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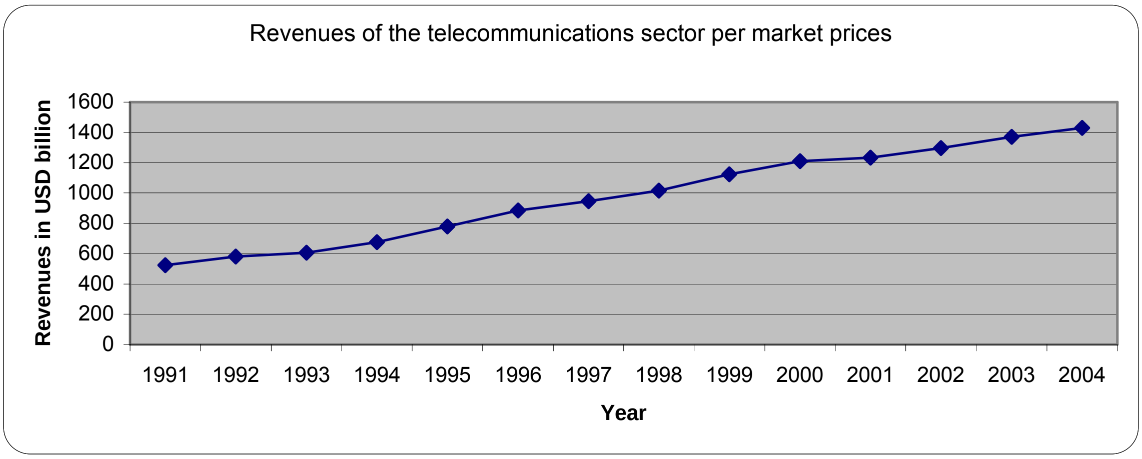
1. CHARACTERISTICS OF THE TELECOMMUNICATION SERVICES MARKET

1.1 Global Development

In 2004 the telecommunications sector continued its ascending trend of development and in conformity with forecast data of the International Telecommunications Union (ITU) and EITO[1] the revenues leveled up to approximately 1,43 trillion US Dollars, which is a growth of 3,9% compared to 2003. After the crisis of 2001-2002 the telecommunication companies and the investors became more cautious, because of which for 2003 and 2004 the growth rates were lower as compared with the time periods before the crisis. According to the forecasts of Decision Etudes Conseil[2] the average growth rate of the world telecommunications market for the time period 2002-2007 is expected to be about 6%, which is a lower value than the average long-term growth rate of 9,02% for the time period 1991-2001.[3] (according to data of ITU).

The growth of the telecommunications sector for the time period 1991 - 2004 is shown on the chart below:



Source: *ITU and EITO*

Fig. 1

The low growth rates are also determined by the changed geographic structure of the telecommunications market. The traditionally developed markets in Europe, the USA, the Republic of Korea and Japan are gradually being saturated, and the transition to new technologies is not implemented sufficiently fast to compensate the reduced growth rates. The enhancement of the markets in the developing countries, particularly in Eastern Europe and China, results in redistribution of the revenues from telecommunications services in a world scale. The changes in the geographic structure are a result of the impact of a multitude of factors, amongst which are, further to the mentioned saturation of the markets in the developed countries, also the convergences of networks and services, as well as the particularities in the economic development of the individual world regions. The slow-down of the growth within the sector does not refer to the markets of new services and applications, in particular in the sphere of mobile communications.

In this complicated situation the telecommunications companies are trying to provide for growth through reduction of expenditures, attraction of investments for financing new services, attainment of a balance between market needs and supply of services as well as making the business bigger aimed at the increase of the market value. According to data of Deloitte & Touche for the time period from January 2003 to December 2004 the market value of the global telecommunications market grew up by 28%. The most significant share in the market value growth is the share of the countries from Europe, the Middle East and Africa

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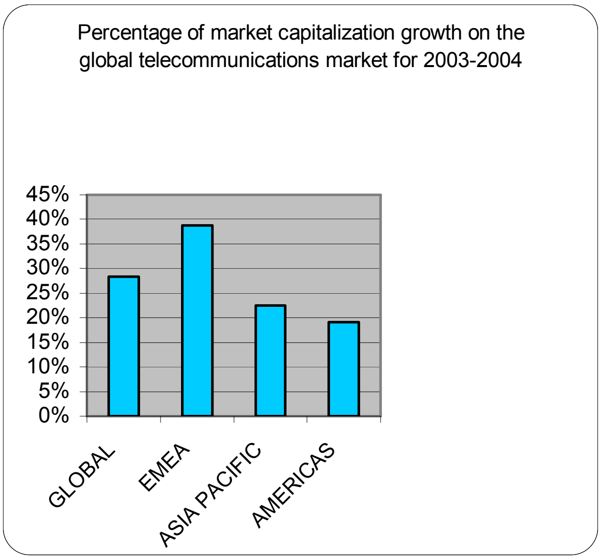
[1] *European Information Technology Observatory 2004 u 2005 (www.eito.com)*
[2] *"World Electronics Industry Report 2002-2007" Decision Etudes Conseil*
[3] *http://www.itu.int/ITU-D/ict/statistics/at_glance/KeyTelecom99.html*

(EMEA) - 38,7%. The growth of the market value for the countries from North and South America is 19, 1%, and for the countries from the Asian – Pacific Ocean region – 22, 5%.[4]

