end of the year, the number of undertakings which have notified the CRC of the start up of data transfer and Internet access services has reached a total of 636 (Figure 54), which represents a 9 percent increase compared to 2007.



*Source: CRC*

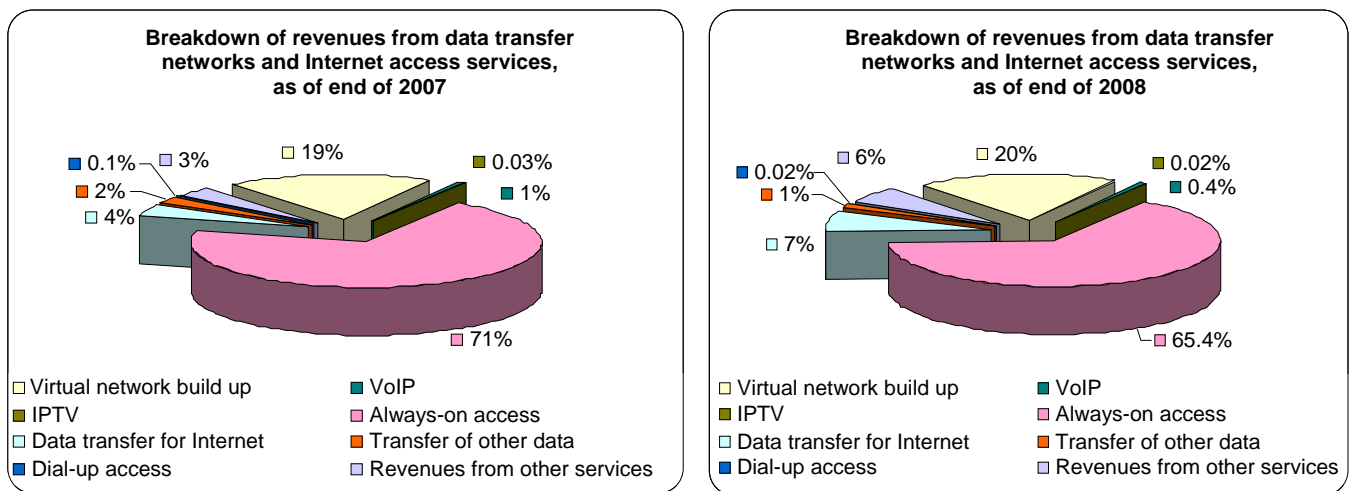
**Figure 54**

In connection with the intensive registration of Internet providers' networks as operators of public networks for data transfer without a scarce resource, since 2005 CRC considers data transfer networks and provision of Internet access services as one market segment.

In the past year, authorizations for the usage of scarce resource - numbers from the National Numbering Plan, in connection with the provision of public electronic communications via networks for data transfer and/or Internet access were not issued.

The consolidation trend observed in the Internet segment for the past few years persists: some smaller suppliers were bought by bigger ones while other small companies went completely out of business.

The volume of data transfer and Internet access services market segment, calculated on the basis of data submitted to the CRC by 87 percent of the undertakings, amounts to BGN 281 million, or 33 percent more than that in 2007. Analysis of the revenues broken down by the services provided shows that the provision of always-on Internet access accounts for the biggest share of revenues (65.4 percent). The share of revenues from the construction of virtual networks and data transfer for Internet was also increasing (Figure 55). The largest decrease was in dial-up Internet access (77 percent), due to the growing consumers needs of high-speed broadband access, as well as due to the unprofitability of dial-up Internet access use.



Source: Data submitted to CRC

Figure 55

Investments in the construction, maintenance, and operation of networks for data transfer amounted to BGN 74 million and decreased by 21 percent compared to 2007.

17 of all undertakings, which have submitted information to the CRC, in 2009, plan to start providing a Voice over Internet Protocol (VoIP) service in 2009, and 27 have plans to offer IPTV. As a comparison, at the end of 2008, 28 of the undertakings declared that they provide Voice over Internet Protocol, and 8 offered IP TV.

## 6.2. Internet access services

According to NSI<sup>36</sup> data, at the end of the first quarter of 2008, 30 percent of the population at the age of 16 to 74 years were surfing the Internet every day or at least once a week, while in the first quarter of 2004, the percentage was 18.1, i.e. an increase of 86 percent were registered over a 4-year period.

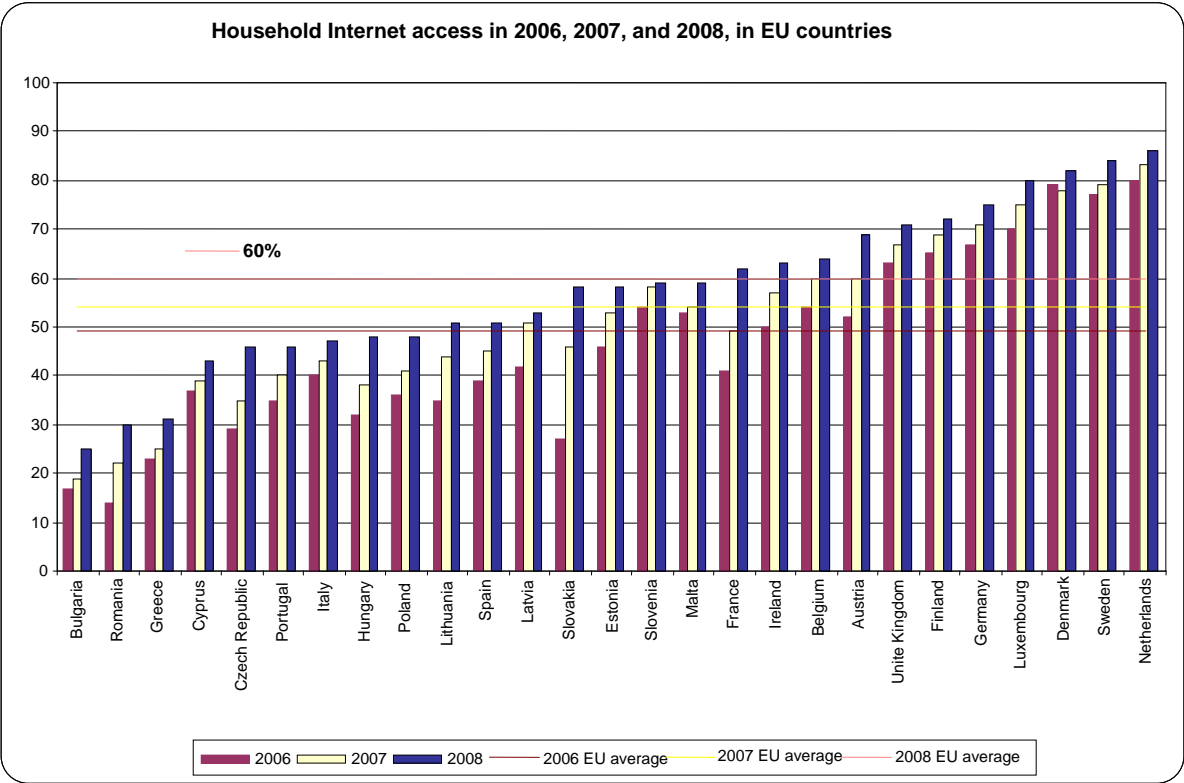
According to a survey<sup>37</sup> conducted by Alpha Research, at the end of 2008, 38 percent of the population over 18 years of age used Internet. According to the survey, the growth of Internet users in Bulgaria is approximately one quarter per year.

Figure 56 presents the Internet services penetration rate per household in the EU countries, according to Eurostat data. It is evident from the chart that the Internet penetration per households in Bulgaria has increased by 32 percent for the period from 2007 till 2008 and has

<sup>36</sup> <http://www.nsi.bg/IKT/ICT2008.pdf>

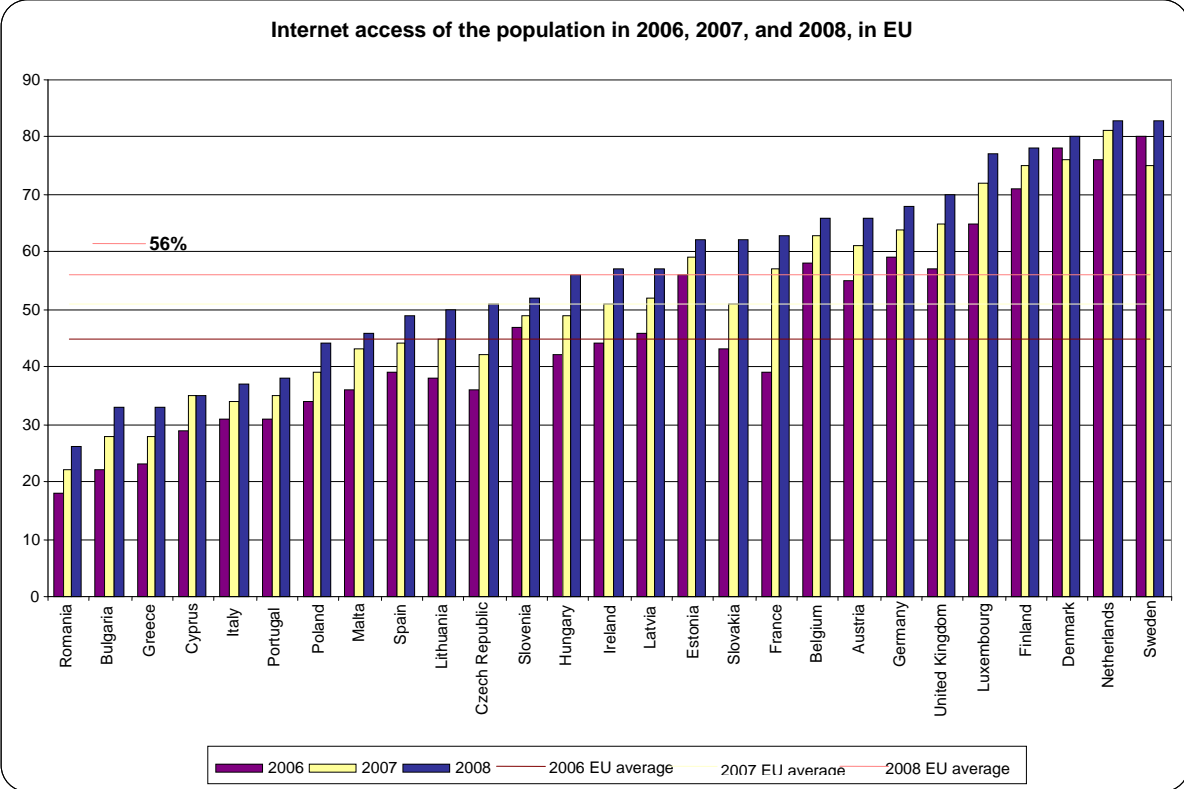
<sup>37</sup> <http://www.aresearch.org/internet/1749.html>

reached 25 percent. Despite the growth, Bulgaria still ranks last in the household Internet access indicator and is significantly below the EU average.



