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2. FIXED TELEPHONE NETWORKS AND PROVISION OF FIXED VOICE TELEPHONE SERVICES

2.1. Participants in the fixed voice telephone service market

Following the expiration of the BTC PLC monopoly since 01.01.2003 the liberalization of the telecommunication networks and services in the country started up. Conditions were established for the penetration of new alternative of the incumbent players in market of fixed telephone networks and provision of fixed voice telephone services.

As of 31.12.2004 11 alternative operators have the right to carry out telecommunications through fixed telephone networks and to provide fixed voice telephone services. Out of these, the number of the newly licensed ones during the year is 6. Eleven operators are entitled to carry out telecommunications through a public telecommunication network and to provide fixed voice telephone service (they are in possession of license No 116 A). Eight operators are licensed for the carrying out of telecommunications through a public telecommunication network for the provision of access to a voice telephone service through the “carrier selection” service (they are in possession of license 116 B). Four of the alternative operators have licenses issued solely under 116 A, one – solely under 116 B and seven – of the two types (116 A and 116 B).

Source: CRC

Fig. 13

As of 31.12.2004 the total number of licenses (116 A and 116 B) issued to alternative to BTC PLC operators for this kind of telecommunication activity is 19. The licenses of all these operators are with a territorial scope Republic of Bulgaria, such as the scope of the license of BTC PLC.
Although most of the licensed operators have certain experience and not a few revenues from the provision of telecommunication services prior to the issuance of the voice services licenses, at the end of 2004 solely “GLOBALTECH BULGARIA” LTD of the alternative fixed operators in the country declared to have started activities on provision of a fixed voice telephone service, but the subscribers and the operator’s revenues are comparatively few within the total market volume. This is to a great degree, due to the delay owing to various reasons, of the conclusion of interconnection agreements with the main operator.

On the grounds of the provisions of the Telecommunications Act and the Methodology on the Conditions and Procedure for Determination of Operators with Significant Market Power (State Gazette, issue 61 dated 13.07.2005), after a conducted market analysis and a Decision of CRC No 1748/16.09.2004, BTC PLC was determined as an operator with significant market power on the fixed telephone networks and fixed voice telephone services market. As such an operator BTC PLC was imposed the obligations with regard to the interconnection, provision of specific access and collocation of premises, telecommunication equipment, channels, towers and others stipulated in the Telecommunications Act.

Since the end of 2004 the process of conclusion of interconnection agreements between BTC PLC and the alternative operators conformed to the effective legal base really started. This provided with grounds to forecast that in 2005 other real participants in the fixed telephone networks and provision of fixed voice telephone services market will also appear, which shall be a prerequisite for the creation of competitive environment on this market.

In European scale the number of operators licensed to provide fixed voice telephone services through fixed telephone networks greatly varies – from 422 in Germany to one in Malta. At the average for EU 25 the number of these operators is 86, and for the countries which acceded EU in 2004 – 40. These numbers are in great contrast with the number of licensed operators in our country for the provision of this kind of a telecommunication service.

---

1 EU 25 – in total the 25 countries- members of the European Union; EU 15 – the member countries of the European Union without the newly acceded 10 countries.
The biggest number of operators licensed to provide for a fixed voice telephone service without having a built-up own telecommunication network is in Germany, Sweden and the United Kingdom. In our country the number of the authorized operators for this activity is bigger solely in relation to the number of licensed operators in Malta and Slovenia.

Note:

- The incumbents are also included in the hereinabove indicated number;
- The data about Bulgaria are as of 31.12.2004.


Fig. 14

http://europa.eu.int/information_society/topics/ecomm/all_about/implementation_enforcement/annualreports/10threport/index_en.htm
### Estimated number of authorised public fixed voice telephony operators, July 2004