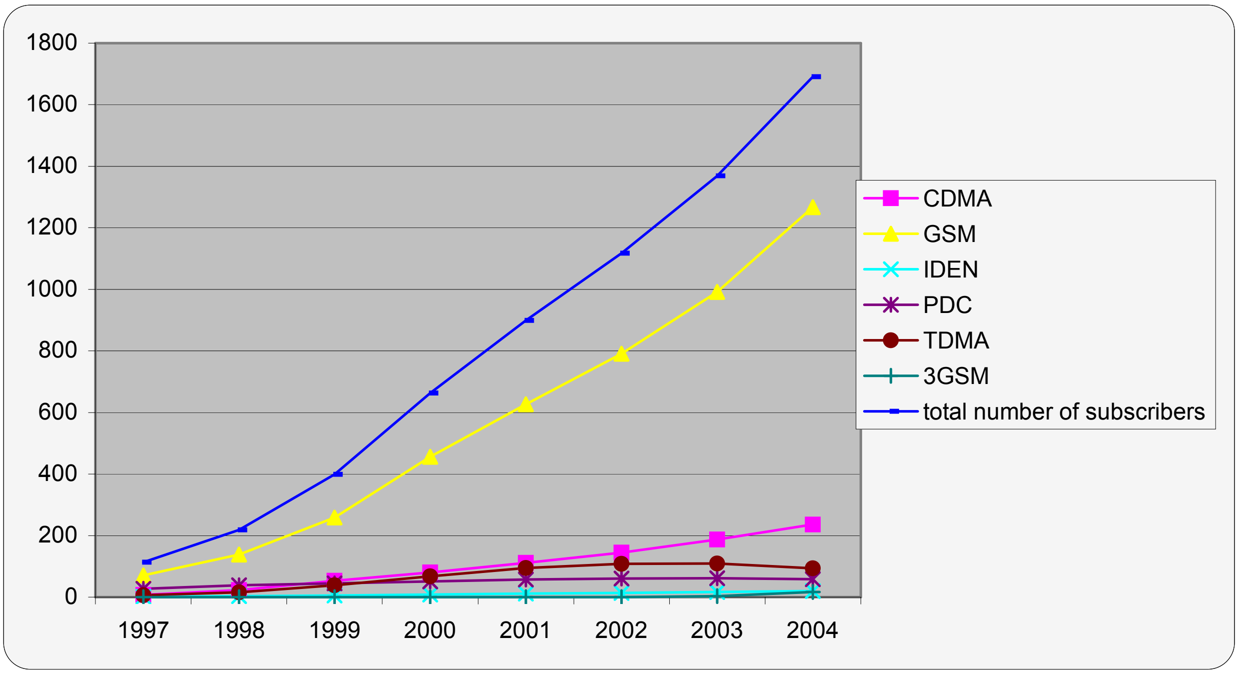


Source: *Deloitte Touche Tohmatsu*

Fig. 2

In 2004 the mobile communications continued to be the most dynamically developing sector on the telecommunications market throughout the world. The number of subscribers increased by 23, 4% compared to the preceding year and reached 1 688, 2 million. About 85, 2% of this growth is due to the bigger number of subscribers of GSM operators: 1 266, 4 million at the end of 2004. The biggest growth was observed in the number of subscribers of third generation (3G) mobile services – 505, 3%, but their share in the total number of subscribers for 2004 amounted to only 1%. After GSM CDMA is the technology that continues to be the most popular one with subscribers growth of 26, 6%.[5]

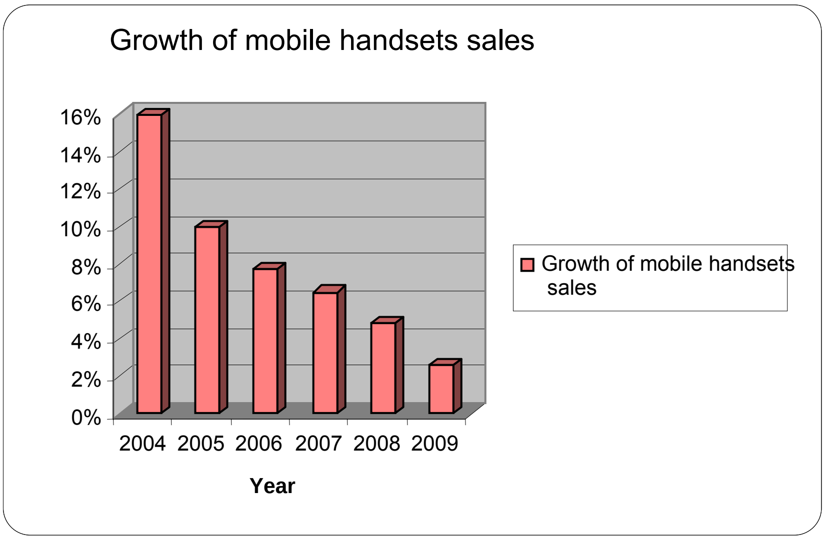
[4] *"Reconnected to Growth, Global Telecommunications Industry Index 2005 – an increasingly interconnected sector" Deloitte Touche Tohmatsu report*
[5] *http://www.gsmworld.com/news/statistics/pdf/gsma_stats_q4_04.pdf*



Source: *GSM Association (www.gsmworld.com)*

Fig. 3

The voice service is still of a leading significance in the mobile sector – over 80% of its revenues in it are realized through that service[6]. A significant growth in the production and sales of mobile handsets and applications is observed on the mobile market. For 2004 the total volume on this market is about USD 71, 6 billion, 561 million mobile telephones being sold as compared with 482, 5 million in 2003, which is a growth of 16%. By 2009 the number of sold handsets per year is anticipated to attain 767 million, but owing to the market saturation the growth rate is expected to be about 2, 6%.[7]



