



## THE INTERNET SERVICES ON THE TELECOMMUNICATION MARKET IN THE REPUBLIC OF MACEDONIA, OVER DIGITAL LEASED LINES

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### Abstract:

Law on Electronic Communications and its additional rules should provide conditions for Internet access and using the Internet services, by the principles of transparency and non discrimination, and these conditions determines the operator with significant market power in relevant markets. Also, it lays down the rules applicable for the distribution of limited resources. Using of Internet Services takes great momentum and growth, and the users of telecommunications services are increasingly use the Internet services, and in that way shall take into consideration the technical resources for using of Internet services and adapt to the needs and accept the offered quality. The Government of the Republic of Macedonia has taken a special efforts on accelerate the liberalization process, with special emphasis on using the Internet services and the aggressive introduction competition in all telecommunications segments, including Internet services, because it is a prerequisite for the creation called inclusive Information Society which creates the preconditions for reducing the existing monopoly on particular market, and rapid increasing in the economy and also in the market competition field, improvement of social and cultural cohesion, reduction of the costs for doing activity in the fields of Internet services, and also accomplishes the principle goal behind the general policy of the Government, which includes the liberalization of the Internet service market, no matter of the technical part of the transmission, and to the utilization of benefits that globalization brings, and certainly stimulated the Internet services and their growth in the Republic of Macedonia and to take its place on the world map, in the economy, as well as in the IT roadmap. This electronic document is a “live” template and already defines the components of your paper [title, text, heads, etc.] in its style sheet.

### Key words:

Leasted line service,  
Globalization,  
Market Liberalization,  
Electronic Communications  
Legislation,  
Monopoly.

## INTRODUCTION

This paper refers to describe the development of Internet services through operators with significant market power over Internet access via leased line, and certainly including relations and the situation that occurred in the use of Internet services in the Macedonian market the Internet for the period from 2004 to 2007 through digital leased lines.

During this period, in compliance analysis of the Internet market in Republic of Macedonia operator who had significant market power on Internet was declared as Macedonian Telekom, based on market analysis, which was developed by the regulatory bodies of Electronic Communications Agency of the Republic of Macedonia, without taking into account which technical funds for data transfer is used by users. It is very important to

note that the operator has had its own capacity and infrastructure, and from that point of view has had dominant relationship in the Internet market [1]. It was obliged to give the opportunity to use its resources and capacities also to other companies which were engaged in the same business, and it is providing Internet services to users, but there was an important factor about technical way of accessing to Internet services which provides operators and other companies that are dealt providing Internet services. It had obligation to give the opportunity to other companies, which have been in the Internet business to use its facilities respectively use of digital leased lines to make better Internet service, with greater speed and cheaper, using this and other advantages offered by digital leased lines and it is a high quality, fast and cheaper data transfer [2]. Thus it can be concluded, given that the data and analyzes are made on the Internet market will have aim to show that in every respect there is unfair competition



and Internet market work Internet access via digital leased line provides a great advantage operators with significant market power on the Internet than the other participants of the market [3].

### **TECHNICAL EXPLANATION BY USING 055 INTERNET SERVICE AND INTERNET SERVICE VIA DIGITAL LEASED LINES**

When it comes to the use of 055 Internet service, this refers of course to the “dial up” Internet service, in terms of using a non-geographic number for access to the Internet services. For the end-user of Internet service there is no technical differences between using usual “dial up” and 055 “dial up” Internet services and not require further knowledge from end-users or any additional hardware, because it uses the same modem or network card for usual “Dial up” as well as 055 “dial up” Internet service. The difference is that instead of a local or national telephone number that is chosen by the end-user, to establish an Internet connection to use the Internet service, a characteristic of the Internet call service in which it is located (e.g. the Skopje area is 02), phone number which need to dial begins with the number 055, and does not depend on where the user is located on the entire territory of the Republic of Macedonia. The user of 055 Internet services feels the simpler access to Internet service, and price of 055 Internet service is lower than price of Internet services via usual “Dial up” and it is also lower of the price per call unit [4-5].

Price for use 055 “dial up” Internet service is not branched and split to the price of Internet traffic and the use of Internet services and telephone impulse, but it's price is same. Digital leased lines allow transfer of voice, data, video and multimedia information. Lease shall be based on a fixed monthly fee, depending on the guaranteed transfer speed, where volume of generated traffic in not important and certainly by operator Macedonian Telekom, according to their clients gigantic market Internet service provider or direct end-users .