**Total EU25: 1608 - Total EU15: 1237**

<table>
<thead>
<tr>
<th>Country</th>
<th>Total</th>
<th>EU15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Belgium</td>
<td>56</td>
<td>54</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>38</td>
<td>34</td>
</tr>
<tr>
<td>Denmark</td>
<td>27</td>
<td>22</td>
</tr>
<tr>
<td>Estonia</td>
<td>72</td>
<td>61</td>
</tr>
<tr>
<td>Greece</td>
<td>53</td>
<td>42</td>
</tr>
<tr>
<td>Spain</td>
<td>138</td>
<td>117</td>
</tr>
<tr>
<td>France</td>
<td>47</td>
<td>41</td>
</tr>
<tr>
<td>Ireland</td>
<td>114</td>
<td>99</td>
</tr>
<tr>
<td>Italy</td>
<td>138</td>
<td>117</td>
</tr>
<tr>
<td>Cyprus</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>Latvia</td>
<td>114</td>
<td>107</td>
</tr>
<tr>
<td>Lithuania</td>
<td>131</td>
<td>117</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>26</td>
<td>22</td>
</tr>
<tr>
<td>Malta</td>
<td>66</td>
<td>55</td>
</tr>
<tr>
<td>Netherlands</td>
<td>180</td>
<td>168</td>
</tr>
<tr>
<td>Austria</td>
<td>96</td>
<td>89</td>
</tr>
<tr>
<td>Poland</td>
<td>55</td>
<td>49</td>
</tr>
<tr>
<td>Portugal</td>
<td>79</td>
<td>70</td>
</tr>
<tr>
<td>Slovenia</td>
<td>72</td>
<td>66</td>
</tr>
<tr>
<td>Slovakia</td>
<td>28</td>
<td>23</td>
</tr>
<tr>
<td>Finland</td>
<td>72</td>
<td>66</td>
</tr>
<tr>
<td>Sweden</td>
<td>72</td>
<td>66</td>
</tr>
<tr>
<td>UK</td>
<td>156</td>
<td>138</td>
</tr>
</tbody>
</table>

**Source:** European Electronic Communications Regulation and Markets 2004 (10th Report), Volume II, Annex 3 Market Overview, p. 15 and according to data of CRC (the data about Bulgaria are as of 31.12.2004)

**Bulgaria – number of licensed carriers**

The number of the licensed operators depends on the time of liberalization of the market in the relevant country. In a great part of the countries the telecommunications markets have been liberalized for a long time and the competition is at a much more advanced stage compared to the Bulgarian one where it is still starting up. The juxtaposition of the number of licensed operators to the number of those really operating from them, which is a more precise criterion for the competitive conditions on a certain market, is of significance.

The biggest number of real participants in the fixed voice telephone services of EU25 is in the Netherlands – 129, and the smallest, one or two – in Bulgaria, Slovakia and Malta.
It should be noted that although at the end of 2004 the provision of fixed voice telephone service (inclusive of carrier selection for long distance and international calls) on the part of the licensed alternative operators in the country is only starting up, in reality in the last few years BTC PLC has been faced by the real competition of the voice telephony through Internet protocol (VoIP) providers.

This activity is implemented on the grounds of a free trade agreement with the main operator. At the provision of this service the voice is transformed into packages of data and through Internet they are transmitted to the desired direction, there being again transformed into voice (Fig. No 17).

---

Note:

- The incumbent operators are included in the indicated number;
- The data about Bulgaria are as of 31.12.2004.

Source: European Electronic Communications Regulation and Markets 2004 (10th Report)³, Volume II, Annex 3 Market Overview, p. 16 and according to data of CRC

Fig. 16

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³ http://europa.eu.int/information_society/topics/ecomm/all_about/implementation_enforcement/annualreports/10threport/index_en.htm
Leading participants in the voice telephony market through Internet are the operators licensed for the provision of fixed voice telephone services alternative to BTC PLC - “ORBITEL” PLC, “EATERN TELECOMMUNICATION COMPANY” PLC, “NEXCOM BULGARIA” PLC, “NETPLUS” LTD, “SPECTRUM NET” PLC, “BULGARIA TELECOM NET” PLC, “TELECOM PARTNERS NETWORK” LTD, “GLOBALTECH BULGARIA” LTD, “NETPLUS” LTD, “SPECTRUM NET” PLC, “BULGARIA TELECOM BULGARIA” PLC, “TRANS TELECOM” LTD, as well as others like “INTERTEL TELECOMMUNICATIONS” LTD, “PLANETPHON”, “BULGARIAN INFORMATION TECHNOLOGIES” EAD, “NETEL” LTD, “EXTE” LTD, “BTC NET” LTD. These operators provide voice telephone service, through the BTC PLC network (ISDN ports).

The competition between the VoIP providers and BTC PLC is of price and non-price nature. The main competitive advantage of BTC PLC is the higher quality of the service. A competitive advantage of the VoIP providers are the lower prices to make long distance and international calls, as well as calls to mobile networks (item 2.5.).

2.2. Infrastructure of the BTC PLC fixed network

The modernization and renovation of the existing telecommunications infrastructure is a priority factor for the development of the telecommunications market in the country and the provision of services of higher quality at lower prices.

In the last four years BTC PLC invested significant funds (over BGN 600 million) for the development of its network. The following graph indicates the development of digitalization rate of the fixed BTC network for the last few years, the digital telephones of the company reaching 34% at the end of 2004.