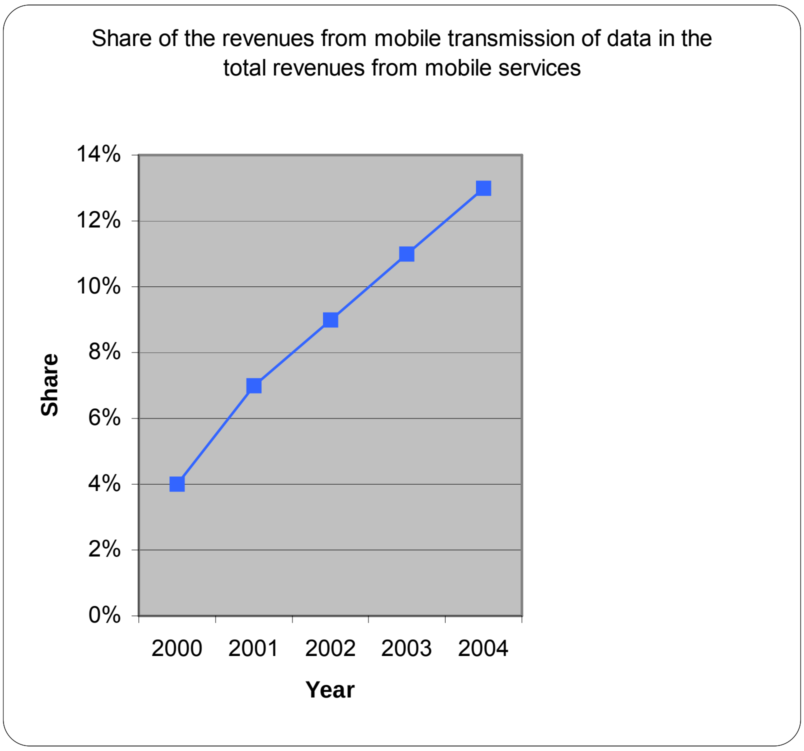
Source: *OMSYC 2005 (www.omsyc.com)*

Fig. 4

[6] *"TMT Trends: Predictions 2005, a focus on the mobile and wireless sector" Deloitte Touche Tohmatsu report*

[7] *http://multichannelmerchant.com/opsandfulfillment/advisor/Handset-Market-Growth/*

In result of the entry of a new generation technologies (2,5G and 3G) and the integration of voice services and high speed data transmission, over 3 times increase of the revenues from data transmission services is observed in the total revenues from mobile services: from 4% in 2000 to 13% in 2004. The entry of the data transmission and the access to Internet within the mobile services scope is a good possibility for additional growth of this market potential, the preservation of its leading positions in the sphere of telecommunications and the postponement of the saturation for a future time period. The data transmission services through mobile networks generated revenues amounting to USD 63,7 billion for 2004, 44% of these revenues being realized in the Asian – Pacific region, where there is a great growth potential and penetration of new services amongst the population. By 2010 the number of mobile operators' subscribers in Asia may be expected to exceed 1 billion, predominantly in China and India.[8]



Source: *OMSYC 2005 (www.omsyc.com)*

Fig. 5

The ascending trend of the mobile market in a global scale is a result of the market segmentation and the imposition of a new mobile "culture" amongst users, which is stated in the mobile services personalization. This includes possibilities for download of melodies and pictures from Internet (revenues over 2 USD billion for 2004), as well as use of modern Internet applications for chat and online messages, which are anticipated gradually to replace the traditional SMS and MMS messages as a way to communicate. From the point of view of supply, the enhancement of competition amongst operators, results in decrease of the possibilities for realization of profits, but this effect is compensated by the fast rates, by which the consumption of mobile services grows up.

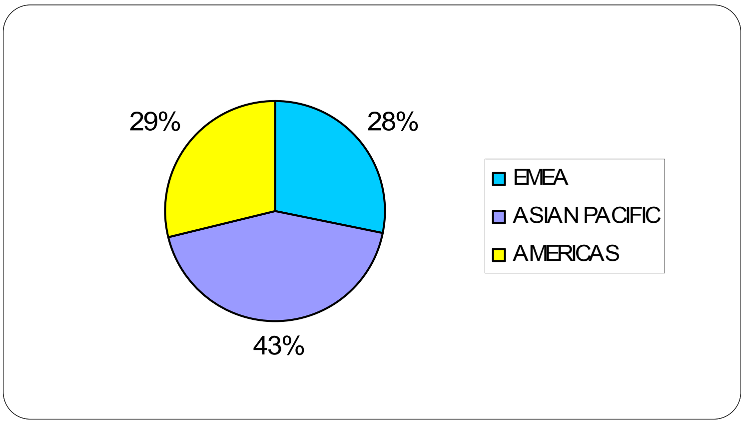
According to forecasts of Deloitte&Touche in 2005 the number of cellular networks subscribers will exceed 2 billion, and the penetration of mobile services on some regional markets will reach 100%. A significant growth in the production of third generation networks mobile telephone handsets is expected.

The significance of the high speed access to Internet grows up on global telecommunications markets. The possibilities for fast data transmission, access to various

[8] *"The World Mobile Market 1996-2010" – 2005 edition, 5th publication, www.omsyc.com*

applications for entertainment or business, the transfer of a part of the commodity and financial markets online are solely a part of the conditions, stimulating this trend.

