1. OVERVIEW OF MARKETS







1. Overview of Markets

This overview presents in detail statistical data regarding the course of Electronic Communications market in Greece.

It should be mentioned that, from the financial point of view, the application of International Financial Reporting Standards (IFRS) in the financial statements of Athens Stock Exchange (ASE) listed companies, affects in certain aspects the direct comparison of financial data of 2005 with previous years. There is, a notable increase in the turnover and in total assets. However, the reduction, noticed in gross profits, due mainly to the use of IFRS, renders impossible any comparison with the previous years. At the same time, the downward trend of the Consumer Prices Sub-index for Communications continued for the sixth consecutive year, contrary to the General Consumer Price Index (GCPI).

The number of licensed providers kept increasing. It should be noted that the transposition of the European Regulatory Framework in greek legislation, that took place at the beginning of 2006, repeals the specific regime of General Authorizations and Individual Licences.

In fixed telephony, the competition in infrastructures has remained low. In 2005, only 1% of connections used alternative providers for accessing the public telephone network, against 7.7% in the European Union (EU). To the contrary, service level competition has improved. Alternative providers continued expanding their shares in outgoing traffic. More specifically, at the end of the first half of 2005, the share of alternative providers in outgoing calls (calculated based on traffic volume) amounted to 28.7% compared to 26% at the end of the second half of 2005. The competition was more intense in international calls, where the share of alternative providers grew at the end of the fist half of 2005 to 50.4\%.

As regards fixed telephony retail tariffs, no important changes have been made, while, the cost of the 3minute local and long-distance call in Greece remains below the European average. However, the increase of both, monthly rental and VAT, resulted in the average monthly expenditure of the Greek residential user, exceeding the respective expenditure of the European user.

Interconnection both in fixed and mobile telephony, showed an upward trend compared to 2004. Interconnection fees in the network of the Greek incumbent (OTE) fluctuated in October 2005 just below the European average, according to the figures of the 11th Report of the European Commission¹ on Electronic Communications market in Europe. To the contrary, on October 2005, call termination fees in mobile telephony networks, were substantially higher (almost 18%) than the European average, ranking Greece as the 6th most expensive country among the 25 EU member states.

Internet market kept moving on the upward, as both revenues and subscribers showed an important increase. At the same time, the number of the Greek Domain Names with the [.gr] suffix kept expanding rapidly. At the end of 2005 Domain Names exceeded 120,000, marking an increase of 42% compared to the end of 2004.

As regards broadband access, a significant increase of broadband lines has been noticed, especially during the last quarter of the year. The number of broadband lines at the end of 2005 amounted to 160,113. Greece, however, occupies the last position among the 25 EU member states, with a penetration of 1.45% in the population, compared to the average

¹ http://europa.eu.int/information_society/policy/ecomm/implementation_enforcement/annualreports/11threport/index_en.htm

penetration of 12.75% in the EU. A major problem in Greek broadband market is the one-dimensional technological growth, since 99% of all broadband lines corresponds to ADSL lines. This fact constitutes a sign of low competition level from the infrastructure point of view.

The development of Local Loop Unbundling (LLU), which at the end of 2005 amounted to 6,884 lines (penetration 0.13% over the main telephone lines) was significantly low. The cost of LLU in Greece was significantly low with regard to fully unbundled access lines (third cheapest country in the EU), but relatively high as regards shared access lines (above the European average).

1.1. Financial Data of the Market

This section presents the basic financial data of Greek Electronic Communications market, as they

accrued from the published balance-sheets of the licensed providers for the time period 2000-2004. For 2005, any financial figures regarding the providers listed in the ASE, are based on their annual financial statements, pursuant to the IFRS. Moreover, EETT has taken into account any data that has been collected on a six-month period basis from the licensed providers, as regards the turnover, the investments, etc.

The application of IFRS justifies a large part of the changes observed in the figures presented. Consequently, the comparison of financial data of the listed providers between 2004 and 2005 is not possible, given that the figures presented are not comparable.

The market in overall, is characterized, by a positive change regarding the turnover and total assets, while gross profits show a negative change (see Chart 1). It



Source: EETT (based on published balance - sheets)

should be noted that the total of financial data of providers having Individual Licence and General Authorization, is taken into account.

Providers' turnover --that is the total revenues during the year- is shown in Chart 2. It is noted that data of licensed providers (holders of Individual Licences as well as General Authorizations) which don't provide fixed telephony services, is not included.

The effect of IFRS on the turnover is relatively small. In the context of modifying the figures of the balance sheet for 2004 pursuant to the IFRS, the most important effect was the negative change by 3.5% of OTE's turnover for 2004. Consequently, the comparison with the respective figures of 2004 is more viable. Hence, taking into account the estimations for the other providers, OTE marked a decrease by 5%, contrary to the alternative fixed telephony providers and Mobile Telephony Operators (MTOs) that marked an increase by 10% and 5%, respectively.