---

4 The percentage of digitalization was calculated as a ratio of the digital local loops to the total number of activated subscription telephone lines (the total number of ISDN ports is included as well)
Although still comparatively low, the digitalization rate of the network continues to grow as a result of the increased number of digital lines, as well as the respectively continuing decrease of the analogue lines (by 15% for a one-year time period). With regard to the pre-accession commitments of Bulgaria in the sphere of telecommunications, the digitalization growth is to continue. The BTC PLC license stipulates obligations under this indicator: at the end of 2005 the percentage of the digital lines is to reach 50-55%, and at the end of 2007 75-81%.

The table below presents the planned development of digitalization in 2005 per administrative regions.

**Table 2**

<table>
<thead>
<tr>
<th>Administrative region</th>
<th>Number of new digital lines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blagoevgrad</td>
<td>3 000</td>
</tr>
<tr>
<td>Bourgas</td>
<td>11 000</td>
</tr>
<tr>
<td>Varna</td>
<td>15 000</td>
</tr>
<tr>
<td>Veliko Turnovo</td>
<td>7 000</td>
</tr>
<tr>
<td>Vidin</td>
<td>5 900</td>
</tr>
<tr>
<td>Vratsa</td>
<td>3 600</td>
</tr>
<tr>
<td>Gabrovo</td>
<td>9 000</td>
</tr>
<tr>
<td>Kurdzhali</td>
<td>6 700</td>
</tr>
<tr>
<td>Kyustendil</td>
<td>9 300</td>
</tr>
<tr>
<td>Lovech</td>
<td>5 000</td>
</tr>
<tr>
<td>Montana</td>
<td>3 300</td>
</tr>
<tr>
<td>Pazardzhik</td>
<td>4 000</td>
</tr>
<tr>
<td>Pernik</td>
<td>1 800</td>
</tr>
<tr>
<td>Razgrad</td>
<td>5 000</td>
</tr>
<tr>
<td>Rousse</td>
<td>9 500</td>
</tr>
</tbody>
</table>
Silistra  6,000  
Sliven  10,000  
Smolyan  4,500  
Sofia  100,000  
Stara Zagora  9,000  
Dobrich  14,000  
Turgovishte  5,500  
Shoumen  11,800  
Yambol  12,900  
Total  272,800 

*Source: CRC*

### 2.3. Subscribers telephone lines of BTC PLC fixed network

As a whole in the last two years the total number of subscribers’ telephone lines of the company has decreased. In 2004 compared to the preceding year the number of BTC telephones decreased by 3%, and as compared with 2002 - by 5%. The data indicate that there is a trend BTC subscribers to reject the operator services. The market demand in Bulgaria follows the European and global tendencies, the users getting re-orientated more and more towards the services of the mobile operators, which offer a wider set and flexibility at their use (with regard to mobility as well as with regard to charging – pre-paid services).

*Source: CRC according to data of BTC PLC*

![Graph](image)

**Fig. 19**

For the time period 2001-2004 the indicators fixed telephone penetration per population and households smoothly decrease owing to the trend of decrease in the number of telephone lines by approximately equal rate as the population. At the calculation of the penetration rate
per households the number of telephone sets of residential subscribers was correlated to the data about the number of households of the last census of the National Statistical Institute of 2001. The indicator fixed telephone penetration per households is traditionally high, amounting to 78 % at the end of 2004, but it marks decrease by 4 % in relation to the preceding year.

The ratio of residential and business telephone lines has been relatively constant in the last few years (Fig. 21).

**Fig. 20**

*Source: CRCK according to data of BTC PLC.*

The ratio of residential and business telephone lines has been relatively constant in the last few years (Fig. 21).
2.4. Voice telephone services, provided or by BTC PLC through the fixed telephone network

In 2004 the revenues of BTC PLC from services provided through the fixed telephone network amounted to nearly BGN 1 billion and as a whole decreased by 1% compared to 2003.

The voice telephone service, provided through the fixed telephone network has the biggest relative share in the revenues of BTC PLC (87%). In 2004 compared to 2003 the Company reported insignificant changes in these revenues – decrease in their share by 0.1% and decrease in their absolute value by 0.6%. The availability of stable levels of the revenues from voice telephone service in the last two years may be explained by the absence of real participants, alternative to BTC PLC and the ensuing from that absence of competition in the face of the operators licensed for carrying out of telecommunications on the fixed telephone networks and fixed voice telephone services market.