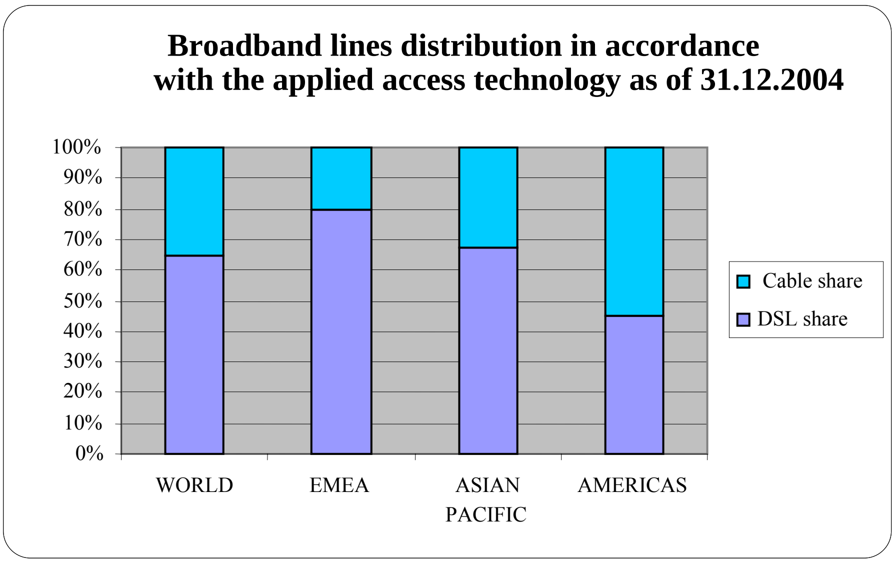
Broadband Internet access is exclusively much spoken about at the modern stage of the electronic communications development. According to data of IMS RESEARCH[9] the number of subscribers of broadband Internet access exceeds 150 million or, this is more than 50% growth for 2004. It is anticipated that this trend will be preserved within a medium-term period, by 2009 the number of broadband access subscribers reaching 400 million people. According to data of ITU for 2004 Asia occupies the first place for broadband Internet penetration (the Republic of Korea – 24, 9% and China – 20, 9%)[10]. Notwithstanding the initial delay, Europe is the second after Asia for broadband Internet penetration, and the USA preserve their position with the biggest number of broadband lines.



Source: Point Topic Ltd.

Fig. 6

The DSL technology is of leading significance for the maintenance of stable growth within the sector in 2004. The number of DSL lines worldwide increased by 24, 2% for the second half of 2004, whilst the number of cable lines for the same time period grew up by 16, 5%. The number of DSL lines reaches 64% of the total number of broadband lines for last year and the remaining 36% refer to the cable access and other technologies.[11]



***Source:** Point Topic Ltd.*

Fig. 7

[9] *http://www.imsresearch.com/members/pr.asp?X=180*
[10] *http://www.itu.int/ITU-D/ict/statistics/at_glance/top20_broad_2004.html*
[11] *"World Broadband Statistics: Q4 2004", Point Topic Ltd. report*

In 2004 the VoB (Voice over Broadband) services became more and more popular with the business subscribers, which are realized through peer-to-peer network architecture. Skype Company, for instance, offers competitive prices for the conduct of calls with users throughout the world (inclusive of other networks as well), and the calls amongst Skype users are fully free of charge. This new generation services exceptionally well enter the broadly used applications for the transmission of communications. On the other hand VoB services combine the possibilities of Internet broadband access with the growing up users' interest in the voice transmission services through Internet Protocol (VoIP). The greatest interest in these services is observed amongst the business users in the USA where the revenues for 2004 reached USD 1, 3 billion, and by 2009 they are expected to increase by 1431% up to USD 19, 9 billion.[12] According to a market research of Yankee Group in 2004 about 10% of the business subscribers in the USA use IP telephony, with the anticipation that in 2005 half of the new lines shall be based on the VoIP technology. The service is preferred predominantly by big companies since it provides for a possibility for smaller expenses and greater flexibility during use.

1.2. Structure and volume of the Bulgarian telecommunications market

In 2004 for the third consecutive year two approaches were used to measure up the volume of the Bulgarian telecommunications market. The first follows up the methodology of the European monitoring[13], and the second is more detailed and comprises all market segments.

In conformity with the European monitoring methodology, the total market volume comprises the revenues of the operators from carrying out telecommunications in four main segments:

- Supply of fixed telephone services through fixed telephone networks;
- Supply of mobile services through mobile telephone networks;
- Supply of "leased lines" and data transmission services through public telecommunication networks;
- Supply of Internet access services through the public switched telephone network[14].

Fig. 8 show the modification of the revenues from the four segments of the Bulgarian telecommunications market for the time period 2001-2004.