Source: Eurostat

Figure 56



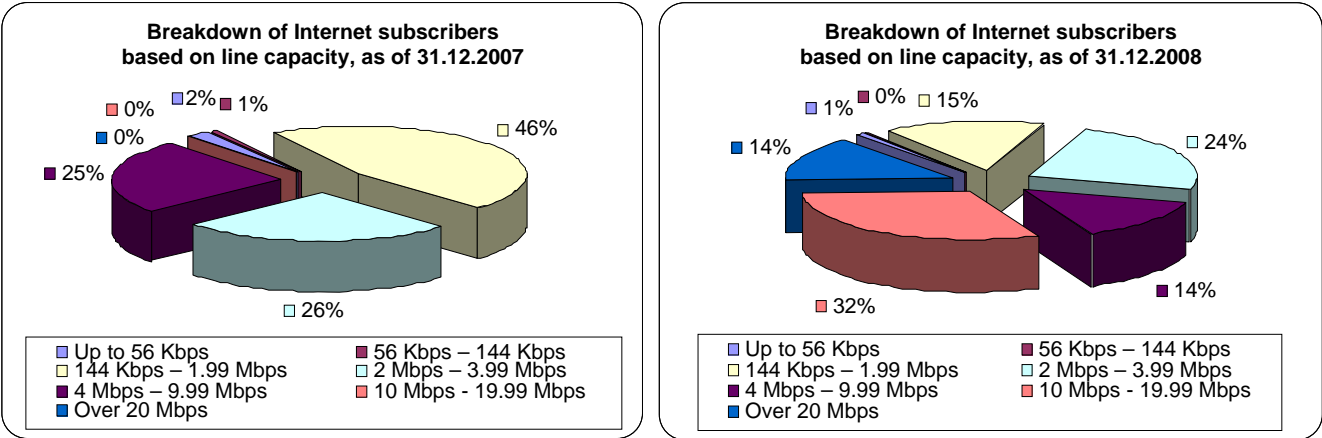
Source: Eurostat

Figure 57

In the period 2007 – 2008, the Internet penetration rate per population has increased 18 percent (Figure 57). The trend observed in 2007 continued and Bulgaria was once again next to the last country with 33 percent (before Romania) and almost 2 times under the average population penetration rate in the EU Member States (56 percent).

According to data from 87 percent of the undertakings, which have provided the requested information, the number of subscribers to Internet access services has increased by 31 percent for a one-year period and, at the end of 2008, they were 853 032. The total number included also the subscribers to Double and Triple play packages, declared by the undertakings providing cable television, representing 13.2 percent of the total number of subscribers to Internet access.

Figure 58 presents the breakdown of Internet access service subscribers based on the capacity used. The cumulative relative share of subscribers using Internet access with speed less than 144 Kbit/s was only 1 percent, i.e. the number of lowest speed subscribers has decreased by nearly 50 percent compared to the previous year. It is obvious from the results that subscribers to broadband Internet access<sup>38</sup> in Bulgaria represent a significant proportion of the total number, while 45 percent of all Internet connections in the country are at a speed exceeding 10 Mbps.



Source: Data submitted to CRC

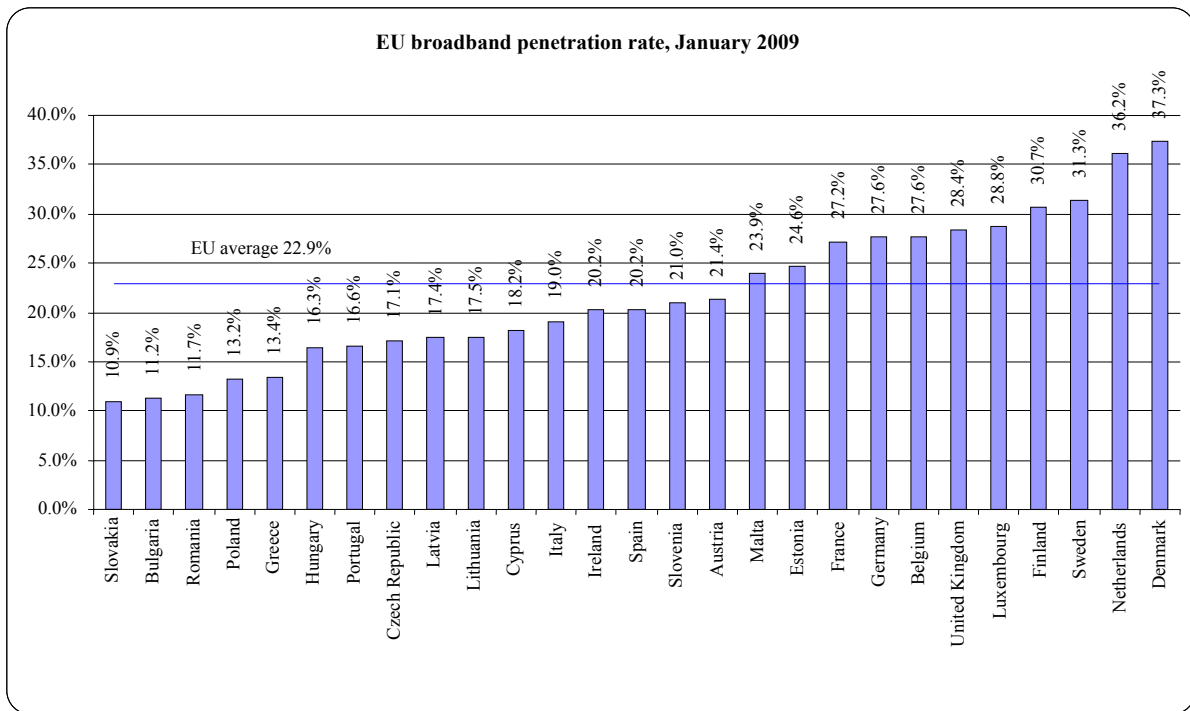
Figure 58

Figure 59 presents graphical data on the broadband services penetration rate<sup>39</sup> in the EU. Regarding the broadband services penetration rate per population in the EU Member States, Bulgaria was already next to the last country with 11.2 percent, and the annual growth was 43 percent. At the end of 2008, penetration rate per households in Bulgaria reached 29.2 percent<sup>40</sup>.

<sup>38</sup> According to the European Commission definition, broadband access is the Internet access with a speed exceeding 144 kbit/s

<sup>39</sup> Correlation of the total broadband lines number with the number of population in the respective country.

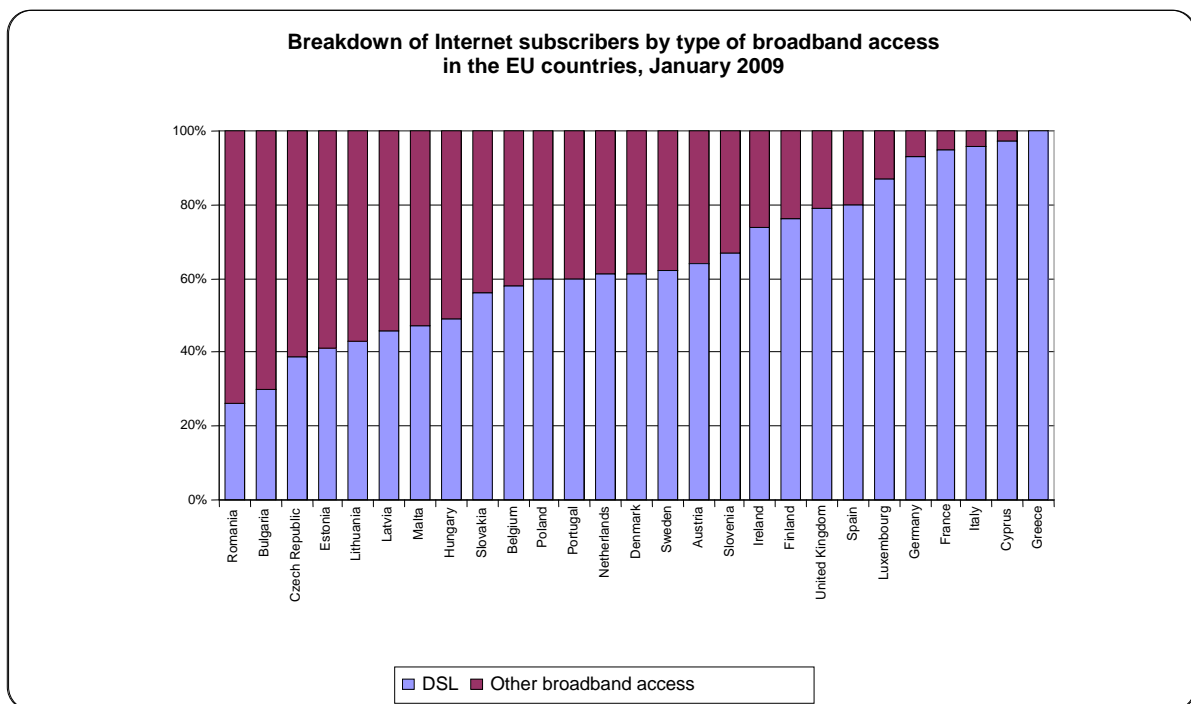
<sup>40</sup> It should be borne in mind that data submitted to the EC in connection with the preparation of the 14<sup>th</sup> Report are estimated based on a market evaluation, based on 100 percent of the information provided by 73 percent of the undertakings which have notified the CRC of the provision of data transfer and/or Internet access services.



**Source:** Commission staff working document accompanying the Progress report on the single European electronic communications market 2008 (14th report)

**Figure 59**

In the EU, the most prevalent broadband connection technology is xDSL with 79.4 percent share (Figure 60). In eight EU Member States another kind of technology (other than DSL) for broadband Internet access is mainly used.



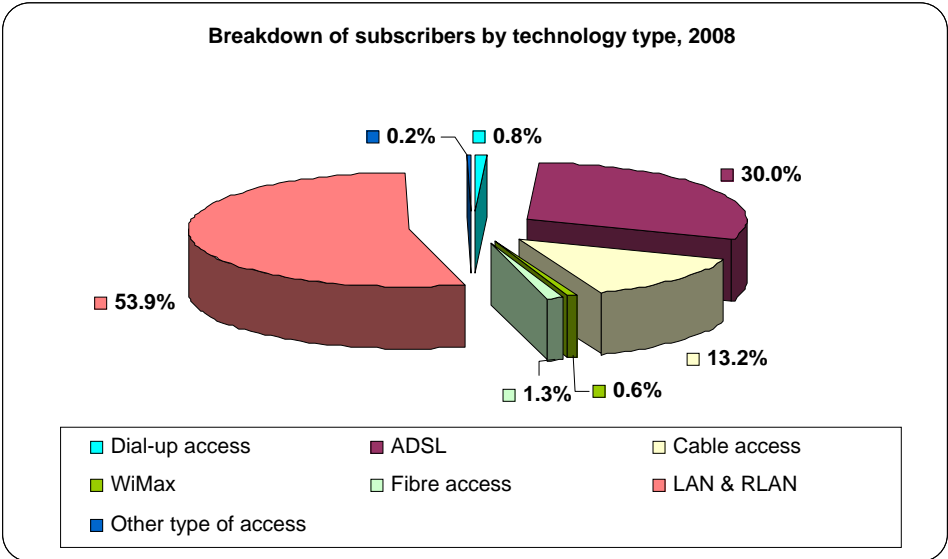
**Source:** Commission staff working document accompanying the Progress report on the single European electronic communications market 2008 (14th report)

**Figure 60**

With a share of 30 percent, the xDSL technology was least popular in Bulgaria compared to the EU countries, as by this indicator we got ahead only of Romania. Besides BTC AD, at present, one of the alternative undertakings (ORBITEL EAD) has also started providing DSL Internet access since July 2008 on the basis of an agreement for bitstream access to the network of the incumbent.

Subscribers to ADSL services in the country, as of 31.12.2008 (provided by the incumbent, as well as via bitstream and simple resale), reached 256 090 and represented 30 percent of all broadband access subscribers in Bulgaria, as the increase in the absolute value for a one-year period was 50 percent. The share of alternative undertakings in the total number of ADSL lines used was only 1 percent.