Source: CRC according to data of BTC PLC
The revenues from line installation fee, monthly rental charge, outgoing traffic and provision of dial-up access to Internet from other operators through numbers of the type 13AX, 13AXY and 13AXYZ have the biggest share in the total volume of revenues from voice telephone services in 2004, amounting to 89.9%. In 2004 compared to 2003 there is an increase in relative and absolute values solely of this item of BTC PLC revenues, respectively by 2.6% and by 2.4%. The revenues of the Company from public payphones preserve their value in relative expression of 0.1%, and in an absolute amount they grow up by 0.2%. The revenues from all other services – interconnection, provision of value added services, incoming international calls and public payphones of other operators decrease both in relative and absolute value.

Source: CRC according to data of BTC PLC

Fig. 22

Structure of BTC PLC revenues in 2003 & 2004 from the provision of services through the fixed telephone network

Source: CRC according to data of BTC PLC

Fig. 23

Structure of BTC PLC revenues in 2003 from provision of voice telephone services through the fixed network

Source: CRC according to data of BTC PLC

Fig. 23
Of the telephone services revenues presented in Fig. 24, during the year solely the amounts from monthly rental price grew up – by 11% compared to 2003, as well as those from services through an operator – by 26 % for the same time period, and the revenues from line installation decreased mostly. The growth of revenues from monthly rental, notwithstanding the decreased number of subscribers, may be explained by the fact that they are a derivative of the monthly rental price (which is a fixed magnitude), taking into consideration the fact that the monthly subscription fee for residential and business subscribers increased by BGN 1,50 with the modification in prices in 2004. The decrease of the revenues from line installations is a result of the observed in the last few years greater interest in mobile services compared to fixed ones as a result of the broader range of services, provided by mobile operators to their subscribers and the more flexible price packages. At the end of 2004 BTC PLC satisfied this trend with the introduction of price packages for residential subscribers „At Home”, including monthly subscription fee and a certain volume of consumption against a fixed price.
2.5. Prices and price policy of BTC PLC

In 2004 the price policy of BTC PLC related to the fixed voice telephone service continues to be directed at:

- Re-balancing of the prices of services and non-admittance of cross subsidizing between them;
- Conformity of the prices with the expenses relevant to the services provision in reference to the requirements of the effective Telecommunications Act;
- Maintenance of a reasonable profitability in a long-term plan;
- Approximation of the price levels and ratios to the already existing ones in the European countries with developed competition.

During the month of May BTC PLC modified the prices of services, offered through the fixed telephone network as a part of the rebalancing process. The monthly rental charge and the local calls prices were increased and the prices for long distance and international calls – both for residential and business subscribers – were reduced.

After the entry into force of the Telecommunications Act (TA) in 2003, on the grounds and after a conducted analysis and a Decision of CRC the incumbent was designated as an operator having significant power over the fixed telephone networks and fixed voice telephone services market. As a result of this the prices of the fixed voice telephone service provided for by BTC PLC, fall under the scope of prices regulated by the CRC. These prices shall be set by the public telecommunication operators in virtue of Principles, adopted by a CRC Decision concerning price determination and the costs for the provision of fixed voice telephone services.

The following two figures show the monthly rental prices of the incumbents, respectively for residential and business subscribers, in the EU Member States and Bulgaria, as well as their minimal and average value for the EU.
Monthly rental charge for residential users in the EU Countries and Bulgaria
(EUR, VAT incl.)

As of August 31, 2003
As of August 31, 2004
Min. value in EU as of August 31, 2004
Average value in EU as of August 31, 2004

Source: EC, 10th Report on the Implementation of the Telecommunications Regulatory Package, data of BTC PLC

Fig. 26
The conclusion may be drawn from the data indicated in Fig. 26 and Fig. 27 that the monthly rental charge for residential and business subscribers of the ten newly EU acceded countries is under the EU average.

In 2004 we can observe a slight increase of the monthly rental charge for residential customers at an average for the ten new EU member states. Its average value in 2003 was 9.7 €, and in the middle of the following year it is 9.8 €, whilst for the EU member states this increase is more significant – by 7% compared to 2003. The monthly rental for business customers in 2004 at an average for the new EU member states grows by 7.53%.

The monthly rental charge for ISDN lines is excluded from the monthly rental of BTC PLC subscribers. The monthly rental of the business customers of BTC PLC nears the average values for the EU newly acceded countries, but it is still significantly under the average values for the 25 member states. For residential customers, notwithstanding the increase in 2004, the monthly rental value nears the EU minimal value.