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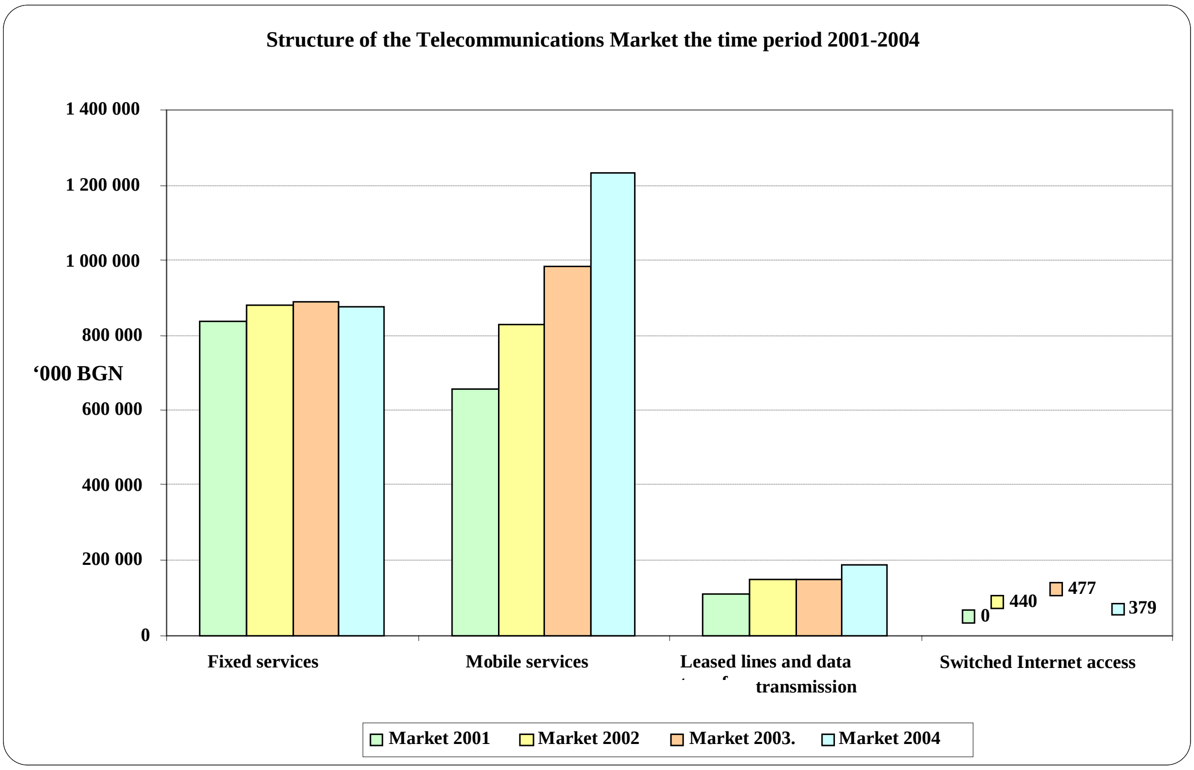
[12] *http://www.infonetics.com/resources/purple.shtml?ms05.vip.nr.shtml*

[13] *Project of the European Commission for the assessment of the condition and the development of the telecommunications markets in the EU Candidate Countries*

[14] *In the renewed as of the end of 2004 Project for Monitoring of Candidate Countries from South-Eastern Europe the "Fixed Internet" segment is included in the market structure instead of „dial-up Internet access through the public switched telephone network". It was established within the framework of the Project that the various countries interpret this segment in a different manner and aimed at the comparability of the data what it should include shall be subject to further particularization. Owing to this reason the structure of the telecommunications market from preceding stages of the Project was used in this report, and the separation of the revenues from switched Internet is possible for the first time.*



Source: *Data, submitted to CRC*

Note: No data available for 2001 about the revenues from public switched Internet access

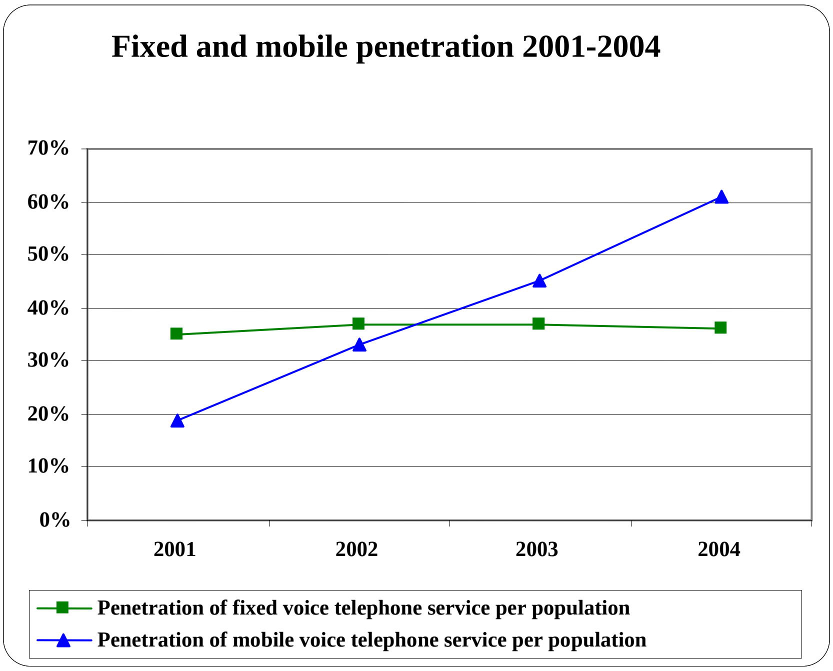
Fig. 8

The analysis of the data allows for the tracing of the basic trends in the market development in the last few years:

- The amount and share of the revenues from mobile services continue to increase and those of the fixed services continued smoothly to decrease (Fig. 8);
- Unlike 2003 compared to 2002, when the leased lines and data transmission segment preserved a comparatively permanent share in absolute and relative expression, in 2004 compared to 2003 there is a growth of this segment by 27%;
- In 2004 the Internet access revenues through the public switched telephone network decreased compared to the preceding two years, but they are comparatively stable for the time period under consideration.

Although the penetration of mobile services in Bulgaria noted a serious growth for the past year and reached 65%, it still remains too low as compared with the levels in the countries from the European Union, where in the last few years in some of the countries it even exceeded 100% owing to the fact that mobile services users have more than one mobile telephone. The great number of pre-paid mobile services subscribers should be noted as well - – 2/3 of all subscribers.