More complex is the representation of gross profit (i.e. the difference between the turnover and the cost of goods sold). The majority of financial statements of listed companies, do not include operational expenditures under cost of qoods sold (administration, distribution, research and development expenditure), in contrast with OTE and COSMOTE. Hence, the trend of gross profit, as shown in Chart 3 (see page 24), is negative.



Source: EETT (based on published balance sheets)

The negative change in OTE's gross profit is due to the total cost of the voluntary retirement scheme, which in 2005 stood at 1 million euros. Note that the participation of the Greek State (through transfer of shares at the percentage of 4% of OTE's share capital) in the cost of the scheme is subject to the EU's approval and it has not been taken into account in the financial results of OTE.

The evolution of total assets (i.e. all funds of a provider, including fixed assets such as buildings, machinery,

etc, as well as current assets such as cash, receivables, stock, etc.) is shown in Chart 4.

According to IFRS, assets are usually, but not strictly, recorded under "current assets" and "non current assets" or depending on their liquidity degree. In this context, OTE remained first with its total assets standing at 7.16 billion euros, presenting a recovery from the downward course of previous years. MTOs continued their progressing course, with the estimated total assets exceeding 4.9 billion euros for 2005. Finally,



Source: EETT (based on published balance - sheets)



Source: EETT (based on published balance - sheets)



alternative fixed telephony providers show stability, given that the estimation of total assets for 2005 stands just above 600 million euros.

Table 1 presents the aforementioned financial figures.

Table 1						
Evolution of Telecommunications Providers Financial Figures						
Turnover (billion euros)	2000	2001	2002	2003	2004	2005*
OTE	3.21	3.45	3.34	3.12	2.85	2.71
Mobile Telephony Operators (MTOs)	1.95	2.95	3.05	3.58	4.08	4.29
Alternative Fixed Telephony Providers (**)	0.04	0.05	0.10	0.29	0.44	0.49
Other Providers (***)	0.25	0.43	0.57	0.61	0.50	0.50
Total	5.45	6.28	7.06	7.60	7.87	7.99
Gross Profits (billion euros)						
OTE	0.78	0.89	0.77	0.55	0.20	-0.82
MTOs	1.13	1.33	1.67	1.87	2.05	1.77
Alternative Fixed Telephony Providers (**)	0.01	0.01	0.03	0.08	0.14	0.14
Other Providers (***)	0.07	0.05	0.01	0.15	0.17	0.18
Total	1.99	2.28	2.48	2.65	2.25	1.27
Total Assets (billion euros)						
OTE	7.09	7.55	7.78	7.63	6.79	7.16
MTOs	2.40	3.39	3.64	3.90	4.27	4.94
Alternative Fixed Telephony Providers (**)	0.13	0.18	0.36	0.50	0.58	0.61
Other Providers (***)	0.32	0.83	0.92	0.80	0.66	0.72
Total	9.94	11.96	12.70	12.83	12.30	13.43

* Estimation

** All individually licenced providers of fixed telephony are included.

*** All other individually licenced and generally authorized providers are included

Source: EETT (based on published balance - sheets)

1.2. Licensing

Charts 5 and 6 present the annual growth of licensed providers (holders of General Authorizations and Individual Licences) starting from the beginning of 2001 till the end of 2005. Chart 5 in particular, reflects market dynamics as regards Individual Licences. After 2001, when the majority of Individual Licences were granted, new Individual Licences are granted at an annual rate of 5% to 15%.









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Table 2 presents the number of Individual Licences holders per activity by the end of 2005.

It should be mentioned that an Individual Licence is still required for the installation of telecommunication networks through public areas (access rights) and the provision of telecommunications services through the use of scarce resources, (i.e. numbers or frequencies). In this context, a provider may hold Individual Licences for different activities (Table 2). A General Authorization is required to perform any kind of telecommunication activity not falling in the scope of Individual Licences.

It should also be stressed that the European Regulatory Framework, the transposition of which took place at the beginning of 2006, repeals the specific regime of General Authorizations and Individual Licences.