Macedonian Telekom as provider of the public communications network was declared also in 2010 by regulatory agencies of electronic communication, as an operator with significant market power on the market of services offered over digital leased lines, to offer their customers a digital leased lines with a transmission speed of 64 kbit/s to 2 Mbit/s, which optimally meet their needs, depending on the volume and character of the use.

Digital leased lines as well as technical solution most frequently used by companies and institutions in the fields of finance, transactional business operations with payment cards, service providers and operators who need to connect their distant locations, branch offices and ATMs, with central location of their computer systems. Other companies which may to use a digital leased lines, for example, some state institutions, insurance companies, production and trading company, educational institutions, healthcare institutions and other customers who need to use a digital leased lines.

Now days, there are several types of Internet connections, which are offered in the market of Internet services that are available to users. These are: ADSL broadband internet and internet via digital leased line.

Companies or institutions have the ability to link between their offices that are in faraway places, and their existing buildings in the vicinity, using the services of connecting via digital leased line. This service allows to all users guaranteed bandwidth.

Internet provider and operator which offering this service provides to users additional security to transfer certain information and data and using certainly using fast Internet, as well as the security of the transmission itself. This service offers to user the ability to adding and using the other additional services, including the services of VoIP (Voice over Internet Protocol), voice transfer via IP.

The main disadvantage of this type of service is big price of this service on market. High cost of services is because when enabling the use of these services there are also included in the costs of installation and maintenance of digital leased lines. But of course as time goes on, this type of service is expected to be cheaper in the market.

The main aim of leased line services is actually getting common communications link that can be the same or different and all that, depending on the needs of the user and his business (it refers to the legal entity). The concept about that is actually to provide connection via the Internet platform that would be used by a large number of clients. This option has gained popularity among domestic users in accordance with their lower capacity demand of those who are business users.

The flexibility and low cost are the main reasons for the fact that they attract more users than the use of the Internet via other access or connection. Use of the required capacity of communication and data transmission services is a big challenge to do business with such mutual relationships, such as direct use of services of a number of users at a particular time. There are very urgent and priority data volumes that need to be downloaded during the time when is the traffic of data maximal and if there is a dispute data traffic, then arise difficulties in the operation of the particular company or a particular person.

### **MONOPOLISTIC INFLUENCE OF INTERNET MARKET VIA DIGITAL LEASED LINES**

There are companies whose main activity is to enable Internet services, and in the market of this part they are only internet service provider in the territory of the Republic of Macedonia, so that with this form of work they are also known as Internet service providers.

There are companies whose main business is to enable service users in the field of telecommunications, on territory of the Republic of Macedonia, as well as the providing of fixed telephony services, internet, rent their own networks for the profit to other providers of telecommunication services to their end users, as well as the re-broadcasting of television channels.



The only operator of public communications services in the period from 2004 to 2007, which had its own built public communications network, was Macedonian Telekom. In this way, in accordance of old Telecommunications act and using the new act electronic communications, it was forced to be the main provider of public electronic communications services. Also in this period, Macedonian Telekom as the company was named as the operator which has a large market power in the relevant market of data transfer i.e. market for enabling and providing Internet services to the territory of the Republic of Macedonia, and later in accordance with an analysis of the market that have been designed by regulatory bodies AEC - Agency of electronic communication, both in the period from 2004 to 2007, and also after that period, precisely in the year 2010.

Macedonian Telekom AD Skopje with its own telecommunication infrastructure, i.e. telecommunication network can enable telecommunication services in main markets as providers of telecommunications services and offer its services to its partners who are interested to use all or part of a telecommunications service, which offers companies Macedonian Telekom.

In the period from 2004 to 2007, there were companies that were involved in business Internet service provider. i.e. were Internet service providers who did not have their network infrastructure, and they were forced to use the network of operators who have significant market power in the area of telecommunication services in the territory Republic Macedonia.

In accordance with the executed notification to the regulatory body of the Agency for Electronic Communication in Republic of Macedonia, which were several prime Internet service providers in the Republic of Macedonia. One of those telecommunications services which was offered and still is in offer its customers by provider of internet services, was also for accessing the Internet via digital leased line.