Figure 61 presents the breakdown of broadband Internet access subscribers in Bulgaria, according to the type of technology. The most widespread technologies were LAN and RLAN (53.9 percent of the total number of subscribers), followed by ADSL (30 percent) and cable access (13.2 percent). WiMAX access technology was used by less than 1 percent of all subscribers. Fibre-optic Internet (FTTx) users have increased and their share is expected to grow. Since the beginning of 2008, SPECTRUM NET AD has started offering Internet access services, digital TV and fixed telephone line through the PON (Passive Optical Network) technology. One of PON advantages over active optical networks is that it does not use electrically powered components to split the signal, which ensures better quality and higher safety in respect of the services rendered. At the end of 2008, services provided through that type of networks were available in a limited number of residential quarters in the capital.



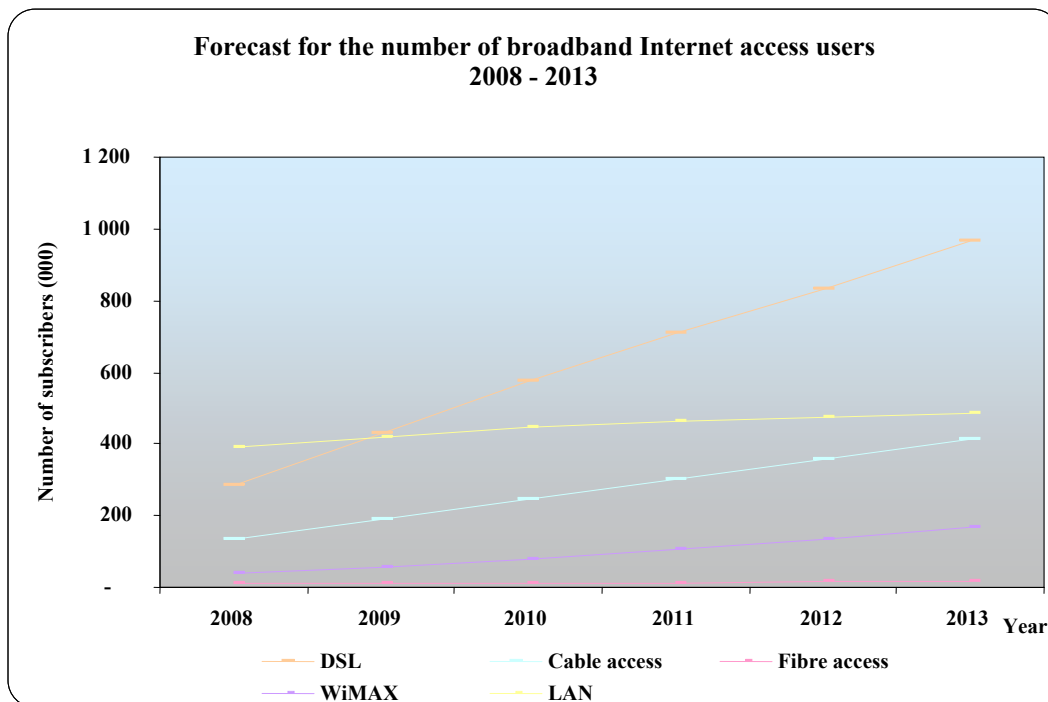
Source: Data submitted to the CRC

Figure 61

**Prospects and trends**

According to *Pyramid Research* forecasts, the penetration of broadband Internet access in Bulgaria is expected to reach 28 percent, at the end of 2013. The largest growth is forecasted to be in DSL access, as the number of its subscribers is expected to increase more than 3 times in a six-year period (Figure 62)





*Source: Pyramid Research*

**Figure 62**

It can be expected that the Internet usage in Bulgaria will continue to grow with the introduction of new wireless networks and the development of existing fibre networks, the available ADSL service and bundled offers of cable TV, fixed or mobile voice telephone service and broadband Internet. Moreover, the availability of alternatives for content delivery, as well as the opportunities for provision of new interactive services, will cause intensive competition among undertakings, which would lead to services of better quality and affordability for the consumers.

## **7. Satellite systems**

### **7.1. Market players**

The market segment of fixed satellite networks covers the activity of undertakings providing public electronic communications via a network of the fixed satellite service and of undertakings providing public electronic communications service - access to satellite systems.

In 2008, the number of undertakings that have notified the CRC of their intent on the provision of public electronic communications in that segment has remained unchanged compared to the previous year - 14. Ten are the undertakings having an authorization<sup>41</sup> to provide services through networks of the fixed satellite service, and those authorized to provide access to satellite systems services are four. In 2008, the CRC did not issue any authorizations to new undertakings, and notifications for the provision of public electronic communications service - access to satellite systems, were not submitted either.

<sup>41</sup> Authorizations for the provision of electronic communications under the LEC replace licensing regime in force until May 2007, pursuant to the TA (repealed).

Table No. 16 and Table No. 17 below present information on the number and activity of undertakings providing electronic communications via satellite systems and on the types of services they offered in 2008.

**Table No. 16**

**Undertakings authorized to provide public electronic communications via networks of the fixed satellite service and types of services they offered in 2008**

No.	Name of the undertaking	Types of electronic communications services provided by the undertaking through the network, in 2008				
		Satellite broadcasting of television and radio programs - wholesale or to end-users	Two-way transfer of data for Internet - wholesale	Internet access retailing	Two-way transfer of other data - retail	Other wholesale services
1	BIKAM EOOD	×	-	-	-	-
2	BULSATCOM AD	×	-	-	-	-
3	BNT	×	-	-	-	-
4	INTERACTIVE TECHNOLOGIES AD	×	-	-	-	-
5	LYMES-CONSULTING OOD	-	-	-	×	-
6	NETERRA EOOD	×	-	-	-	×
7	CITS AD*	-	-	-	-	-
8	TELENOR BULGARIA EOOD	×	-	-	-	-
9	TRANSAT AD	-	-	×	×	-
10	HUNGARO DIGITEL OOD*	-	-	-	-	-
<b>Total number of undertakings providing the service, in 2008:</b>		<b>6</b>	<b>-</b>	<b>1</b>	<b>2</b>	<b>1</b>

\*In 2008, the undertaking did not provide services via the network

*Source: Data submitted to the CRC*

**Table No. 17**

**Undertakings that notified the CRC of their intent to provide public electronic communications service - access to satellite systems, and types of services they offered in 2008**

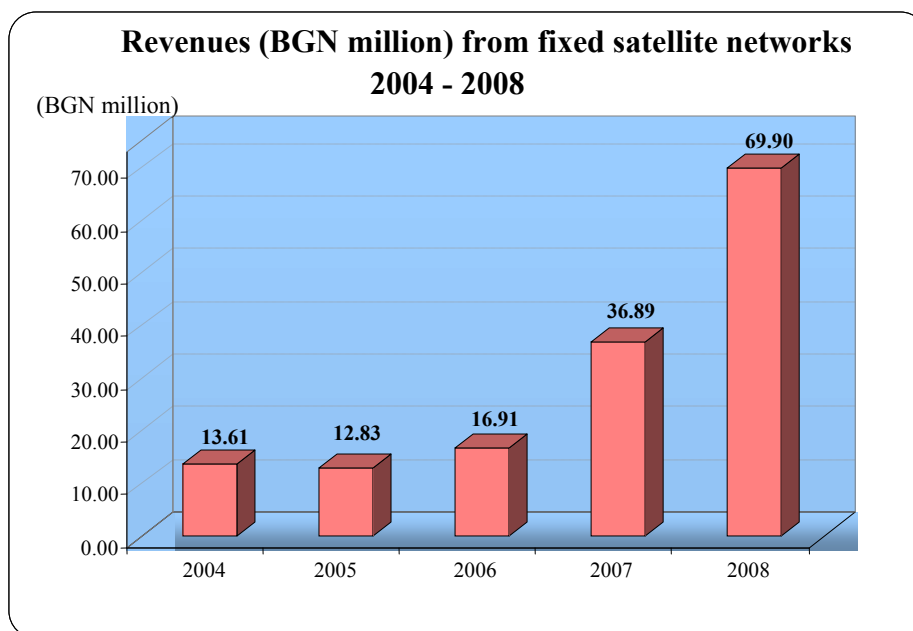
No.	Name of the undertaking	Types of electronic communications services provided by the undertaking, in 2008					
		Radio and television broadcasting	Retail voice transmission	Wholesale data transfer for Internet	Internet access retailing	Two-way transfer of other data - retail	Other retail services
1	ELSACOM EAD	-	×	-	-	-	×
2	SCORTEL OOD	-	×	-	-	-	×
3	SKU-JULIA LAZAROVA ET*	-	-	-	-	-	-
4	FORCE DELTA OOD*	-	-	-	-	-	-
<b>Total number of undertakings providing the service, in 2008:</b>		<b>-</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2</b>

\*In 2008, the undertaking did not provide any services

*Source: Data submitted to the CRC*

## 7.2. Volume, structure of and investments in the market segment of fixed satellite networks in 2008.

In 2008, the volume of the market segment of fixed satellite networks, calculated on the basis of revenues from services provided, increased twice compared to the previous year and amounted to BGN 69.90 million (Figure 63)<sup>42</sup>.



*Source: Data submitted to the CRC*

**Figure 63**

Ninety-three percents of the revenues raised over the year were from services provided to end-users, and 7 percent - from wholesale services. In 2007, the share of revenues from these two groups of services was 87 percent and 13 percent respectively. Table No. 18 below presents the revenues structure by types of services offered for wholesale and to the end-users, in 2008, in the total volume of the market segment:

**Table No. 18**

**Revenues structure by types of services in market segment - fixed satellite networks, for 2007 and 2008**

Type of the provided services	Relative share of revenues by types of services in the total segment volume (%)	
	2007	2008
1. Wholesale satellite broadcasting of radio and television programs	9.53 %	5.30 %
2. Satellite digital television and radio	79.81 %	89.35 %
3. Retail Internet access provision	0.06 %	0.03 %
4. Retail voice transmission	0.79 %	0.33 %
5. Retail two-way data transfer <sup>1</sup>	6.18 %	3.21 %
6. Other retail services <sup>2</sup>	0.14 %	0.12 %

<sup>42</sup> 2006 data were corrected – revenues from the sale of terminal devices are excluded

Type of the provided services	Relative share of revenues by types of services in the total segment volume (%)	
	2007	2008
7. Wholesale one-way data transfer	3.49 %	1.66 %
<b>Total:</b>	<b>100.00 %</b>	<b>100.00 %</b>

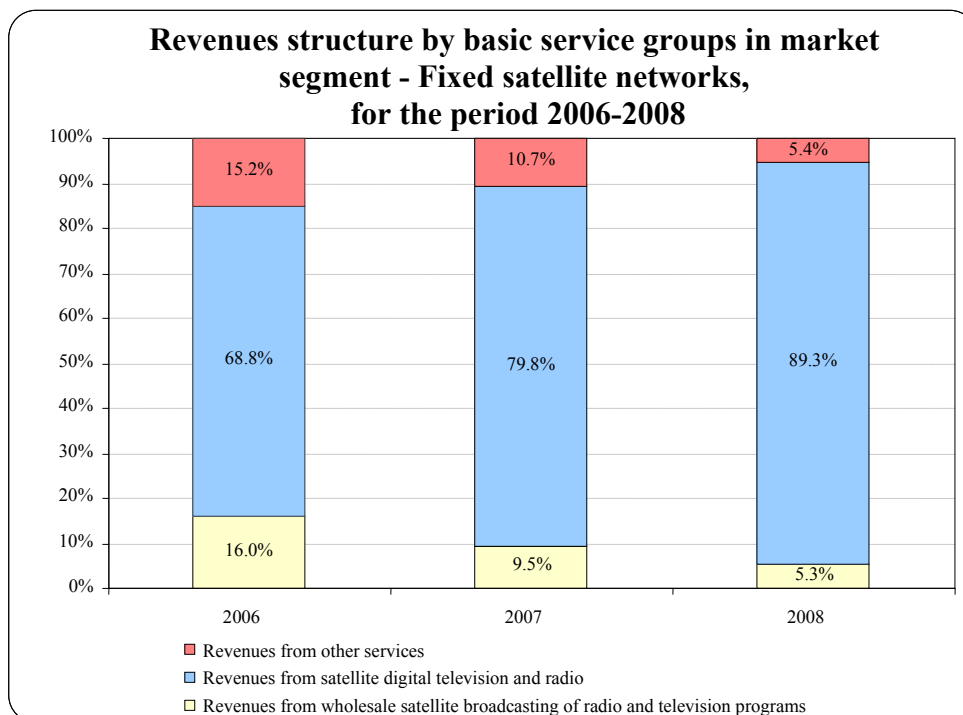
<sup>1</sup> Data transfer from accounting, ERP and other applications

<sup>2</sup> Voice and data transmission for the purposes of maritime communications and navigation, and intelligent transport systems, and GPS systems for the monitoring and control of transport parks (fleets)

*Source: Data submitted to the CRC*

The growth in the total volume of the market segment - fixed satellite networks, in 2008, amounting to BGN 33.01 million, as well as the increase in the share of revenues from retail services provided in this segment, was due to the sustainable growth of revenues from satellite digital television and radio - over the last year revenues from this service reached BGN 62.44 million, which in absolute terms was 33.01 million more compared to 2007.