The juxtaposition of mobile penetration with the levels of fixed penetration on the market in Bulgaria for the last four years, in compliance with the European and global trends, confirms the growing up popularity of the mobile services amongst the Bulgarian users along with a smooth trend of decrease of the number of fixed lines per 100 inhabitants (Fig. 9)



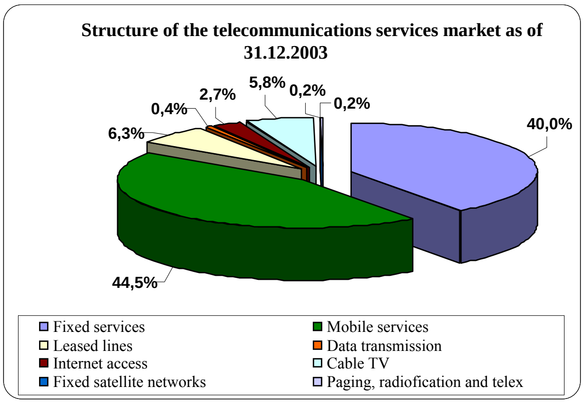
Source: *Data submitted to CRC*

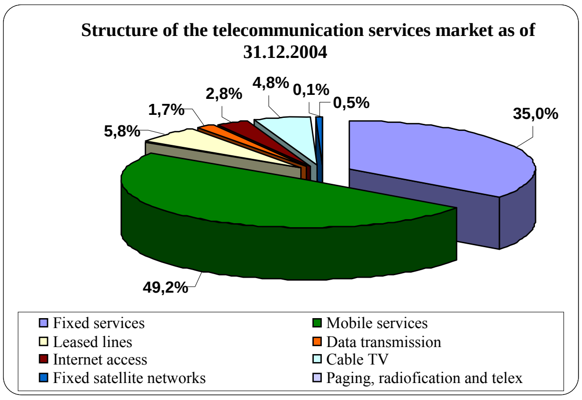
Fig. 9

The Bulgarian telecommunications market approaches saturation with regard to the consumption of telephone services with still absence of a significant users' interest in broadband services under the conditions of a specific and limited broadband market. BTC PLC started the ADSL service in 2004 with the difficult to measure competition on the part of unregulated LAN networks and starting-up competition on the part of the cable networks. It may be anticipated that in the next few years grown up demand and supply of Internet broadband access and data transmission will create an additional potential for a market growth (inclusive of the mobile segment, and it would postpone its saturation in time).

In May last year ten of the thirteen EU Candidate Countries were accepted as full EU members Owing to this reason the Project for Monitoring on EU Candidate Countries was completed in December 2003 and was renewed at the end of 2004, and the remaining candidate countries from the region of South-Eastern Europe were included in it further to Bulgaria, Romania and Turkey – participants under the preceding Project. The first report under the Project is expected in July 2005. Owing to these reasons at the time of the preparation of the report there were no data about the market development of the candidate countries for the past year and no comparisons between Bulgaria and the countries from South-Eastern Europe are possible with regard to the volume and growth of the telecommunications market, as well as pertaining to other indicators. Comparisons with the European Union countries were used in the analysis according to mainly data from reports of EC.

The second approach for measuring the market was adopted aimed at a more complete analysis, in which the volume of the telecommunications market includes the revenues from cable television, satellite systems, paging services and the provision of Internet access service segments. With this approach the volume of the Bulgarian telecommunications market for 2004 amounted to BGN 2,503 billion or Euro 1,280 billion, which is 13% increase compared to the preceding year.