After the change of BTC PLC prices in 2004, which is a consecutive step in the process of their rebalancing, the ratio of prices for local, long-distance and international calls varied from 1:12, 5:25 as of 31.12.2003 to 1:5:103 as of 31.12.2004. The EU average value of this ratio for 2004 is without any substantial change - from 1:2, 5:5, and 4 in 2003 to 1:2, 4:5, 4 in 2004.

Source: EC, 10th Report on the Implementation of the Telecommunications Regulatory Package, data of BTC PLC

Fig. 27

In prices for a 5-minute call for digital local telephony; long-distance – at a distance over 100 km in the heavy-traffic hours from 08 h to 21 h and international – to neighboring countries.
Shown on the next figure is the modification of the ratio between the prices of BTC PLC for local, long-distance and international calls at their rebalancing for the time period 1999 - 2004, compared to the average values for the EU Member States in 2003 and 2004. The rebalancing of prices of the fixed telephone services of BTC PLC finds expression in a rise of the prices of local calls and a price decrease for the long-distance and international calls with the aim of eliminating the uncompetitive cross subsidizing of the services prices. Notwithstanding, at the end of 2004 the prices of the incumbent\(^8\) in Bulgaria are still unbalanced in comparison with the average ratio for the EU.

\[\text{Source: CRC according to data of BTC PLC}\]

<table>
<thead>
<tr>
<th>Prices of BTC PLC(^6)</th>
<th>Residential customers</th>
<th>Business customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly rental</td>
<td>7,0</td>
<td>7,99</td>
</tr>
<tr>
<td>1 min. local call</td>
<td>0,015</td>
<td>0,021</td>
</tr>
<tr>
<td>1 min. long-distance call</td>
<td>0,132</td>
<td>0,09</td>
</tr>
<tr>
<td>1 min. international call</td>
<td>0,608</td>
<td>0,542</td>
</tr>
</tbody>
</table>

\(^6\)Presented are the prices of the offered services in BGN, VAT excvation., weighted by their constant weights in the consumer’s price basket for plain telephone service, according to the Methodology for determining of prices of the plain telephone service and the leased lines.

\(^7\) The ISDN rental price is excluded from the monthly rental price as of the month of May 2004

\(^8\) Incumbent – operator who owned in the past exclusive rights regulated by a law to provide telecommunication services.
The charts presented below compare the prices per 3-minute and 10-minute local calls of BTC PLC (effective from May 2004) with those of the EU Member States.

**Source:** CRC, EC, 9th-10th Reports on the Implementation of the Telecommunications Regulatory Package, data of BTC PLC

**Fig. 28**

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**Source:** EC, 10th Report on the Implementation of the Telecommunications Regulatory Package, Data of BTC PLC

**Fig. 29**
As of August 31, 2003
As of August 31, 2004
Min. value in EU as of August 31, 2004
Average value in EU as of August 31, 2004
Max. value in EU as of August 31, 2004
EUR-cents, VAT incl.
Prices for 10-min. local calls in the EU Countries

Source: EC, 10th Report on the Implementation of the Telecommunications Regulatory Package, Data of BTC PLC

Fig. 30

As in May 2004 BTC PLC increased the prices of the local calls, the value of a 3-minute local call as of 31.08.2004 being by 38% higher than that for August 2003 and by 39.44% higher than the price for a 10-minute local call. The analysis shows that notwithstanding this increase, the value of a 3-minute and a 10-minute local call in Bulgaria is the lowest compared to the prices in all other EU member states.

As of 31.08.2004 the prices of a 3-minute and of a 10-minute local calls in Bulgaria are under the EU minimal value or 3 times below the EU Member States average. The tendency for decrease of the tariffs for a 3-minute and a 10-minute local call continues for EU Member States. The average price of a 3-minute local call for 2004 is by 2, 34% lower than the one for 2003 and by 3, and 12% for a 10-minute call.

The following charts represent the rates of the incumbents for 3-minute and 10-minute long-distance calls.5

5 at a distance above 200 km in the heavy traffic hours.; the data for Bulgaria are the rates of BTC PLC for the third long-distance zone – for a distance above 100 km
**Prices for 3-min. long-distance calls in the EU Countries and Bulgaria**

Maximum value in EU as of August 31, 2004

Minimum value in EU as of August 31, 2004

Average value in EU as of August 31, 2004

Source: EC, 10th Report on the Implementation of the Telecommunications Regulatory Package, Data of BTC PLC

Fig. 31

**Prices for 10-min. long-distance calls in the EU Countries and Bulgaria**

Maximum value in EU as of August 31, 2004

Minimum value in EU as of August 31, 2004

Average value in EU as of August 31, 2004

Source: EC, 10th Report on the Implementation of the Telecommunications Regulatory Package, Data of BTC PLC

Fig. 32
In May 2004 BTC PLC decreased the prices of long-distance calls by 10%. Notwithstanding that decrease, the price of the incumbent for a long-distance call is still among the highest in Europe.