Table 2						
Number of Individually Licensed Providers per Activity (31-12-2005)						
Activity		Number of Providers				
Voice Telephony and Development of Fixed Network		14				
Voice Telephony		4				
Development of Fixed Network		16				
Satellite Communications		11				
2 nd Generation Mobile Telephony		4				
3 rd Generation Mobile Telephony		3				
TETRA		1				
W-LAN		10				

Source: EETT

1.3. Access to the Public Switched Telephone Network

During 2005, access of the Greek population to the Public Switched Telephone Network (PSTN) (measured in lines equivalent to 64 Kb/s), remained stable as compared to the two previous years, (Chart 7 and Table 3). The number of PSTN lines retained its downward trend, falling for the first time after 1997, below 5 million. On the contrary, ISDN BRA lines maintained their upward course. Additionally, ISDN PRA lines presented for the first time a reduction as compared to the previous year. Annual percentage changes of PSTN and Integrated Services Digital Network (ISDN) access lines (2000-) are shown in Charts 8 and 9.



Source: EETT (based on figures of licensed providers)

Table 3						
Evolution of Telephone Lines						
	PSTN Lines	ISDN BRA Lines	ISDN PRA Lines	Penetration ²		
Dec. 1997	5,430,855	792	134	51.7%		
Dec. 1998	5,535,521	3,258	448	52.8%		
Dec. 1999	5,610,931	27,542	1,478	52.4%		
Dec. 2000	5,659,274	96,972	3,946	54.6%		
Dec. 2001	5,607,726	199,033	5,385	56.2%		
Dec. 2002	5,412,842	349,751	6,048	57.2%		
Dec. 2003	5,200,368	448,542	6,766	57.1%		
Dec. 2004	5,080,444	525,499	7,362	57.3%		
Dec. 2005 (*)	4,939,083	575,920	7,084	56.8%		

* Estimation Source: EETT (based on figures of licensed providers)

² Penetration has been calculated based on population figures given by NSS. Especially for 2005 an estimation of the population has been made, based on the population projection of NSS at a decennium level.

A monopolistic status dominates the access market, with OTE possessing 99% of the market. As shown in Chart 9, Greece lags behind most of the other EU member states in terms of development of competition in access network. On the contrary, competition was enhanced in the provision of fixed telephony, with the number of preselected lines exceeding 740,000 in the middle of 2005. This number corresponds to approximately 13.5% of the main telephone lines. The course of competition in fixed telephony services is described in detail in the following section.



Source: EETT (based on figures of licensed providers)



Source: 11th Report of the European Commission

Note: The percentage of Greece regards lines and not subscribers.

1.4. Fixed Telephony Services

In spite of the maintenance of monopoly in the access market, competition in fixed telephony services was further enhanced. Alternative providers have been extending their shares in the outgoing traffic volume, as shown in Charts 10 and 11 (in total and by call type respectively), recording, however, a downward increase rate after 2004. More specifically, the share gained by alternative providers from OTE, for the first half of 2005 is estimated at 29% (based on the outgoing traffic and excluding Dial-up calls), 5 percentage units higher compared to the respective time period in 2004. More than 50% of this share (previous semesters were more than 60%) corresponded to the three top alternative providers³ (based on outgoing traffic per semester), showing, however, through the years a downward trend.

The intertemporal evolution of retail outgoing traffic in absolute figures, for OTE and the alternative providers, is shown in Chart 12. Moreover, the



Source: EETT (based on figures of licensed providers)

Note: Chart 10 refers to the total outgoing traffic, including local, national, international calls and calls from fixed to mobiles. Furthermore, Charts 10 and 11 do not include traffic from calls by means of prepaid cards, excluding international calls.

³ Reference to the percentage of the three top providers serves as an indication of market concentration and does not imply the existence of significant differentiation (in terms of customer base) among the 3rd, 4th, 5th etc providers.





Source: EETT (based on figures of licensed providers)



Source: EETT (based on figures of licensed providers)

Table 4

Evolution of the Outgoing Calls Volume from a Fixed Telephone (Breakdown to the Various Types of Calls, in Millions of Minutes)							
	H1 2002	H2 2002	H1 2003	H2 2003	H1 2004	H2 2004	H1 2005
Local	8,914	7,998	8,351	7,639	8,314	7,390	8,064
National	1,178	1,218	1,237	1,312	1,375	1,366	1,433
Dial-up Calls	5,062	5,641	6,714	6,903	7,161	6,536	6,447
International (pre-paid cards)	388	422	417	459	487	521	495
To mobile	985	1,074	1,032	1,138	1,193	1,232	1,244
Total except Dial-up	11,465	10,712	11,036	10,548	11,368	10,509	11,236
Total with Dial-up	16,527	16,353	17,751	17,452	18,529	17,045	17,683

Where H: Semester



Source: EETT (based on figures of licensed providers)

classification of this traffic by type of call (including Dial-up calls) is shown in Chart 13 and Table 4. Finally, Chart 14 shows the annual change (%) by traffic type as well as in totals.