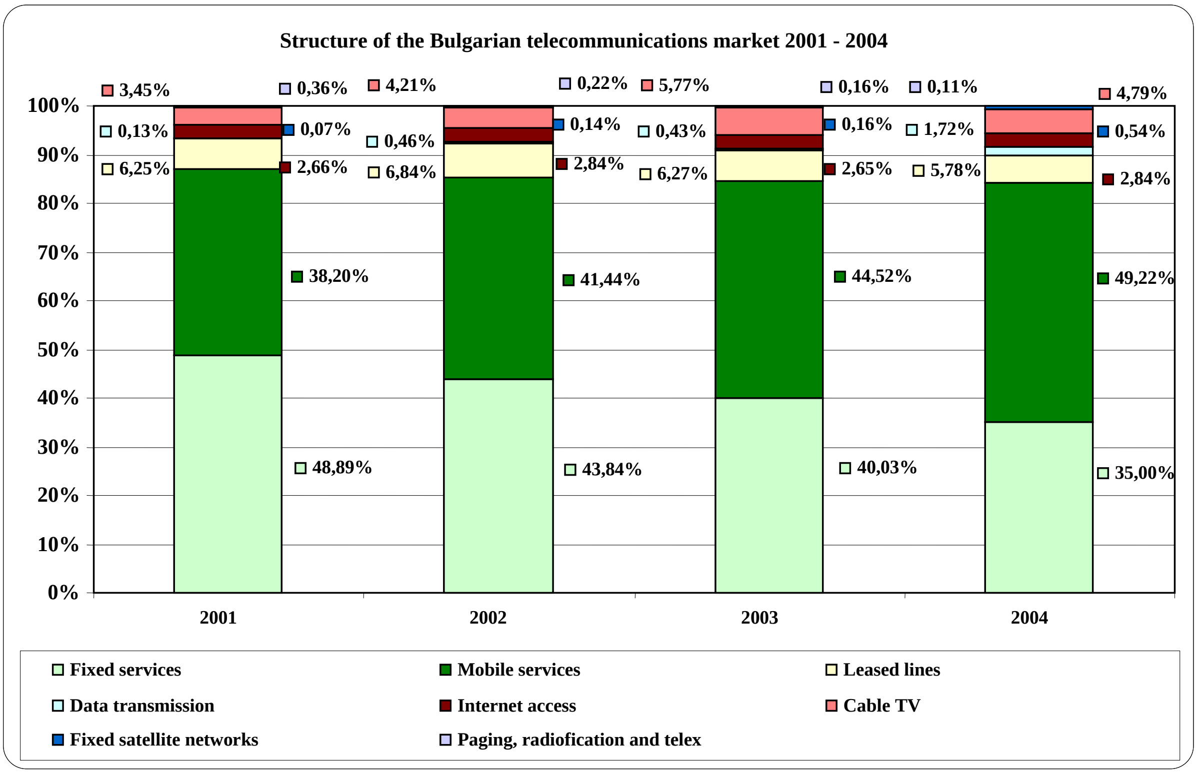




Source: *Data submitted to CRC*

Fig. 10

In 2004 the volume of the Bulgarian telecommunications market was about 7% of the GDP total value for Bulgaria and for a consecutive year it outstripped the GDP growth (10% for the past year). The figure herein below shows the restructuring of the market for the last four years.



Source: *Data submitted to CRC*

Fig. 11

Since in Bulgaria the activities on the provision of Internet access services are at a free regime, the precise determination of the "Internet access" segment amount is not possible. According to an expert evaluation of CRC, based on data obtained from 124 Internet service providers, the volume of revenues from the provision of the service in 2004 amounted to BGN 71 million and grew up compared to 2003 by 21% in an absolute expression, having preserved its share in the total market structure.

As it was stated, the trend of growth in the volume of revenues from mobile services at the expense of the fixed services share continues. For the second consecutive year the mobile services share in the country is bigger than that of the fixed services. In 2004 the mobile services market grew up in an absolute value by 25% and constitutes half of the overall volume of revenues from telecommunication services. The competition continues to develop mainly between the two operators of digital networks with observation of the leader's positions of "MOBILTEL", the intensifying presence of the second GSM operator – "COSMO BULGARIA MOBILE" PLC and almost fading market presence of the first mobile operator in the country, RTC LTD. The prepaid mobile services and value added services market continues to develop with a starting interest of the Bulgarian user in services as mobile Internet and multimedia communications.

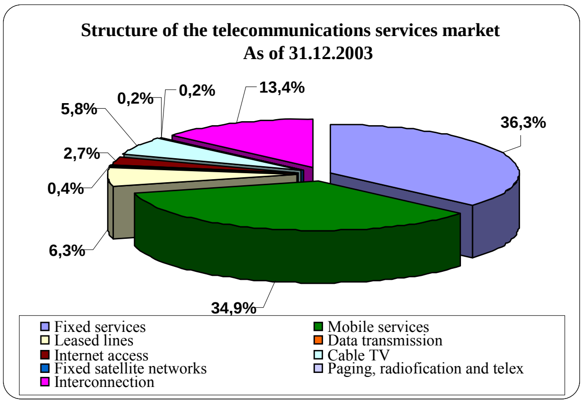
Although with a lower rate, the "leased lines" segment volume grows up in an absolute expression as well. Although in 2004 11 new operators for the provision of the "leased lines" service and 6 for the building up, maintenance and use of public telecommunication networks of the fixed radio service, were licensed, still solely BTC PLC, „RACOM NT" EOOD, "CABLETEL" PLC and "MOBILTEL" PLC actively offer the service and realize revenues from it. Because of that the increase of revenues from the "leased lines" service in an absolute expression is solely 4%, and in a relative expression there is even a drop by 0, 5% available at hand.

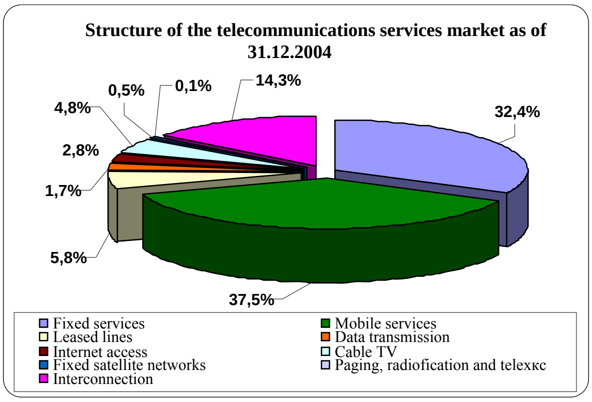
The assessment of the revenues from activities on distribution of radio- and television signals through cable telecommunications networks was made on the basis of 75% of the registered operators. In 2004 the activities on the carrying out of telecommunications through a public cable telecommunication network for distribution of radio- and television programs passed from a licensing to a more alleviated – registration regime and 562 cable operators were re-registered. 101 new operators were also registered during the year. The data received in CRC from the cable operators about their activities in 2004, are in conflict with the general trend of this market segment development. Because of that the data about the volume of the revenues obtained from the operators, were re-calculated on the grounds of assessments from other sources about this segment volume and growth (12% for the past year). According to CRC the revenues from cable telecommunication networks as a whole preserve their share in the total market structure. Over 25 cable operators declared that they provide their subscribers with Internet access in over 22 populated areas. In 2004 "CABLETEL" PLC and some other operators started the integrated "triple play" service, which provides for access to cable television, fixed voice telephone service and high speed Internet for the users through one cable.