As of 31.08.2004 the prices of a 3-minute long-distance call in Bulgaria are by 12, 69%, and of a 10-minute – by 22, 26% higher than the average values in the EU Member States. The average value of a 3-minute long-distance call peak rate in the EU Member States as of August 2004 has decreased by 11, 70%, and for a 10-minute call – by 13, 26% compared to the same month in 2003.

The above mentioned facts show that for the EU Member States the trend of equalizing the rates for local and long-distance calls continues in 2004 as well.

Presented on Fig. 33 are the values of a 10-minute international call to a neighbouring country, a distant European country and the USA, made through the incumbents of the EU Member States and Bulgaria as of August 2004, as well as the EU average values.

---

*Source:* EC, 10th Report on the Implementation of the Telecommunications Regulatory Package, Data of BTC PLC

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6 The prices are in EURO, VAT included, for the heavy traffic hours
European country. The price of our incumbent for calls to the USA is by 88% higher than the average value for the EU Member States.

2.5.1. Average monthly expenditure for fixed services – OECD\(^9\) price baskets

The figures below indicate the average monthly expenditure for residential and business subscribers of the incumbents in the OECD countries and Bulgaria, calculated through the price baskets for national calls through PSTN\(^{10}\). The baskets represent a comparison of the consumption for the OECD countries and Bulgaria and include solely national calls to the fixed and to mobile networks. The Purchasing Power Parity (PPP) was taken into consideration at the calculations as well.

The presented expenditures consist of fixed and usage parts. Fixed expenditures are calculated on the basis of the annual subscription fee and the line installation fee, the usage part – on the basis of the prices per minute of local\(^11\) and long-distance calls. At calculating the consumption expenditure, a certain number of calls to the fixed network are input in the baskets, their number for residential subscribers being 1200, and for business subscribers – 3600 per year. The calls to mobile networks are respectively 120 and 360, representing 10% of the number of the calls to the fixed network. The average duration of calls in the residential users basket changes from 2.5 to 7 minutes depending on the fact whether they are made in peak or off-peak traffic hours and on the distance, this duration does not change in the business subscribers basket and is 3.5 minutes.

At the thus input scheme of consumption BTC subscribers spend less as compared with the average value for the countries under investigation: 30.9 for residential subscribers at 40.3 US$/PPP at an average for OECD and respectively 56.6 for business subscribers with an average value of 93.6 US$/PPP. The low value of the fixed part of the expenditure is seen, where a part of the rental price is included. The results may be explained by the fact that BTC PLC prices are still unbalanced (Fig. 34 and Fig. 35).

---

\(^9\) OECD – Organization for Economic Cooperation and Development

\(^{10}\) - Public switched telephone network

\(^{11}\) - The price of a minute of local call is calculated on the basis of the price of one rate impulse for talks made from telephones of a digital automatic telephone exchange at BTC prices effective as of the end of 2004.
Average monthly expenditure of residential PSTN users
(OECD national residential basket)

Source: Teligen, CRC

Fig. 34
Average monthly expenditure of business PSTN users
(OECD national business basket)

Source: Teligen, CRC

Fig. 35
2.6. Prices of BTC PLC and VoIP providers

As it is indicated in item 2.1, there is a price competition between the incumbent operator and the VoIP providers with regard to the long-distance and international calls and calls to mobile networks. Comparisons of the prices of a three- and a ten-minute long-distance and a ten-minute international call of BTC PLC and ORBITEL PLC, NEXCOM BULGARIA PLC and the EASTERN TELECOMMUNICATION COMPANY PLC (ETC) are presented for the purposes of the analysis, as well as comparisons for a minute call to the mobile networks in the country. The value of the local call within the BTC PLC network, which the user makes to connect to the VoIP provider, is added to the value per minute of the relevant provider. All the comparisons are with the BTC PLC prices in peak hours.

The analysis of the data indicates that the average prices for a three- and a ten-minute long-distance call of these VoIP providers are at an average by 32% lower than the prices of the incumbent operator in the remotest zone for distance (with a comparison of the prices of VoIP providers with the price of BTC for a call in the third zone,, a distance of over 100 km.