Through the years, total traffic volume shows a

relevant stability. Regarding the different types of calls there is a reduction in the traffic volume of local calls (over 70% of the total traffic volume) and an increase in national traffic volume, from fixed to mobile networks, as well as in international traffic. As regards Dial-up calls, the reductions noticed in mid 2004 are attributed to the increasing use of ADSL technology for accessing the Internet.

traditional telephony services is reflected in the respective retail revenues (Chart 15), which, from 2003 and onwards, are steadily reduced by approximately 5% every six months. The fact that the reduction of retail

The intensity of competition in the provision of



Source: EETT (based on figures of licensed providers)



* H1 2003, also includes the revenues from calls to short code services Source: EETT (based on figures of licensed providers)

Note: Chart 15 refers to the total of retail revenues from local, national, international calls and calls from fixed to mobile networks. No category includes revenues from calls by means of prepaid cards.

revenues emanates from competitive pressures is proven by the downward trend presented in the average retail revenue per minute of outgoing traffic, for all types of calls (Chart 16).

The number of active subscribers⁴ for Carrier Selection and Pre-Selection of the alternative providers in mid 2005, is estimated to be approximately 1,062,000. More than half of these subscriptions refer to Pre-Selection. Also, a percentage standing at 88% regards residential users. It is noted that the so called "Pre-Selection subscription", does not exclude the possibility of activating the Carrier Selection, while the so called "Selection subscription" pertains strictly to the subscription only for Carrier Selection. Finally, from the aforementioned data one cannot exclude the possibility of there being a double calculation of subscribers, who are registered in more than one provider.



^{*} During H1 2003, as regards local calls, the average retail revenue also relates to calls to short code services Source: EETT (based on figures of licensed providers)



Note: In Chart 16, revenues and traffic from calls by use of prepaid cards are not included.

⁴ Meaning that the respective subscribers, registered at the semester, were invoiced at least once during the last quarter of the semester.

Source: EETT (based on figures of licensed providers)

Activated lines for Carrier Pre-selection, according to the figures of OTE, reached in mid 2005 742,000 (Chart 17). The majority of them (97%) related to all the types of calls (local, national, international calls and calls to mobile networks).

1.5. Telephony Tariffs

1.5.1. Fixed Telephony

During 2005 there were no significant changes in the tariffs of fixed and mobile telephony, with the exception of some small reductions in the calls from fixed to mobile networks, as well as international calls. Here-below follow some comparative figures of tariff policy of the fixed telephony providers for the December of the years 2005, 2004 and 2003, as regards the cost of different types of calls (local, national, international calls and calls to mobile networks) during peak hours⁵. The presented data refer to the basic programs of each provider and do not take into account special discount programs, monthly rentals or bonus time.

Chart 18 shows the actual cost of a 3-minute local call during peak hours. Most providers charge per minute for the first two minutes of a call and per second after that period. It is also worth noting that, a number of providers use minute-based charge.



^₅ From 08:00 to 20:00.

Respectively, the cost of a 3-minute, national call is shown in Chart 19. Calls performed during peak hours, are charged by all providers per second.

Chart 20 shows the average weighted cost of a 1minute call from a fixed to mobile network for the December of years 2003, 2004 and 2005. The average weighted cost has been calculated on the basis of the actual cost of a 1-minute call to all four MTOs. The weighing coefficient was the market share of each MTO in the incoming calls from fixed telephony providers for the aforementioned time periods. It is noted that the cost of a call to mobile network includes a minimum charge, which is in general 30 seconds, while the charging step beyond that threshold is usually per one second.

The resulting average weighted cost for each fixed telephony provider implies marginal changes between the years 2005 and 2004, ranging for 2005 from 1% to 6%, while the respective changes range for the year 2004 was 3% to 20%.

Regarding international calls, each provider uses different charge zones. However, there are not significant differences in the selection of countries that compose these zones. Indicatively, Chart 21 presents the cost of a 3-minute international call to a fixed phone terminating in the UK and USA (usually, they belong in the same charge zone), Russia and Brazil.







Source: EETT





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Charts 22 and 23 present the cost of a 3-minute local and national call from the incumbents of the 25 member states, made during peak hours, in September 2005. It should be mentioned that the cost includes any existing call set-up charges or minimum charge fees, as well as other reductions, depending on the duration of the call.

Greece is below the European average, in terms of local calls cost (5^{th} place) as well as national calls (13^{th} place).





Source: 11th Report of the European Commission



Charts 24 and 25 present a comparative evolution of the charge for the residential user in Greece (OTE) and EU (weighted average of the former state monopolies of the EU member states) as regards a 3minute and a 10-minute local and national call.

In Greece, local call is charged substantially lower than the weighted average of the EU member

states. The same applies to national call, having a smaller cost difference charge.

The monthly rental for the residential user is on the upward, as shown in Chart 26 (see page 40), remaining marginally below the weighted average of the 25 EU member states.