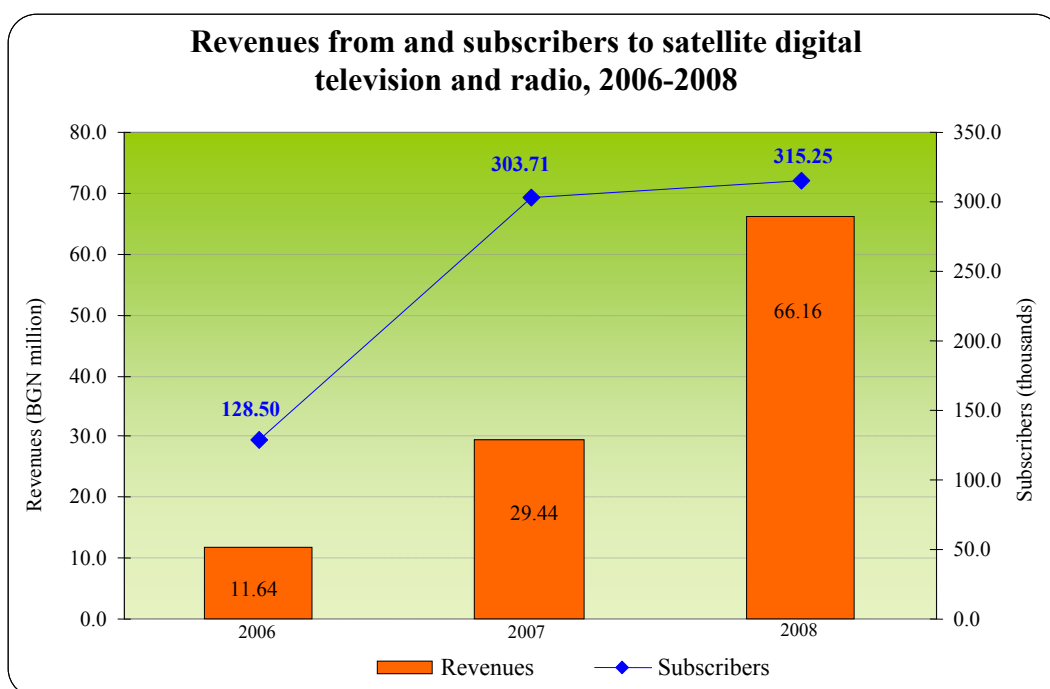
Over the past three years, the share of revenues from providing this service has increased by almost 21 percentage points, and in 2008 reached 89.3 percent, while the share of revenues from other services decreased from 31.2 percent, in 2006, to 10.7 percent in 2008 (Figure 64).



*Source: Data submitted to the CRC*

**Figure 64**

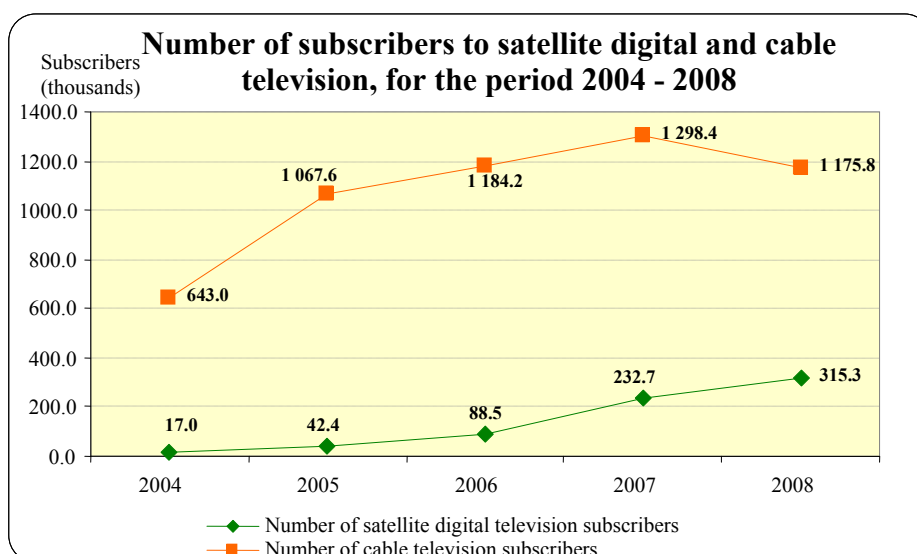
Other services offered in the segment registered a high growth of 5.3 percent in revenues from services for wholesale satellite broadcasting of radio and television programs, 11.5 percent in revenues from the provision of retail satellite Internet access, and 59.5 percent in revenues from the provision of other retail services. Revenues from voice transmission for end-users, from retail two-way data transfer, and from wholesale one-way data transfer have dropped in comparison with the previous year.



*Source: Data submitted to the CRC*

**Figure 65**

The number of subscribers to satellite digital television, during the year, reached 315.2 thousand, representing 35 percent increase compared to the previous year. The penetration rate of the satellite digital television service, based on households, continued to grow and in 2008 was 10.8 percent, which is 2.8 percentage points more than that in 2007, when the measured penetration rate was 8 percent<sup>43</sup>. As a comparison, the penetration rate of cable television, in 2008, was 40 percent or 4 percentage points lower than the previous year (Figure 66).

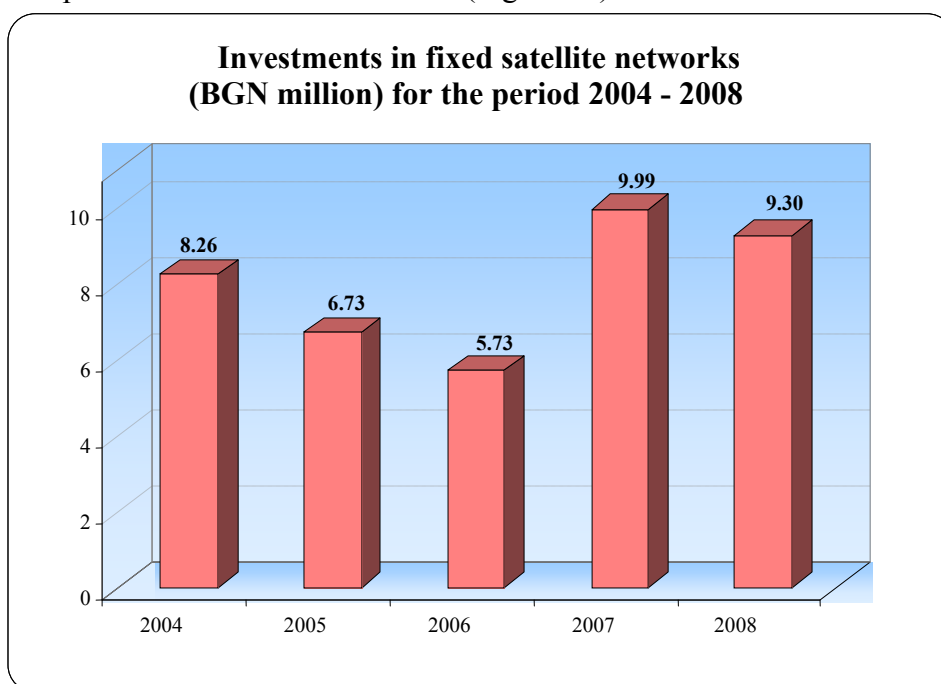


*Source: Data submitted to the CRC*

**Figure 66**

<sup>43</sup> The number of households, used in the calculation of the indicator, is taken from the last official census in 2001.

Investments declared by the undertakings, in 2008, amounted to BGN 9.30 million, which represents 7.4 percent less than those in 2007 (Figure 67).



*Source: Data submitted to the CRC*

**Figure 67**

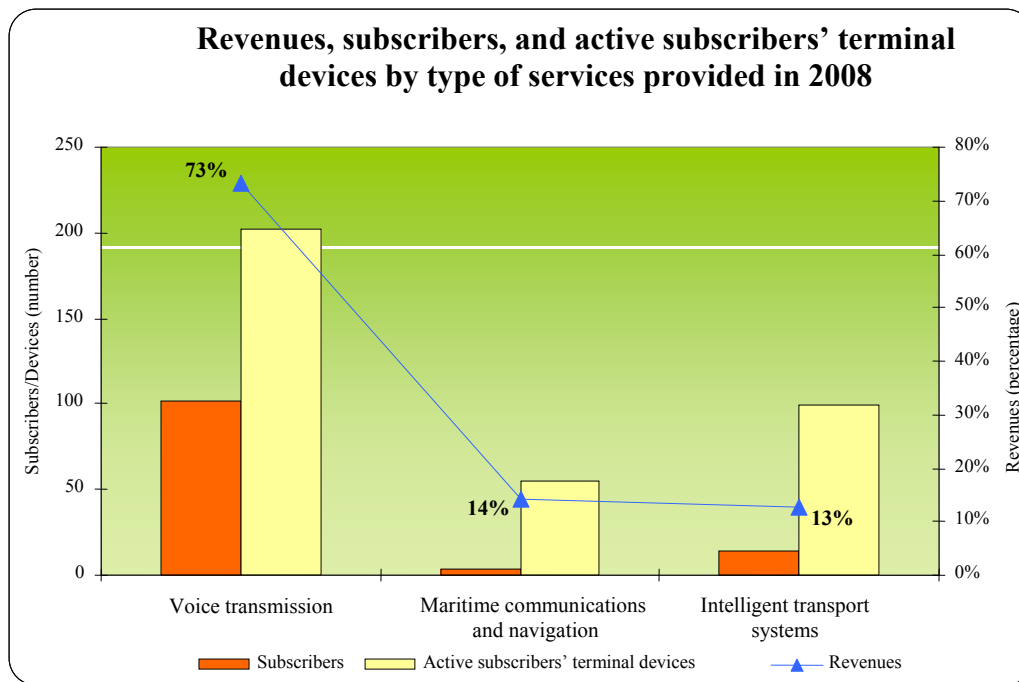
Probably as a result of the worldwide adverse economic conditions over the last year, the undertakings indicated that they intend to shrink the size of their investments in fixed satellite systems, in 2009, up to BGN 5.15 million.

### **7.3. Access to satellite systems**

In 2008, major market player in the provision of access to satellite systems service was once again SCORTEL OOD, which provided voice transmission and data transfer services for the purposes of maritime communications and navigation, and the so-called "intelligent transport systems" and GPS systems for the monitoring and control of fleets to end-users.