![Prices of 3-min. and 10-min. long-distance call of BTC PLC and alternative operators in Bulgaria](image)

**Source:** CRC

Fig. 36

Although in result of the process of rebalancing the prices for international calls of BTC PLC decrease, they remain higher as compared with those of the VoIP providers. The average value of a 10-minute international call with VoIP to a neighbouring country is by 22% lower, for a call to a distant European country (Great Britain) is by a half lower, and for a call to the USA - even 67 % cheaper. The comparison is again with regard to the BTC prices in peak traffic hours. The tariffs of VoIP providers are not differentiated for the various hours of the day.
Price for a 10-minute international call of BTC PLC and VoIP providers in Bulgaria

**Source:** CRC

It is seen from the following figure that VoIP operators offer discounts also for calls to the networks of the mobile operators in the country: 20-30% less as compared with the BTC tariff.

**Source:** CRC

Fig. 37

Price per minute for a fixed to mobile call, in BGN, VAT included

**Source:** CRC

Fig. 38
2.7. Reference Interconnection Offer

The discussion and approval of a reference offer for the conclusion of an interconnection agreement (Reference Interconnection Offer - RIO) was among the priorities of the regulatory policy in 2004 in view of the encouragement of the competition within the telecommunications sector. By Decision No 1410/29.06.2004 CRC approved the first RIO, after a procedure of public consultation with the participation of the alternative operators, who obtained a license for the provision of a voice telephone service, the mobile operators and the Electronic Media Association, In compliance with the provisions of the Bulgarian legislation, by Decisions No 2295/29.12.2004 and No 2296/29.12.2004 the RIO was amended. Rendering an account of the substantiated standpoints of the interested operators, obtained during the public consultation procedure, CRC imposed restrictions on some of the prices of the services, subject of the RIO. A new section was included in the RIO approved at the end of 2004, referring to the pre-selection of an operator for long-distance and international calls.

The figures below show comparisons of the interconnection prices in the European Union (EU) Member States. The data are about termination in the fixed network of the incumbent operator and about termination in mobile network. The presented average values for 2004 are given as EC-15 or EC-25 – in conformity with the number of the countries, which data under the relevant analyses were used for. In cases where prices are indicated solely for some of the newly acceded EU Member States, the number is smaller than 25.

Data about the EU Member States were used during the comparisons from a communiqué of the European Commission for the Regulation of the European Electronic Communications and Markets 2004 (COM (2004) 759 dated 02.12.2004)\(^{12}\). The communiqué is the tenth report of the European Commission on the achievements and regulation in the sphere of telecommunications.

Prices per minute, exclusive of value added tax for the heavy traffic hours were used for the comparisons. The BTC PLC prices are from RIO for 2004, re-calculated in Eurocents.

The considered prices are imposed by the national regulator authorities or were set by operators under commercial agreements.

Presented on Fig. 41 are the average weighted prices for EC-15 for termination in a fixed network for the three segments (local, single, double) during the time period 2000 – 2004. The data are as of the month of July for each of the years. The trend observed is towards lower prices for the three segments.

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The decrease for a single segment is the biggest – 55%, for local follows - 36% and it is 22% for a double segment. The prices for single (6%) and double (8%) segments significantly decrease for the past year. The annual decrease for a local segment is 5%.

The trend towards lower prices for termination is available also for each of the EU Member States. Fig. (40) shows the prices for a local segment for termination in the fixed network of the incumbent operator for EC-23 and the re-calculated price in Eurocents of BTC PLC.

![Interconnection charges for call termination on incumbents’ fixed network Local level - EU 15 weighted average: 0.59 euro-cents, EU 23 average 0.65 euro-cents](image)

The biggest decrease for 2004 for a local segment is in Great Britain (15%) and Belgium (12%). The prices of the newly accepted EU Member States are by 74% higher then those of EC-15.

The prices for termination for a single segment for EC-25 and BTC PLC are presented in Fig. 41.

*Source: European Electronic Communications Regulation and Markets 2004 (10th Report)*[^13], Volume II, Annex 3 Market Overview

**Fig. 40**

[^13]: http://europa.eu.int/information_society/topics/ecomm/all_about/implementation_enforcement/annualreports/10threport/index_en.htm

[^14]: http://europa.eu.int/information_society/topics/ecomm/all_about/implementation_enforcement/annualreports/10threport/index_en.htm
Interconnection charges for call termination on incumbents' fixed network

Single transit - EU 15 average: 0.91 euro-cents, EU 25 average: 1.00 euro-cents

![Graph showing interconnection charges for call termination on single transit]

Source: European Electronic Communications Regulation and Markets 2004 (10th Report)\(^{15}\), Volume II, Annex 3 Market Overview

The decrease of the prices in 2004 for the single segment in Sweden (25%), Germany (10%) and Belgium (10%) is significant. The prices of the newly accepted EU member States are by 60% higher than those of EC-15.