Source: 11th Report of the European Commission



Source: 11th Report of the European Commission

The increase of the monthly rental and the VAT, resulted in the average monthly expenditure of the Greek residential user exceeding the respective expenditure of the European, as shown in Chart 27. On the contrary, the average monthly expenditure for the Greek non-residential user remains lower compared to the respective expenditure of the European counterpart.

Chart 27 is a result of the application of a methodology used both by the EU and the Organization for Economic Cooperation and Development (OECD) for international tariff comparisons. According to the methodology, the average monthly expenditure is specified based on a specific "basket" of calls, which is defined by OECD and is applied on the standard tariffs charged by the incumbents of every member state.









Based on the specific methodology, the annual residential user expenditure includes: a) The fixed charges that contains any fixed and installation charges for a new connection (depreciated over 5 years) VAT included and b) usage charges, i.e. variable charges, which refer to 1,200 national calls to fixed lines, plus 120 calls to mobile networks (representing 10% of the number of calls to fixed lines) and 72 international calls (representing 6% of the number of calls to fixed lines).

Regarding the non-residential user, the annual expenditure includes: a) The fixed charges, that contain any fixed and installation charges for a new connection (depreciated over 5 years), VAT excluded, and b) the usage charges, which refer to 3,600

national calls to fixed lines, plus 360 calls to mobile networks and 216 international calls.

Charts 28 and 29 (see page 42) provide a comparative presentation among the 25 EU member states of the average monthly expenditure for a residential and non-residential user of fixed telephony, respectively. Greece exceeds the European average, in terms of monthly expenditure of residential user, given that it holds the 18th position (9th position in the 15 EU member states compared to the 6th position in 2004). On the contrary, the situation differentiates as far as average monthly expenditure for the non-residential users is concerned, as Greece is the 8th least expensive member state (5th position in the 15 EU member states, compared to the 4th position in 2004).



Source: 11th Report of the European Commission



Source: 11th Report of the European Commission

1.5.2. Mobile Telephony

The average monthly expenditure for mobile telephony user is identified in a similar way to that, of the fixed telephony. The analysis is based on the methodology used both by the EU and the OECD for international tariffs comparison. According to the methodology, the average expenditure is identified based on a specific "basket" of calls, which is defined by OECD and is applied on the respective post-paid packages of the two most important MTOs of every member state. It should be noted that the companies were chosen based on subscription data compiled by the European Commission.

More specifically, there are three different "baskets", depending on the level of usage (low,

medium and high user). Chart 30 (see page 44) presents the comparative evolution of the average monthly expenditure for the medium user "basket". On an annual basis, the expenditure of the mobile telephony user includes the following charges:

a) Fixed charges, which are identified as the monthly fixed charges and any other registration/installation charges (depreciated over 3 years) including the VAT.

b) Usage charges, which is the variable monthly expenditure, referring to 75 outgoing calls (24% in local calls, 12% in national calls, 43% in calls to mobile networks of the same company and 21% in calls to subscribers of other companies) and 35 outgoing short text messages (SMS).

Moreover, there is a specific time allocation of the calls, with 47% of the calls being made during peak

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hours, 30% during non-peak hours and 23% during the weekends. Finally, all relevant packages of the operators are taken into account, however, only the least expensive are presented for each usage "basket".

Greece is found in the middle of the ranking with the average monthly expenditure amounting approximately to 32 euros, while the European average is estimated to be approximately 33 euros.

Chart 30





Source: 11th Report of the European Commission

1.6. Internet

1.6.1. Internet Market

Internet market in Greece continues developing both in terms of total revenues and number of connections. More specifically, total revenues of licensed providers from Internet services for 2005 have been estimated to be approximately 126 million euros, marking a 19% increase compared to 2004 (Chart 31).

At the same time, the connections of licensed providers in the Internet, as shown in Chart 32, marked a significant increase by 27%, compared to the end of 2004.



Source: EETT (based on figures of licensed providers)



Source: EETT (based on figures of licensed providers)

1.6.2. Domain Names with the [.gr] Suffix

In 2005 an important increase has been marked, in the number of applications as well as in the total Domain Names assignments [.gr]. The total number of Domain Names, including sub-domains (com.gr, net.gr, org.gr, edu.gr, gov.gr), has exceeded for the first time the total of 100,000.

Indisputably, the introduction of Domain Names with Greek characters has constituted an important factor for this positive development. During 2005, the number of requested Names stood at 10,432 (42% over the total number of domain name applications). At the same time, the assigned Domain Names [.gr] with Greek characters have constituted 17% of the totally assigned Names. Chart 33 presents the evolution of requested and assigned Domain Names, while Chart 34 shows the evolution of assignment percentage over the applications that have been submitted.