Revenues from the provision of public electronic communications through that service registered a reduction of 7.6 percent compared to the previous year, while their share in the total volume of market segment - fixed satellite networks, remained marginal - only 0.5 percent compared to 0.9 percent in 2007. The highest share was that of revenues from voice transmission - 73 percent of the total volume of revenues from access to satellite systems service, followed by revenues from voice transmission and data transfer for the provision of maritime communications and navigation - 14 percent, and revenues from voice transmission and data transfer for the so-called intelligent transport systems and GPS systems for the monitoring and control of fleets - 13 percent. The number of subscribers registered an increase of 62 percent, compared to the previous year, as the highest share was that of business customers - 89 percent, and the share of revenues received from them is respectively 97 percent of the total revenues in 2008.

The chart below presents the breakdown of revenues, number of subscribers, and active subscribers' terminal devices by type of services provided (Figure 68):



*Source: Data submitted to the CRC*

**Figure 68**

## 8. Terrestrial broadcasting

The practice to separate the regulatory functions in the media sector continued in 2008 as well, as the regulation of the terrestrial broadcasting of radio and/or television signals was carried out by the CRC, and that of the program content - by the Council for Electronic Media (CEM). Over the year, the procedure for issuing authorizations for the use of individually assigned scarce resource - radio-frequency spectrum, to operative radio and television broadcasters holding an individual license issued under the TA (repealed), complied with § 9, para. 3 of TFP of the LEC, under which the Commission issues a corresponding authorization ex officio to operators that carry out telecommunications activities based on individual licenses pending the entry into force of the LEC.

The CRC issues authorizations for the use of individually assigned scarce resource - radio-frequency spectrum, to newly registered radio and television broadcasters upon the entry into force of the LEC, pursuant to the provisions of Art. 30, item 12 of the LEC.

LEC regulatory framework created preconditions for the penetration of digital broadcasting, but for the provision of a comprehensive legal framework necessary for the digitalization introduction, changes are to be made, which will regulate the procedures for issuing of authorizations for the use of individually assigned radio-frequency spectrum for provision of electronic communications over terrestrial digital broadcasting networks. As a parallel step in this direction, a corresponding change in the media law is contemplated, particularly in the Law on Radio and Television (LRT). The CRC and CEM priorities on digitalization evolve from the Plan for Introduction of Digital Video Broadcasting — Terrestrial (DVB-T) in Bulgaria, adopted by the Council of Ministers in early 2008. The document regulates the harmonized assignment of the radio-frequency resource in accordance with the Final Acts of the Regional Radiocommunication Conference for planning of the digital terrestrial broadcasting services in the parts of Regions 1 and 3 in the frequency bands 174-230 MHz and 470-862 MHz. The plan provides for phased digitalization, which will end in 2015 - it is planned that, by the

end of 2012, all transmitters of terrestrial analogue television broadcasting will cease the broadcasting, and by 2015 full population coverage for the receiving of digitally broadcasted television programs in the Republic of Bulgaria should be reached. Due to the complex nature of digitalization and the influence of a number of time-varying factors, this plan should be periodically updated.

In 2008 the CRC adopted a Regulatory policy on the management of radio frequency spectrum for civil needs, which reflects the trends in electronic communications development on global and European scale, and is directly dependent on the Plan for phased introduction of terrestrial digital television broadcasting. It is envisaged that after the transition to terrestrial digital broadcasting frequency resource will be released, the so-called digital dividend, which will create opportunities for the provision of various wireless electronic communications services.

Under the effective legislation provisions, the transition from analogue to digital television broadcasting will be controlled by the CRC and the CEM.

### ***8.1. VHF-FM broadcasting***

In early 2008, the number of undertakings holding authorizations for local coverage broadcasting was 97, while the number of authorizations issued was 268. Bulgarian National Radio (BNR) and DARIK RADIO AD, both holding national coverage authorizations, continued broadcasting as well.

During the year, 27 authorizations for the use of individually assigned scarce resource - radio frequency spectrum, for the provision of electronic communications by terrestrial broadcasting of local coverage radio signals, were transferred by CEM and CRC decisions. Four authorizations for local coverage terrestrial broadcasting have been terminated.

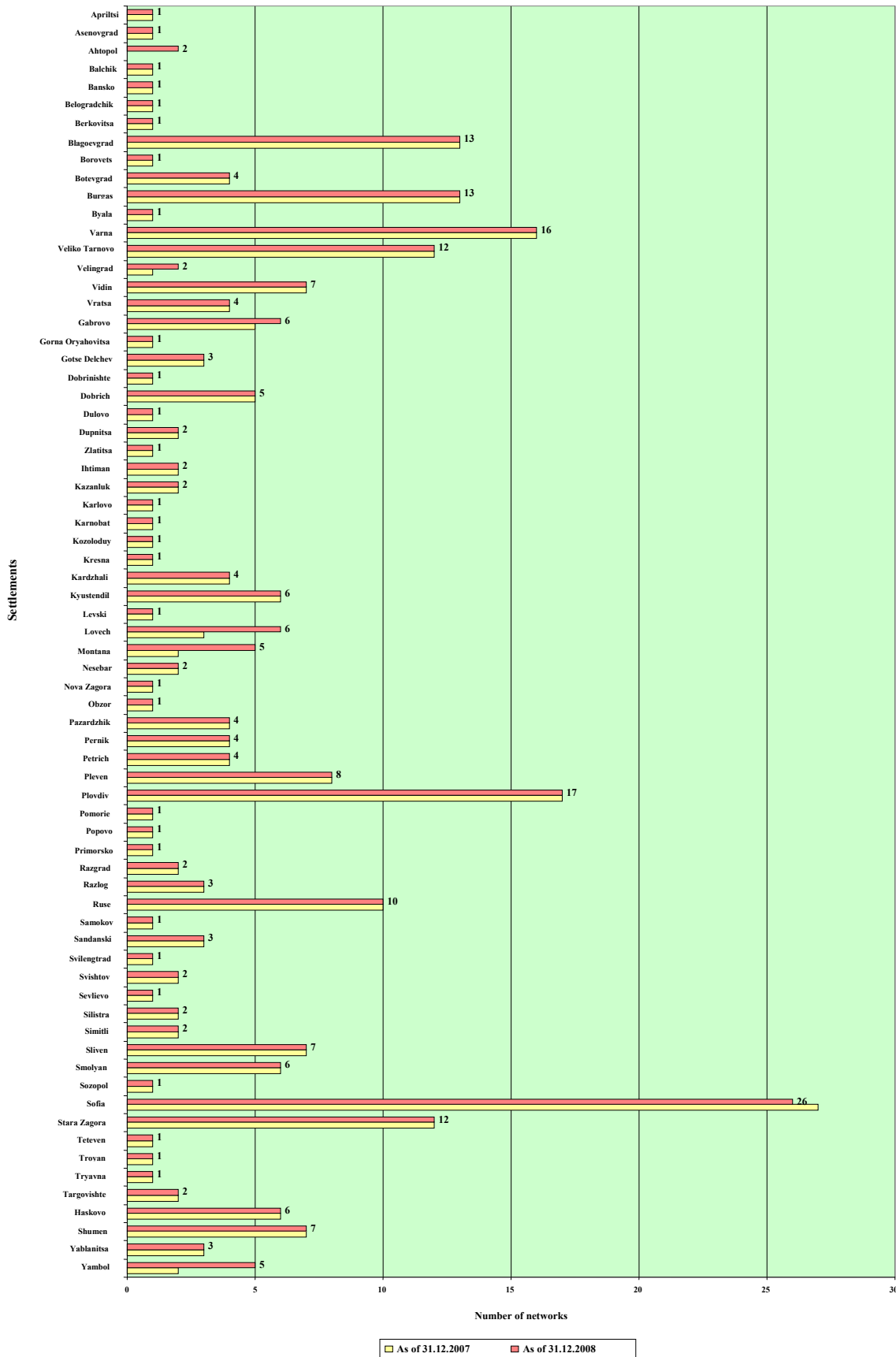
Sixteen local coverage authorizations were issued on the grounds of Art. 30, item 12 of the LEC, in relation to Article 116 c, paragraph 2, and paragraph 4 of the LRT, as well as on the grounds of CEM decisions, as 13 of them were issued to existing radio operators, and 3 authorizations - to newly registered radio operators.

At the end of 2008, a total of 92 radio operators had the right to carry out local coverage terrestrial broadcasting. The total number of authorizations for local coverage terrestrial broadcasting was 280.

Figure 69 presents the breakdown of public electronic communications networks for local coverage broadcasting by settlements, as of December 31, 2007 and 2008, as in 2008 two authorizations for a new settlement - Ahtopol, have been issued. 36.9 percent of the undertakings operated in more than one settlement.



Breakdown of public electronic communications networks for radio broadcasting by settlements



Source: CRC

Revenues generated by undertakings providing electronic communications via analogue terrestrial broadcasting of radio signals, in 2008, amounted to BGN 37.5 million, as 91.81 percent were from broadcasted advertisements, 0.01 percent were under contracts concluded with radio operators for the broadcasting of their programs, and 8.19 percent were from the provision of other services related to the undertakings' activity.

Investments made during the year, in the construction, maintenance and use of broadcasting networks amounted to BGN 4.6 million, and investments scheduled for 2009 were to the value of 2.8 million.

The coverage of BNR and DARIK RADIO AD programs, achieved by population, as of 31.12.2008, was 95 percent and 85 percent respectively.

## ***8.2. Television broadcasting***

As of 31.12.2008, a total of 15 undertakings had the right to provide electronic communications on the basis of authorizations issued for analogue terrestrial broadcasting of television signals, as the networks of 12 of them had local coverage.

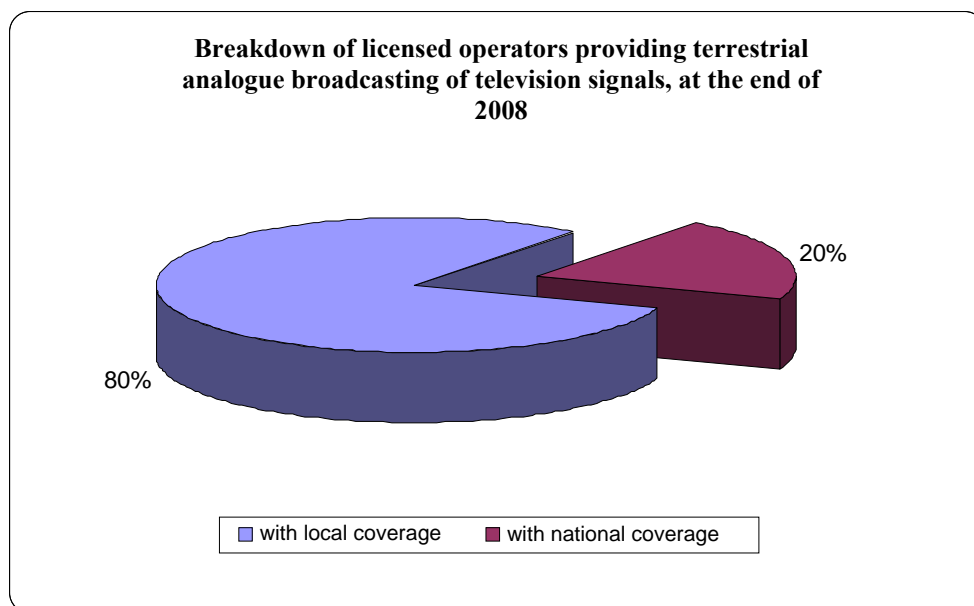
Over the year, a total of 29 authorizations for the provision of electronic communications by terrestrial broadcasting of television signals with local coverage were transferred by CEM and CRC decisions to two newly registered undertakings. By CRC decisions, dated 29.05.2008, TECHNOSTEEL EOOD transferred all its 27 authorizations to TOP TON MEDIA BULGARIA EOOD, and by CRC decisions, dated 3.07.2008, MAX CHANNEL AD transferred its two authorizations to LG CONSULT OOD. During the year, there were no new authorizations issued for analogue terrestrial broadcasting of television signals. As a result, at the end of 2008, the number of authorizations issued for analogue terrestrial broadcasting of television signals with local coverage remained the same as in 2007 - 41.