In 2004 compared to the preceding year the revenues from the provision of fixed telephone services decreased by 1 % in an absolute value and by 5% in the total volume of the market. Of the licensed six new operators of fixed telephone networks 6 are entitled to carry out telecommunications through a public telecommunication network and to provide for a fixed voice telephone service, and four – to provide access to voice telephone service through the "carrier selection" service. At the end of 2004 solely "GLOBALTECH BULGARIA" LTD (licensed in 2003) of the alternative fixed operators in the country declared to have started an activity for the provision of services, but the subscribers and the revenues of the operator are comparatively few in the total market volume. Notwithstanding the traditional fixed service of the incumbent in the last few years has a competition on the part of the VoIP (Internet telephony) providers, who offer discounts with regard to the tariffs of BTC PLC for long distance and international calls, as well as calls to mobile networks.

As in our country there is no independently differentiated "interconnection" segment, the revenues realized from fixed and mobile networks through interconnection are also included during the determination of the amount of fixed and mobile services segments.

With the drop out of the monopoly of BTC PLC and the liberalization of the telecommunications market in the country, the significance of the interconnection of networks keeps on growing. At their entry onto the telecommunications market the newly licensed operators have a restricted number of their own subscribers. The attraction of new subscribers would be impossible if they may not connect to subscribers of other operators, in particular with the subscribers of the incumbent network. The provision of conditions for interconnection of the networks of the newly licensed operators to the networks of operators who have already established themselves on the market shall be a prerequisite for the creation of real competitive environment of the telecommunications market in our country. Owing to the significance which the interconnection of networks has for the users, operators and the market as a whole, the interconnection is presented as an individual market segment in the following figures in the telecommunications market structure.





Note: *At the calculation of the volume of the interconnection segment the following revenues are included: revenues from physical realization of the interconnection (ports, lines and interconnection points); revenues from termination of traffic (originating from other fixed/mobile operators in the country and abroad, inclusive of SMS and MMS traffic), revenues from transit traffic and collocation.*

Source: *Data submitted to CRC*

Fig. 12

It is seen from the graphics that the share of interconnection has grown up by 21%[15] in an absolute value compared to 2003. The data confirm the trend imposed for the last few years for more and more traffic being closed within the mobile networks. It happens more and more seldom that traffic generated in a fixed network ends in mobile network and vice versa.

The investments made by the main telecommunication operators for building up and maintenance of the networks and service development, amount to about BGN 600 million. The decrease of 4% in relation to 2003 is due mainly to the sharp drop – by 44%, in the amount of the investments made by BTC PLC during the year. This drop may be explained by refraining from investment of funds into network up to the completion of the transaction for the privatization of the company in May 2004. For comparison, in 2003 in relation to 2004 the growth of investments of BTC PLC was 45% and they were directed predominantly at digitalization of the network.

[15] *The revenues are gross, without deduction of the payments between operators*

1.3. Prospects for development of the Bulgarian telecommunications market

Enhancement of competition amongst the operators and services providers in the conditions of a liberalized market may be anticipated immediately within a short-term plan. With the progress of the process of conclusion of interconnection agreements between BTC PLC and the newly licensed operators, in compliance with the existing legal regulations and the Reference Interconnection Offer approved by CRC, the new operators are expected to develop their infrastructure and to be a real competition with regard to the provision of fixed voice telephone services and leased lines.

The further stages of the digitalization of the BTC PLC network and the entered into force reference offer for unbundled access to the local loop shall create conditions for the growth of the broadband services market. The big cable operators with built-up infrastructures and grown up possibilities to offer services of quality and integrated services packages, inclusive of television, high-speed Internet and voice telephony are expected to intensify their positions.

The introduction of new technologies and the possibility for provision of a wide scope of services through them are a factor of more and more growing significance for the future potential of the Bulgarian telecommunications market. According to data from a research of GfK, ordered by CRC about the opinions and attitudes of the business users with regard to the telecommunications services market in Bulgaria, the Bulgarian business provides for a high assessment of the degree of entry of the new technologies onto the Bulgarian telecommunications market: 44% of the respondents evaluate it as high.

The intensive development of the mobile communications market will continue during the next year. After the issuance of a third GSM license to BTC PLC, in 2005 the trade activities of BTC MOBILE are expected to start up. The conduct of a tender and the issuance of licenses for UMTS networks and services are forthcoming at the beginning of the year and the Bulgarian users will be able to benefit from a 3G mobile services within two years.

From the end of 2004 the first terrestrial digital broadcasting television of BTC PLC also started on the territory of Sofia. After an interest shown on the part of potential operators, a licensing procedure for the provision of the same service for other populated areas in 2005 is planned. Through digital television the users will obtain access to high quality of the broadcast programs, as well as a set of additional interactive services (video on demand, electronic trading and banking, Internet access, electronic mail, information services and others). The appearance of networks based on PMP technology is expected in a medium-term perspective. They may be an alternative of the access to the traditional infrastructure and services of BTC PLC – both for the new operators and for the end users, in particular in remote and hard accessible geographic areas.

Limited by the demographic and economic development of the country, the users' interest with regard to the telecommunication services will naturally be directed at high-speed Internet, multimedia and online services. Further to the price, which is a decisive factor for the choice of the Bulgarian users, the quality and the clients' orientation of the services will be of greater and greater significance for the demand.

In view of the outlined trends of the Bulgarian telecommunications market development, the application of regulation, which shall stimulate development of competition and encouragement of the investments within the sector, protection of the users' interests and stimulation of new technological solutions will be of particular importance. This will be guaranteed by the forthcoming creation and application of a legal framework harmonized with the new European legislation.