Fig. 42 shows comparisons of prices for a double segment for EC-25 and BTC PLC.

Interconnection charges for call termination on incumbents' fixed network

Double transit - EU 15 average: 1.54 euro-cents, EU 25 average: 1.61 euro-cents

![Graph showing interconnection charges for call termination on double transit]

Source: European Electronic Communications Regulation and Markets 2004 (10th Report)\(^{16}\), Volume II, Annex 3 Market Overview

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\(^{15}\) http://europa.eu.int/information_society/topics/ecomm/all_about/implementation_enforcement/annualreports/10threport/index_en.htm

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41
The biggest decrease in prices for double segment is in Greece (39%), Germany (18%) and Portugal (10%). The prices of the newly acceded EU Member States are by 32% higher than those of EC-15.

For the three segments dependence is observed between the price level and the market liberalization process (it is seen from the significantly higher prices of the new EU Member States). The prices of BTC PLC for the three segments are higher than the average values for the European countries.

The prices for termination from fixed into mobile network are presented in Fig. 43. The data are calculated as weighted average for the countries, rendering an account of the number of users and the termination price of each mobile operator. The price for Bulgaria is re-calculated in Eurocents.

![Fixed-to-mobile national average interconnection charges](image)

Source: European Electronic Communications Regulation and Markets 2004 (10th Report)\(^{17}\), Volume II, Annex 3 Market Overview

Fig. 43

The average price for EC-25 (14.70 Eurocents) was determined as average on the basis of all European mobile operators. The average price for EC-15 is decreased by 16% as compared with 2003. (EC average for 2003 - 17.58 Eurocents).

### 2.8. Reference Unbundling Offer

Following the policy for liberalization of the telecommunications sector and encouraging the competition with regard to the access to networks and in particular the access based on broadband technologies, CRC by Decision No 2297/29.12.2004 approved, after a public consultation, a Reference Unbundling Offer (RUO). Rendering an account of the principle for cost orientation and in view of the approximation of the prices in the RUO to those of the

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\(^{16}\) [Link to source]

\(^{17}\) [Link to source]
Member States, CRC imposed restrictions on the prices of some of the services included in the RUO. The approved proposal on one hand favors the operators creating conditions for faster access to the end users and on the other hand – the users, providing them with continuous high-speed connection during data transmission.

The figures herein below show comparisons of the monthly rental charges for unbundled access to the local loop (the fee for use of a twisted copper pair). The BTC PLC prices are re-calculated in Euro.

**Prices per full unbundled loop (euro)**

<table>
<thead>
<tr>
<th>Country</th>
<th>Price (euro)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BG</td>
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<tr>
<td>BE</td>
<td>11.6</td>
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<tr>
<td>CZ</td>
<td>15.5</td>
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<tr>
<td>DK</td>
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<tr>
<td>DE</td>
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<tr>
<td>EL</td>
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<td>ES</td>
<td>11.4</td>
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<tr>
<td>FI</td>
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<tr>
<td>SE</td>
<td>13.3</td>
</tr>
</tbody>
</table>

**Source:** European Electronic Communications Regulation and Markets 2004 (10th Report)\(^{18}\), Volume II, Annex 3 Market Overview

**Fig. 44**

The 2004 average value for full access for EC-15 is 11.09 Euro.

**Prices per shared access (euro)**

<table>
<thead>
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<th>Country</th>
<th>Price (euro)</th>
</tr>
</thead>
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<tr>
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<tr>
<td>UK</td>
<td>5.6</td>
</tr>
</tbody>
</table>

**Source:** European Electronic Communications Regulation and Markets 2004 (10th Report)\(^{19}\), Volume II, Annex 3 Market Overview

**Fig. 45**

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\(^{18}\) [http://europa.eu.int/information_society/topics/ecomm/all_about/implementation_enforcement/annualreports/10threport/index_en.htm](http://europa.eu.int/information_society/topics/ecomm/all_about/implementation_enforcement/annualreports/10threport/index_en.htm)

\(^{19}\) [http://europa.eu.int/information_society/topics/ecomm/all_about/implementation_enforcement/annualreports/10threport/index_en.htm](http://europa.eu.int/information_society/topics/ecomm/all_about/implementation_enforcement/annualreports/10threport/index_en.htm)
The 2004 average value for shared access for EC-15 is 3, 1 Euro. The prices of BTC PLC in both kinds of offering unbundled access are higher than the average European ones.

http://europa.eu.int/information_society/topics/ecomm/all_about/implementation_enforcement/annualreports/10threport/index_en.htm