The effectiveness of the new Domain Names' Regulation and its contribution in boosting the Greek Internet market is presented in Chart 35, showing the annual evolution of the average assignment percentage over the number of applications submitted for the period 2002-2005.



Source: Institute of Computer Science of the Foundation for Research and Technology – Hellas (ICS-FORTH)

Note: The Chart uses different colours to present the various years starting from April 2004 (new scheme launch). Lighter colours present applications volume, while darker ones present assigned Names volume.





Source: Institute of Computer Science of the Foundation for Research and Technology – Hellas (ICS-FORTH)



Source: EETT

1.7. Mobile Telephony

The penetration of mobile telephony in Greece in 2005 has fluctuated at very high levels, recovering from the declining increase rate of the previous years. More specifically, the total number of subscribers at the end of 2005, as presented in Chart 36, amounted to 12,448,000, marking a 12.7% increase compared to 2004 (total subscribers 11,044,000). It should be noted that the respective change rates during the two previous years were 6.9% for 2004 and 10.9% for 2003. Furthermore, at the end of 2005 the number of active subscribers has reached 10,243,000 compared to 9,306,000 at the end of 2004, marking a 10.1% increase (4.1% for 2003-2004). This number of active subscribers corresponds to 92.2% penetration in the population.

It should be clarified that the term "active

subscribers" refers to all subscribers under contract or pre-paid status, that have contributed to the generation of revenue, during the last three months, that is identified either as retail (call or SMS/ MMS etc.) or wholesale (call acceptance or SMS/ MMS etc.).

Chart 37 presents the evolution of contract and prepaid telephony subscribers. The percentage of the number of subscribers, who prefer pre-paid telephony over the option of contract, remains high and even shows an increase, reaching at the end of 2005 67%, compared to 65.9% at the end of 2004. Moreover, the percentage of the number of active subscribers opting for prepaid telephony, has remained the same, standing at approximately 60%.

Chart 38 presents the allocation of the total number of subscribers per MTO.



Source: EETT (based on figures of licensed providers)





Source: EETT (based on figures of licensed providers)



Source: EETT (based on figures of licensed providers)

1.8. Portability

Number Portability, (which is a facility that enables consumers to change their service provider whilst retaining their existing telephone number) has marked a significant increase in 2005. During 2005, 49,641 mobile telephony numbers have been transferred out of a total of 79,077 applications and 27,403 fixed telephony numbers out of 50,069 applications.

The main reason of rejection is the incorrect way of









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filling in the name of the subscriber or the company (35%), followed by the incorrect ID or passport number (19%). The evolution of the number of applications and transferred numbers for mobile and fixed telephony is presented in Charts 39 and 40.

1.9. Interconnection

1.9.1. Fixed Telephony

Chart 41 presents the intertemporal evolution of Interconnection traffic volume. This traffic volume includes: calls collection from OTE's network and calls termination to OTE's network, on behalf of fixed telephony alternative providers.

During 2005, both calls collection and termination showed an increase, however in slower rate

compared to previous years. More specifically, the annual change (2004-2005) for the call collection reached 11%, while call termination 8%.

According to the 11th Report of the European Commission, Interconnection charges in Greece, in October 2005, were lower than the average of the EU.

Charts 42-44 (see pages 52 & 53) present the Interconnection charges for call termination on the incumbent's network for every member state of the EU, depending on the type of Interconnection (Local, Single, Double tandem). Greece constitutes one of the least expensive member states, especially in terms of Local and Simple Interconnection (7th position), while in terms of Double Interconnection Greece holds the 12th position.



Source: EETT (based on figures of licensed providers)



* The charges for Slovakia and Lithuania for 2004 are out of scale (Slovakia: 2.96 – Lithuania: 2.61). The charge for Lithuania for 2005 is out of scale (2.61).

Source: 11th Report of the European Commission



* The charges for Slovakia and Malta for 2004 are out of scale (Slovakia: 3.84 – Malta: 5.54).

Source: 11th Report of the European Commission



* The charges for Latvia, Malta and Slovakia for 2004 are out of scale (Latvia: 5.57 - Malta: 5.54 - Slovakia: 5.92).

Source: 11th Report of the European Commission

1.9.2. Mobile Telephony

In 2005, MTOs' Interconnection traffic has presented a significant increase. The national and international Interconnection traffic volume (incoming and outgoing) for all four MTOs is shown in detail in Chart 45 (see page 54).

National incoming traffic is the total traffic terminating to the network of each MTO, originating from the networks of other domestic MTOs and of fixed telephony providers (OTE and alternative providers). Respectively, the national outgoing traffic is the total traffic originating from the network of every MTO and terminates to the other domestic MTOs and fixed telephony providers (OTE and alternative providers). International incoming and outgoing traffic refers to the total traffic, which originates from or terminates to international providers.