BULGARIAN NATIONAL TELEVISION (BNT), BALKAN NEWS CORPORATION EAD, and NOVA TV - FIRST PRIVATE CHANNEL EAD hold authorizations for analogue terrestrial broadcasting of television signals with national coverage.

BTC AD has been authorized for digital terrestrial broadcasting of television signals under DVB-T<sup>44</sup> standard, for the territory of Sofia. In 2008, the incumbent broadcasted the following six television programs - Channel 1, bTV, Nova TV, BBT, TV7 and THE VOICE, as well as the national radio programs - HORIZONT and HRISTO BOTEV.

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<sup>44</sup> DVB-T (Digital Video Broadcasting-Terrestrial) - a standard for digital terrestrial broadcasting of television signals



*Source: CRC*

**Figure 70**

Revenues generated by television broadcasters, in 2008, amounted to BGN 309 million, which is 11 percent more compared to 2007; 79.48 percent of them were from broadcast advertisements.

Investments, made in 2008, for the construction, maintenance, and use of networks for television broadcasting amounted to BGN 10.7 million, which was 28 percent less than in the previous year. Investments scheduled for 2009 were to the value of BGN 13.75 million.

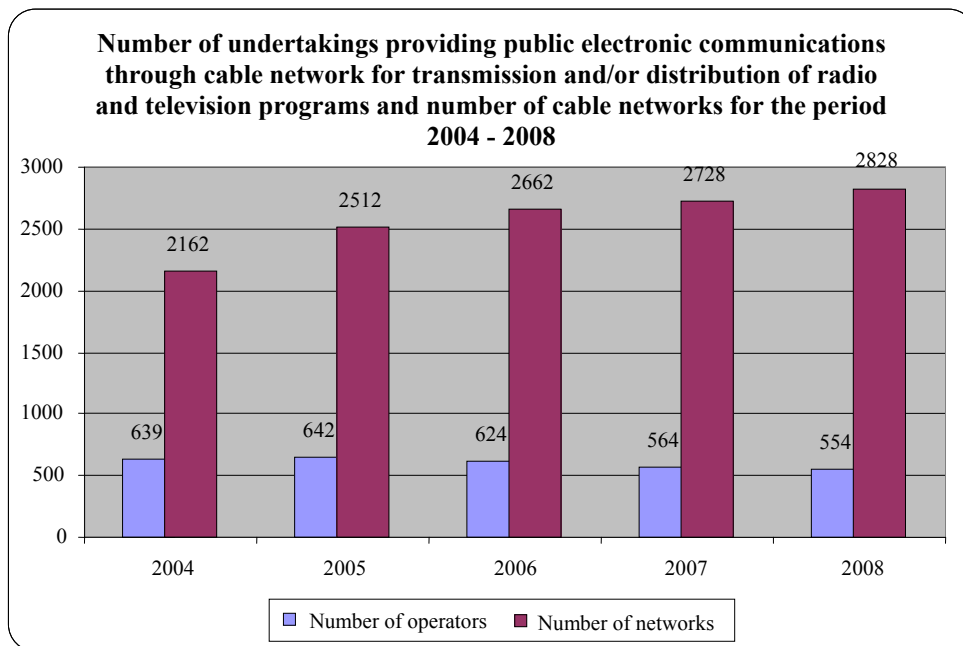
As of 31.12.2008, BNT and bTV population coverage was 98 percent and that of NOVA TV - FIRST PRIVATE CHANNEL EAD - 75 percent.

## **9. Cable networks for transmission and/or distribution of radio and television signals**

In 2008, 34 new undertakings, providing public electronic communications through cable network for transmission and/or distribution of radio and television programs, were registered, which in accordance with the LEC have notified the CRC of their intentions to carry out this type of electronic communications activity. An increase in the number of newly registered undertakings was recorded as compared to 2007. Meanwhile, 15 addendums for territory coverage expansion to existing notifications have been issued, and 44 CRC decisions for cancellation were issued as well.

At the end of 2008, the total number of undertakings, providing public electronic communications through cable network for transmission and/or distribution of radio and television programs, was 554<sup>45</sup>, which is 10 less compared to 2007, and the number of cable networks reached 2828. The observed in the past few years restructuring of this segment of the electronic communications market towards consolidation, continued. Although generally the number of undertakings is decreasing, an intensified competition in terms of service quality was observed.

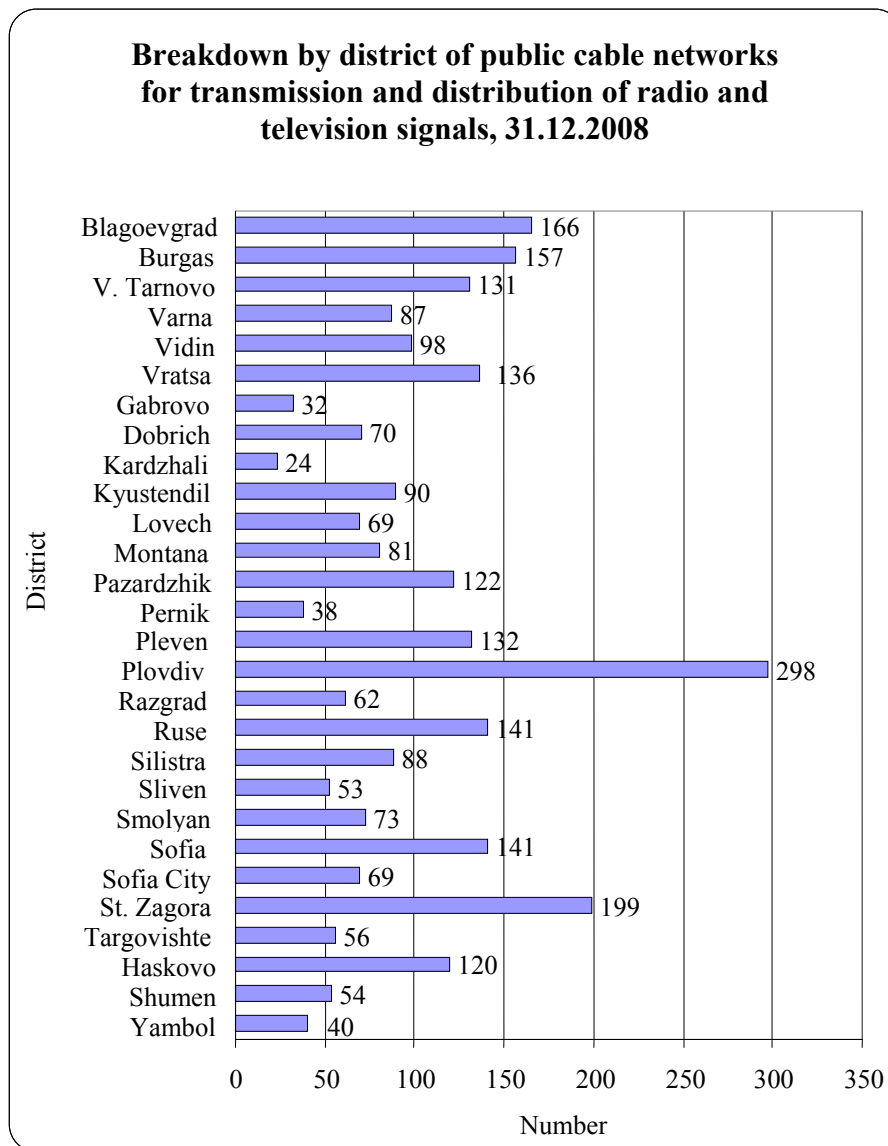
<sup>45</sup> Total number of undertakings, providing public electronic communications through cable network for transmission and/or distribution of radio and television programs at year-end, excluding those cancelled in 2008



*Source: CRC*

**Figure 71**

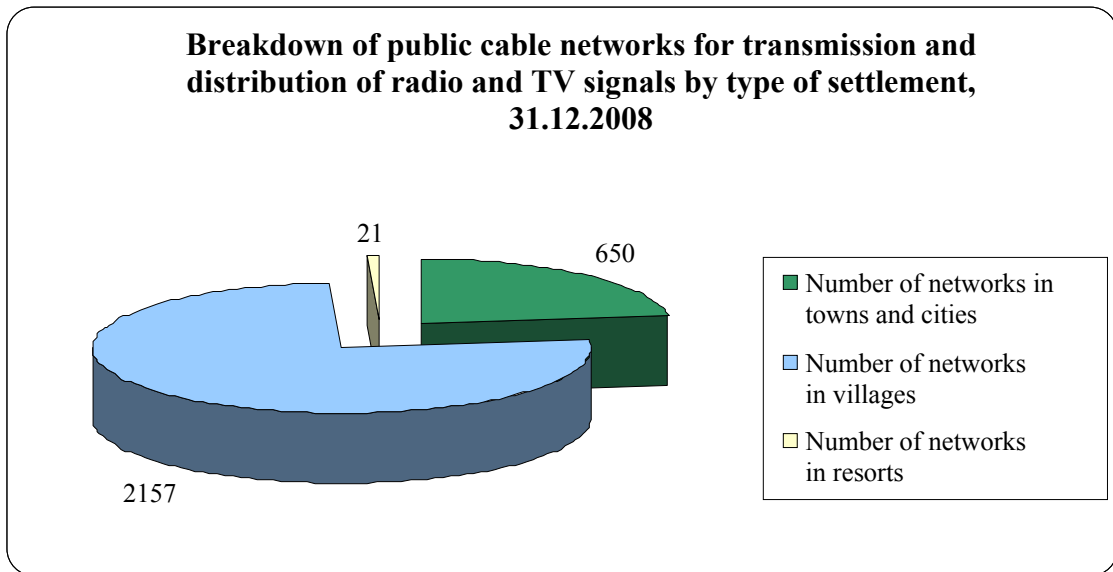
The chart shows that the number of undertakings, providing public electronic communications through cable network for transmission and/or distribution of radio and television programs, decreased compared to the previous three years, but the number of networks in the settlements increased, indicating the strengthening of large undertakings' positions.



*Source: CRC*

**Figure 72**

The breakdown of notifications submitted (pursuant to LEC) varies across districts: just over 60 percent of the networks were built in twelve of the twenty-eight national districts (Figure 72), as the highest concentration is registered in Plovdiv, Burgas, Blagoevgrad, Sofia, and Stara Zagora.