At the beginning of his work, these ISPs, were covering a large part of the Internet services market on the territory of the Republic of Macedonia, and research was done by Agency of research telecommunication market area Internet Services Strategic Marketing & Media Institute in 2003 and 2004, for example, only a company Ultranet Ultra DOOEL which is Internet service provider, in this period on Internet market in the Republic of Macedonia participated with 26.9% [5]. On the other hand Macedonian Telekom in accordance with the Electronic Communications Act (Article 146, paragraph 1) has been declared the operator with significant market power in the market of fixed voice telephone services and networks, and in this regard, including the market on access of data networks via leased digital lines.

The Commission for Protection of Competition, by analyzing data whom they had at their disposal, had made the solution which gives explanation around the confirmation about abuse their dominant position by Macedonian Telekom on that way that they were de-

termined prices on the Internet services market by using leased digital lines, at the time when these services were a prerequisite for enabling competitive contest between Macedonian Telekom and other Internet service providers in the Republic of Macedonia, at the same time there was an actual obstacle to the development of competitive markets around the provision of Internet access via digital leased lines, thus at the same time Macedonian Telekom was strengthened its dominant position in the market of using the internet services via leased lines.

So, the most of internet users who were users of other Internet service providers, were canceled their partnership with them, they were migrated and accepted more favorable terms that were offered to the market with the Macedonian Telekom, as an operator with significant power of the Internet market, which of course was offered better conditions and prices for the users in the retail market, as a sign of exploiting its dominant position in the Internet market.

In this way, other Internet service providers who did not have the market power, are losing at the same time a huge number of its internet services, as well as the arrival of new users, and they were marred reputation in this regard.

As was mentioned, the internet service provider Ultranet Ultra DOOEL Skopje in 2003 and 2004 participated in the Internet market in the Republic of Macedonia with 26.9%, then in 2005 noted a significant decrease, so in this period on the Internet market was present at 6%, and in 2006 and 2007, his participation was less than 1%. (It must be noted that the researching was done by the research agency Strategic Marketing & Media Institute in 2003, 2004 and 2005).

Fact is that the internet service providers in the Republic of Macedonia were offered Internet access to its final users, but keeping in mind that they did not had its own communications network and infrastructure, were forced to rent a digital leased line from Telekom Macedonian operator, to continue as a service to selling or reselling end-users as for example Internet via leased (rented) line, i.e. Internet service and digital leased lines with different packages to transfer some dates, which were different in their speed of access which end-user was demanded from his internet provider.

## INTERNET MARKET AND ITS MONOPOLIZATION

In the report of the regulatory body AEK Agency electronic communications, it was found that during the period from 01.01.2006 until 31.12.2006, the total number of leased digital lines in the Republic of Macedonia was 503 users of leased digital lines, and is presented in Table 1[6-7].

This table shows all participation and sequencing of operators - Internet service provider based on leasing digital line on the internet market in the Republic of Macedonia.



Table 1: Leased digital lines in 2006, the data of AEK

<i>The operator of public communications services</i>	<i>% Of total leased digital lines</i>	<i>Number of leased digital lines to an absolute amount</i>
Macedonian Telekom	92.25%	464
DIS On Net Skopje	2.39%	12
SONET DOO Skopje	2.19%	11
Kosmofon AD Skopje	1.79%	9
ULTRANET Ultra DOOEL Skopje	0.99%	5
Balkantel DOOEL Skopje	0.40%	2

Here you can easily notice the revenue, the costs incurred and the achieved results actually of Internet service providers for example company Ultranet Ultra DOOEL Skopje as Internet service provider, on the basis of concluded agreements on the use of Internet services over leased lines issued by Macedonian Telekom and are presented in Table 2 (in Euros) [8-9].

Table 2: Actual financial results of the company Ultranet Ultra DOOEL Skopje in business of Internet market (in Euros)

<i>Year (period) of achieved results of the company Ultranet Ultra DUAL Skopje</i>	<i>The total revenue from digital leased lines</i>	<i>The total cost</i>	<i>Realized profit / loss</i>
Total for 2004	5,548.00	8,167.00	-2,619.00
Total for 2005	30,864.00	28,352.00	2,512.00
Total for 2006	49,838.00	53,115.00	-3,277.00
Total for 2007	45,100.00	42,365.00	2,735.00
<b>TOTAL:</b>	<b>131,350.00</b>	<b>131,999.00</b>	<b>-649.00</b>

The present revenue of the mentioned company was realized on sales of Internet services via leased line, composed of digital leased lines, which were acquired by the Macedonian Telecom and by Internet traffic which was provided via other means.