National outgoing traffic has shown a 10% increase compared to 2004, followed by the national incoming traffic, which was increased by 7%. On the other hand, international incoming and outgoing traffic has shown marginal changes.

Chart 46 (see page 54) presents the on-net traffic (i.e. traffic between the subscribers of the same mobile network) for the four MTOs. This kind of traffic constitutes a significant part of every MTO's traffic volume, while being a substantial revenues source not affected by Interconnection agreements with other companies. All MTOs aim at creating large, consumers groups who communicate "internally". The on-net traffic has marked an important increase during the period 2002-2005, while its annual change, compared to the end of 2004, stood at 40%. Consequently, the internal traffic has constituted 27% of the total Interconnection traffic (which additionally includes the incoming and outgoing traffic).



Source: EETT (based on figures of the MTOs)



Source: EETT (based on figures of the MTOs)

Chart 47 shows the average national termination fee in a mobile telephony network, for the 25 EU member states, based on the 11th Report of the European Commission (figures of October 2005). Greece exceeds the European average by approximately 2 eurocents and is the 6th most expensive country. The trend of the average termination fee, as presented in Chart 48, either for Greece or the weighted average of the 15 member states of the EU, is downward for the period 2002 until 2005. However, the change rate of the European weighted average is higher than the respective Greek, having as result the increase of difference between them (in 2005 it fluctuated at 20% compared to 12% for the year 2002).



Source: 11th Report of the European Commission



Source: 11th Report of the European Commission

1.10. Broadband

1.10.1. Evolution of Broadband Lines

Broadband access in Greece, as shown in Chart 49, has demonstrated a significant development in 2005 compared to the previous year. The number of broadband lines stood at the end of the year to 160,113, with an important increase in the last quarter due to further reductions in ADSL prices. Despite this important development, broadband penetration in Greece remains exceptionally low compared to the rest of EU member states, as demonstrated in Charts 50 and 51. More specifically, at the end of 2005 Greece remains in the last place of the EU with the penetration reaching only 1.45%, exceptionally lower than the average penetration in the 25 member states (12.75%). At the same time, Greece has one of the lowest absolute numbers of broadband lines (20th among the 25 member states of the EU).



Source: EETT (based on figures of licensed providers)





Source: Communications Committee (COCOM) Report



Source: Communications Committee (COCOM) Report

1.10.2. Broadband Lines by Technology

The provision of broadband access in the Greek market may be classified as such:

- a) ADSL access through OTE's network and no use of LLU. This way of access is provided by OTE either as a retail product (which means directly to retail clients) or as a wholesale product (to alternative providers or Internet Service Providers (ISPs).
- b) xDSL access by means of LLU. This kind of access is provided as a retail product, exclusively to alternative providers or ISPs that have a collocation and LLU usage agreement with OTE.
- c) Access to other technologies, such as Fixed Wireless Access (FWA), optical fibres, leased lines, etc. This type of access is provided by the owner of the relevant infrastructure, either as a retail product (directly to retail clients) or as a wholesale product (to other providers or ISPs).



Source: EETT (based on figures of licensed providers)

As seen in Chart 52, ADSL access via OTE's network and without use of LLU (case a) has been the primary way of provision of broadband access, in 94.4% of total lines. xDSL access via LLU corresponds to 4.3% and access via other technologies corresponds to 1.3%. The one-dimensional structure of broadband market is considered to be a significant factor that inhibits the development of Broadband in Greece. Compared to the other EU member states (Chart 53), Greece shows the highest concentration of broadband lines in DSL technologies (cases a and b).

1.10.3. ADSL Lines

The rapid development of ADSL lines is presented in Chart 54. At the end of 2005, this type of lines showed an increase of approximately 250% compared to December of 2004.

OTE (in collaboration with OTENET) retains a larger share (retail ADSL), which stands at 73.2%. The share, however, of the alternative providers (wholesale ADSL) presents a steady increase. In December 2005 it amounted to 26.8%, compared to 13.2% in the respective time period of the previous year. This increase signifies the intense interest of the alternative providers and ISPs for broadband services provision, that is reflected in the aggressive commercial policy through advertising campaigns and special offer packages.

Chart 55 (see page 60) presents the allocation of Incumbent's DSL Lines based on access rate. The majority of these lines (82.7%) belong to the lowest access rate (384 Kbps – download), while less than 6% corresponds to 1024 Kbps (download). It is worth noting that in almost all member states where broadband is thriving, the most popular packages of broadband access range between 1 – 10 Mbps.