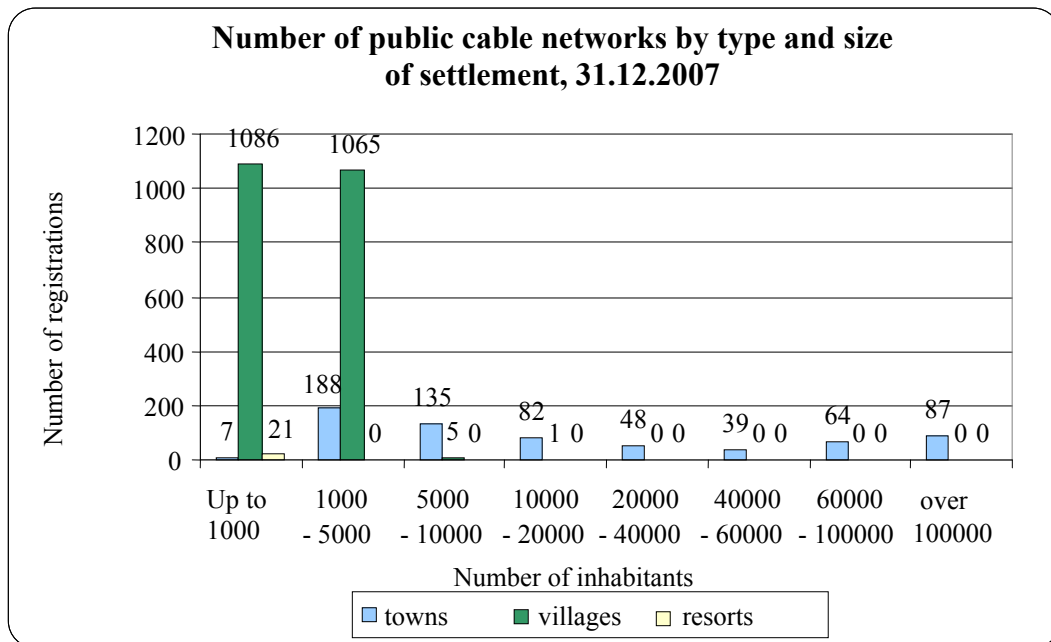


*Source: Data submitted to the CRC*

**Figure 73**

Figure 73 presents the breakdown of cable networks by type of settlement in which they were built. Approximately 76 percent of all networks are located in villages. Cable networks in villages increased by 60, while those in cities - by 39, compared to last year.

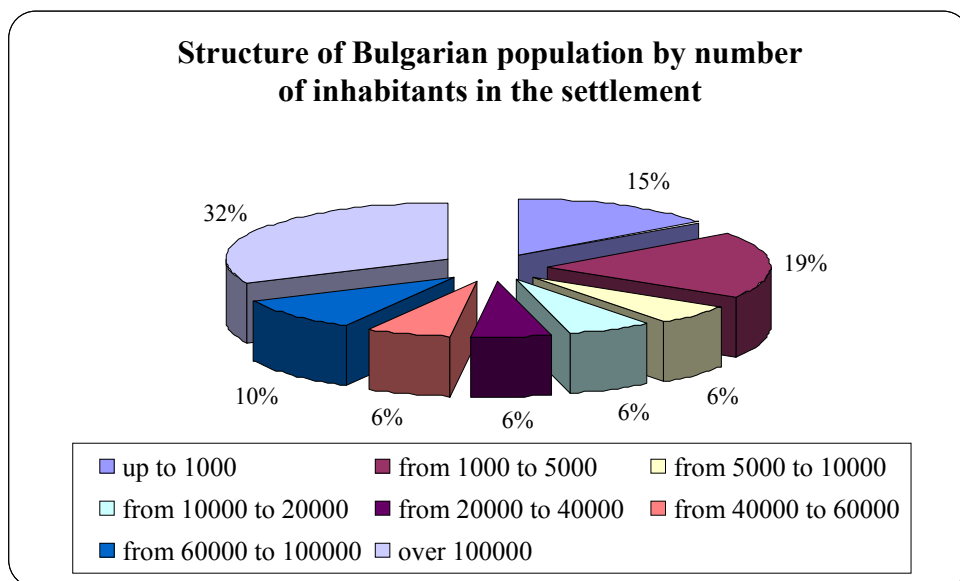
All towns and cities, as well as 28 percent of the villages in Bulgaria have cable networks for distribution of radio and television signals. For a one-year period, the number of villages with cable infrastructure has increased by 1 percent.



*Source: Data submitted to the CRC*

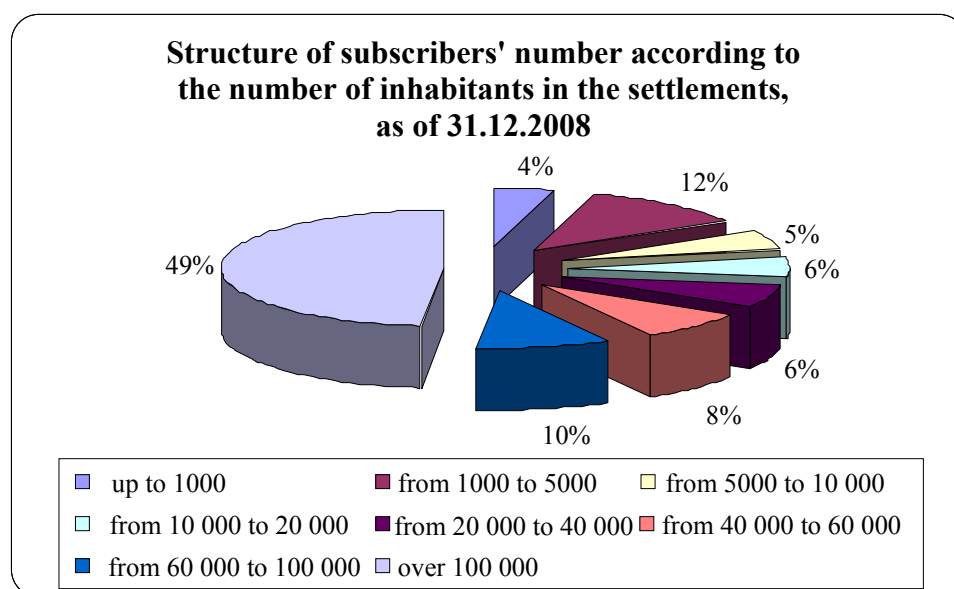
**Figure 74**

The number of cable networks built in settlements with up to 5 000 inhabitants increased to 2 367, which is 4 percent more compared to 2007 (Figure 74). 84 percent of the networks are located in these settlements, while just over 5 percent of them are located in settlements with more than 60 000 inhabitants, where almost half of the population of the country is concentrated.



Source: NSI<sup>46</sup>

Figure 75



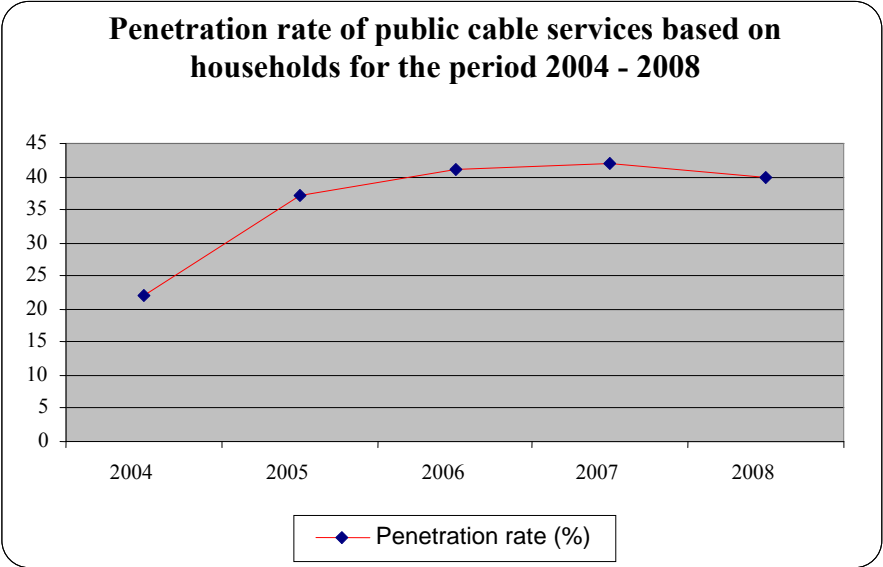
Source: Data submitted to the CRC

Figure 76

High population concentration in cities, on the one hand, and higher standards of living in them, on the other, determines the larger relative share of the population using public electronic services through cable network for transmission and/or distribution of radio and television programs. Half of the subscribers of cable networks were concentrated in large cities with population over 100 000 inhabitants, and the relative share of subscribers in towns with populations over 60 000 inhabitants (cumulative) was 59 percent. This decrease in the percentage of subscribers in settlements with more than 60 000 inhabitants was at the expense of the increase in the relative share of subscribers in smaller settlements. In settlements with population up to 5 000 inhabitants, this indicator has increased by 4 percentage points, over the previous year, reaching 16 percent.

<sup>46</sup> Data are based on the latest census conducted in 2001

The total number of cable network subscribers in Bulgaria, as of 31.12.2008, according to an expert estimate, based on data submitted to the CRC by 93 percent of registered undertakings, was about 1 160 000<sup>47</sup>, as compared to 2007 it has decreased by almost 5 percent. According to data on subscribers, at the same date, cable television penetration of Bulgarian households was 40 percent, which is 2 percentage points less compared to 2007 (Figure 77). The appreciable reduction in the total number of cable network subscribers in 2008 compared to 2007 is due to the growing interest in the alternative to cable television - satellite digital television.



*Source: Data submitted to the CRC*

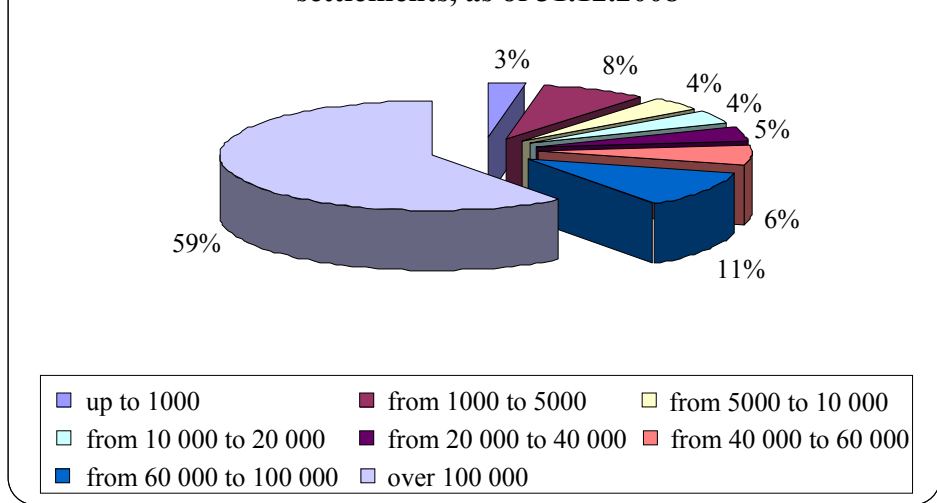
**Figure 77**

Figure 78 presents the structure of revenues from the provision of public electronic services through cable network for transmission and/or distribution of radio and television signals. Given that more than half the subscribers were located in settlements with more than 60 000 inhabitants, revenues from such an activity were significant in this market segment - 70 percent. In settlements with up to 5 000 inhabitants this indicator is only 11 percent.

<sup>47</sup> Includes subscribers to basic program packages, including subscribers to additional package and encoded programs, as well as bundled services, including Double play (cable TV and Internet), Double play (cable TV and voice transmission), and Triple play.



**Structure of revenues from the provision of cable services,  
based on the number of inhabitants in the  
settlements, as of 31.12.2008**



*Source: Data submitted to the CRC*

**Figure 78**

According to CRC expert evaluation, the volume of total revenues from cable networks is estimated at nearly BGN 200 million<sup>48</sup>, which is 13 percent more compared to 2007. The main part of them (82.6 percent) continued to be from the distribution of radio and television signals, registering a decrease by nearly 3 percent. Encoded programs share was the same as in 2006 and 2007 - approximately 1 percent of the revenues of the undertakings, providing services over cable networks, and have submitted information to the CRC. Revenues from the provision of bundled services like Double play (cable television and Internet access) decreased by 4.6 percentage points and amounted to 6.8 percent, those from the provision of services like Triple play increased considerably and reached 4.1 percent, and revenues from the broadcasting of programs received by the subscribers in a digital format reached 5.7 percent of the total revenues of cable networks.