It may be noted that the value of leased lines, which was purchased by the company Ultranet Ultra DOOEL Skopje also include package of Internet services via leased digital communication lines...

From the data exposed by the company Ultranet Ultra DOOEL Skopje, this company was by selling packages Internet services via leased lines during 2004 of year made revenue in the amount of 5,548.00 Euros, then in 2005 posted a profit in the amount of 30,864.00 Euros in 2006 posted a profit in the amount of 49,838.00 Euros, that in 2007 posted a profit in the amount of 45,100.00 Euros (Table 2) [5-7].

Also, it can be concluded that the company Ultranet Ultra DOOEL Skopje has realized losses in the amounting to 2,619.00 Euros from selling packages of Internet services via leased lines during 2004, then in 2005 realized a profit in the amount of 2,512.00 Euros, during 2006 of year has a loss in the amount of 3,277.00 Euros, and in 2007 of year has made a profit in the amount of 2,735.00 Euros. In the analyzed period from selling packages of Internet services via leased digital lines, this company has made a total financial loss of 649.00 Euros.

It can also be noted revenue, losses and actually achieved results from providing Internet services to the end-users and also from providing services of leased lines to the other Internet service providers, based on written contract about leased lines rented by Macedonian Telekom, results are shown in table 3 (in Euros) [6-7].

Table 3: Financial results of company Macedonian Telekom from sales of leased lines and Internet via leased lines (in Euros)

<i>Year (period) of achieved results of the company Macedonian Telekom</i>	<i>Revenue from digital leased lines</i>	<i>Total costs for leased lines</i>	<i>Realized profit / loss</i>
Total for 2004	3,403,374.00	0*	*3,403,374.00
Total for 2005	9,568,400.00	4,942,493.00	4,625,907.00
Total for 2006	9,013,853.00	4,206,770.00	4,807,083.00
Total for 2007	6,997,912.00	3,314,191.00	3,683,721.00
<b>TOTAL:</b>	<b>28,983,539.00</b>	<b>12,463,454.00</b>	<b>16,520,085.00</b>

Macedonian Telecom, on the basis of their data, by selling Internet packages via leased lines of end users as well as by selling rented digital lines to other companies during 2004, generated revenues in the amount of 3,403,374.00 Euros. Next, during 2005, Macedonian Telecom generated revenues in the amount of 9,568,400.00 €, during 2006 generated revenues in the amount of 9,013,853.00 €, and during 2007 generated revenues in the amount of 6,997,912.00 €. (Table 3)

Macedonian Telecom didn't provide any information for the analyzed period of 2004 regarding the actual costs as well as actual profit / loss, so that they showed the revenue as profit.

We can also conclude that the Macedonian Telecom, by selling Internet packages using leased lines and the same service of leased lines to other companies during 2004, generated revenues of 3,403,374.00 €, in 2005 generated revenues in the amount of 4,625,907.00 €, during 2006 generated revenues in the amount of 4,807,083.00 €, and finally, during 2007 generated revenues in the amount of 3,683,721.00 €. During this analyzed period, Macedonian telecom generated revenues in the amount of 16,520,085.00 € by selling Internet packages using leased digital lines and thanks to the service of renting leased lines.



According to the given data, it can be clearly stated that in the analyzed period, the company of Internet provider service Ultranet Ultra DOOEL, Skopje, for example, which in the market of selling Internet access minutes had about 10.7% of total turnover (traffic) and on this basis in 2002 this company held the third place, with a constant decline, till 2004, when it had 7.2% of total turnover, with the fourth place in a ranking out of total 15 internet provider companies.

This means that dominant position of Macedonian Telecom is the reason for this decline, namely the position of Macedonian Telecom strengthened, and on the other hand, the position of Ultranet Ultra DOOEL Skopje weakened on the internet market. We can surely say that the reason for this is that this two companies didn't had the same position. It can be concluded that the same technical and commercial treatment was not enabled to all Internet service providers, in which they would have an opportunity to offer the same service as Macedonian Telecom, the operator with significant market power [10].

In the segment of sales of Internet services, Macedonian telecom used these circumstances to enhance its position, vice versa to decrease the influence and power of other players on the market. Their position weakened on the internet service market due to uncompetitive position in which they were. Some companies have even collapsed because of this, namely they cancelled their services in the area of Internet service providers.

## CONCLUSION

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