Source: EETT (based on figures of licensed providers)

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All access packages are available through various types of charge, such as:

- Subscriptions with no limitation in terms of time or traffic volume.
- Subscriptions with limitation in terms of traffic volume.
- Subscriptions with limitation in terms of traffic time.

Consumers, in their overwhelming majority (88.2%) prefer access packages that are not subject to time or traffic volume limitation, while, 11.8% out of them, makes use of packages with limitation in terms of traffic volume.



Source: EETT (based on figures of licensed providers)

1.10.4. Local Loop Unbundling

LLU is considered an important stage in the "ladder of investment". It is common in all broadband – developed member states, that competition against the former state monopolistic provider is largely based either on the use of owned infrastructures (Cable TV networks as a rule - CaTV) or on LLU.

As shown in Chart 56 LLU presents an unremitting growth (annual increase over 150%). However, it remains at a very low level, with a total of less than 7,000 lines, which equals to 4.3% over the total number of broadband lines.

The number of LLU lines corresponds to 0.13% penetration over the main telephone lines (on December 2005). This percentage is considered particularly low, ranking Greece in the 17th place amongst the EU member states (Chart 57), below which only new member states can be found. The latter states just recently proceeded to the liberalization of the local loop. It is worth noting that the average penetration of LLU lines over the main telephone lines in the 15 EU member states amounted to 4.69%, namely 35 times higher than in Greece.

As regards the cost of LLU lines, Greece is ranked amongst the three cheapest member states in terms of fully unbundled access lines (Chart 58, based on figures of October 2005 - see page 62). On the other hand, as regards shared access LLU lines, Greece is more expensive by approximately 39% compared to the average price of the 15 EU member states and approximately 16% to the 25 EU member states (Chart 59 - see page 62).

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Source: EETT (based on figures of licensed providers)



Source: Communications Committee (COCOM) Report



Source: 11th Report of the European Commission



Source: 11th Report of the European Commission



It should be noted that in order for LLU to be implemented, collocation within OTE's exchange centres is required. There are three different types of collocation: a) physical, b) remote and c) virtual. In Greece only the first two methods are implemented. Table 5 shows figures regarding collocation (physical and remote) that were available at the end of 2005. The geographical allocation of collocation exchanges is presented in Figure 1.

Table 5						
Collocation Exchanges of OTE and Alternative Providers						
	Physical Collocation	Remote Collocation				
Number of Provider	s 8	10				
Number of Exchang	es 4	53				

Source: EETT (based on figures of licensed providers)



Source: EETT (based on figures of licensed providers)

1.11. Postal Services

1.11.1. The Courier Services Market

In 2005, a 13% increase compared to 2004 was recorded in the number of undertakings registered

undertakings, 60% are resided in the region of Attica and in the region of Central Macedonia. The activity of Courier undertakings is mainly concentrated on the collection, transfer, sorting and delivery of domestic



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with EETT's Postal Undertakings Registry. The evolution in the number of registered companies for the period 2000-2005 is shown in Chart 9.

During 2005, the estimated total revenue of the postal market approached 0.5% of the Gross National Product (GDP). Courier Services, that constitute the liberalized part of the market, have handled more than 5% of postal volume and have generated more than 35% of the total market revenue.

In terms of geographical distribution of registered

postal items, with emphasis on the transfer of unaddressed advertising items. The handling of unaddressed advertising mail is conducted with the exclusive use of the undertaking's network that collects the item (autonomous mail collection and distribution). The majority of the items are delivered to their destination within a day and they weigh no more than 500 grams.

Moreover, it is worth mentioning that key domestic clients of registered undertakings are based in big urban centers. In 2005, courier services were used widely by undertakings specialising in trading and in the provision of services. As far as cross-border mail is concerned, the most popular destination/ origination countries are the European Union (EU) and the USA - Canada. The postal items with the prementioned characteristics generate the majority of revenues for Courier undertakings.

The most important factors affecting the demand of postal services in our country are the quality of customer service and the undertaking's reputation in the market. Factors such as the future development of the Greek economy, alteration in the legislative framework and changes in the prices of postal items, shall play a decisive role in the development of the sector, according to Courier undertakings. As far as it concerns the prices of the handled postal items, they are largely influenced by the weight, the destination and the expected delivery time. It is noted that service provision cost for 2005 was mainly driven by the wages of the personnel and the operating expenses.

Regarding the development of competition in Courier services, more than 80% of the mail volume in the liberalised postal sector was processed by the 5 biggest undertakings of the sector, in 2005. It is estimated that there was an intense competition of prices, a fact that contributed to improving the quality of the provided services. Courier companies anticipate that key factors for their future growth, are the expansion of their existing Network, as well as the provision of specialized services to their clients.