### *Services provided and prices*

More undertakings, providing services via cable networks, offer or have plans to offer bundled services such as Double play (cable television and Internet access and/or cable television and voice transmission), Triple play (cable television, Internet access and voice transmission), encrypted programs, data transfer, and services such as HDTV<sup>49</sup> and Video on Demand. Services integration is facilitation for end-users and allows them to choose between different packages according to their individual needs and at discounted prices.

The provision of Double play (cable television and Internet) service is attractive to those undertakings carrying out their activity primarily in big cities like Sofia, Varna, Burgas, Plovdiv, Ruse, and Stara Zagora. The trend of increasingly widespread availability of this service in smaller towns and some villages, observed in the past few years, persists. In 2008, the number of undertakings, which have declared that they provide this service, has increased by 8 compared to 2007, reaching a number of 28. However, revenues from the Double play service fell by 4.6 percentage points, compared to the previous year, and amounted to 6.8

<sup>48</sup> Inclusive of revenues from the provision of basic program package, including additional package and encoded programs, as well as bundled services, including Double play (cable television and Internet), Double play (cable television and voice transmission) and Triple play.

<sup>49</sup> A digital television standard supporting a format that allows higher quality transmission and higher resolution in comparison with traditional analogue or digital television.

percent of the total amount in the market segment. This decrease is attributable to the fact that one of the biggest cable operators in the market terminated the provision of the Double play service combining cable television and Internet access. Over the past few years, the Double play service (cable television and Internet) is becoming more popular as it offers permanent access at bargain prices for consumers. According to the CRC data, submitted by the undertakings, the average monthly subscription for Double play service was BGN 33.00.

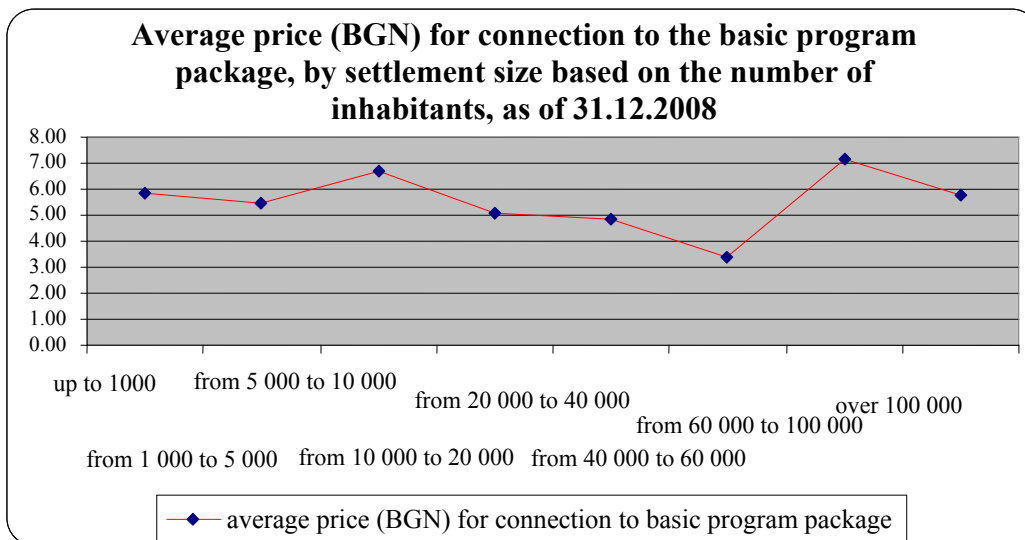
The Triple play service, which provides access to cable television, fixed voice telephone service and high-speed Internet, received by consumers via a single cable, continued to be quite attractive in 2008 as well, although the number of undertakings, which have declared that they provide the service, has decreased in half reaching 3: CABLETEL EAD, VESTITEL BG AD, EUROCOM CABLE MANAGEMENT BULGARIA EOOD. Triple play service provision is concentrated mainly in big cities. It should be noted that Bulgarians, using Double play and Triple play bundled services, were respectively about 4.3 percent and 2.2 percent of the total number of cable network subscribers in Bulgaria, as the Triple play service subscribers have increased by 0.8 percent, which is almost double compared to the previous 2007.

A growing number of cable network operators provided to their subscribers reception of TV programs in both analogue and digital format. More than 20 companies providing services through cable network (including KRAKRA AD, CABLETEL EAD, EUROCOM CABLE MANAGEMENT BULGARIA EOOD, TELECABLE AD, CABLE SAT - WEST OOD, DIGITAL CABLE COMPANY OOD, DOBRUDJA CABLE EOOD etc.) also offer digital television, which provides broadcasting, translation and reception of television signals entirely in digital format, as the broadcasting may be not only in the traditional analogue format, but also in HDTV format. Subscribers receiving cable television in digital format have increased almost 3 times compared to 2007, reaching 13.1 percent of the total number. Video on demand is one of the most popular services of this type, which enables the subscriber to watch movies or programs of their choice against additional payment. The digital program package is generally used with the basic analogue program package against an additional subscription fee for reception. The service is offered also in a package with encoded programs.

The figures below present the average connection and monthly subscription charges<sup>50</sup> for the basic program packages of the undertakings, providing services via cable network. As mentioned above, revenues from these packages covered the highest share of the market segment.

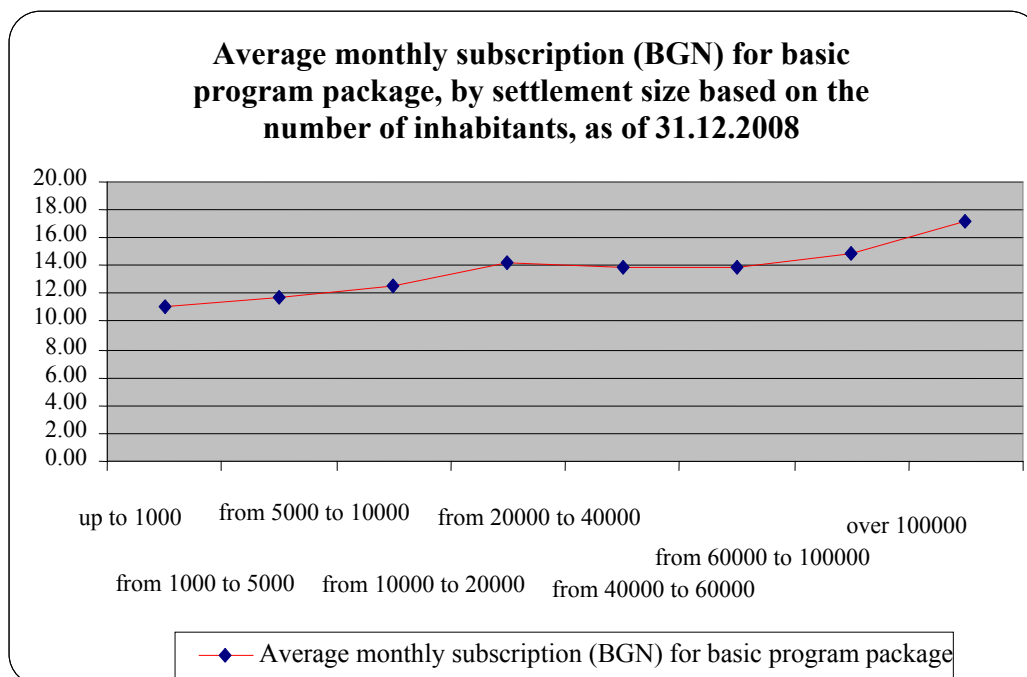
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<sup>50</sup> Charges are calculated as arithmetic mean in size of the settlement based on number of inhabitants.



Source: Data submitted to the CRC

Figure 79



Source: Data submitted to the CRC

Figure 80

In 2008, the average monthly subscription fee for the basic program package has increased by about 6 percent compared to 2007, due primarily to the improvement in the quality of services provided by cable operators, in accordance with the higher user requirements.

Subscribers in more than 60 percent of the settlements, where cable TV is available, did not pay an installation charge for the basic program package. For potential subscribers of undertakings, operating in towns with over 60 000 residents, the installation charges for the basic program package are low or the service is free of charge, which is dictated by the high number of players on the relevant market. On the contrary, the limited number of undertakings, operating in small towns with up to 5 000 inhabitants, determined the relatively high initial fees. Despite the inefficient competition there, monthly subscriptions for the basic program packages were significantly lower, due to the lower quality and the lower coverage

of services provided, as well as the lower purchasing power of the population in these settlements.

## **10. Services provided through point-to-multipoint networks**

At the end of 2008 five companies held licenses for the construction of point-to-multipoint network with national coverage using the WiMAX technology. Four of them actually operated in the market – MAX TELECOM OOD, TRANS TELECOM EAD (using the 1One trademark), NEXCOM BULGARIA EAD, and MOBILTEL EAD (with M-tel trademark). In 2009 CARRIER BG AD is also expected to start the provision of services through its WiMAX network.

Through their point-to-multipoint networks undertakings provide the following:

- broadband Internet access with speeds of up to 4Mbps;
- voice services:
  - via numbers with national access code 099x (provided by MAX TELECOM OOD with code 0999 and by TRANS TELECOM EAD with code 0996);
  - via geographic numbers (TRANS TELECOM EAD and NEXCOM BULGARIA EAD hold licenses for the provision of fixed voice telephone services and use their WiMAX networks for the provision of fixed telephone services via wireless access to subscribers);
- additional services as voice-mail, web TV, mobile applications, web hosting, video surveillance, MAN/VPN services and business telephone exchanges for business users, etc.

Three of the undertakings (MAX TELECOM OOD, TRANS TELECOM EAD, and NEXCOM BULGARIA EAD) provided services to both domestic and business users, as well as bundled services, while MOBILTEL EAD offered only broadband Internet access to business users. In 2008 only MAX TELECOM OOD provided prepaid WiMAX services.

At the end of 2008, the number of consumers using services provided by the WiMAX networks in Bulgaria was 6382 in total, increasing by 261 percent compared to that at the end of 2007. The correlation of domestic to business users was 63.8 percent to 36.2 percent, while the correlation of contract subscribers to users of prepaid services was 95.8 percent to 4.2 percent. One quarter of all WiMAX service users preferred to buy them bundled.

Users of voice services, provided by MAX TELECOM OOD and TRANS TELECOM EAD via numbers with national access code 099x, were 1743 in total. In 2008, the revenues of these two undertakings from those services amounted to BGN 84 620.

The prices for wireless internet access service provided via point-to-multipoint networks were at the price level of services for cable, LAN and DSL broadband Internet access, and part of the undertakings (MAX TELECOM OOD, TRANS TELECOM EAD, and NEXCOM BULGARIA EAD) provided the so-called “nomadic service” by which consumers are able to use their Internet connection at any place where the WiMAX network of the undertaking has coverage. It should be mentioned, however, that generally the speed of the Internet connections offered this way was lower than the speed offered by competitors providing cable, LAN, and DSL services. In terms of prices, voice services via national access code were positioned under the standard plans of the majority of undertakings providing electronic communications via fixed networks.

The development of networks and services provided by point-to-multipoint networks in Bulgaria is still in its initial phase. Evidence of this is the average WiMAX networks coverage in Bulgaria, which at the end of 2008 reached only 44.3 percent of the population in the

country. In 2008 the undertakings have invested a total of BGN 20.2 million in the completion of their networks, and in 2009 they are contemplating new investments of more than 46.6 million, by which they plan to increase their coverage to the average of 62.5 percent of the population in the country.