final methodology for the specification of common cost and the relevant modification of the model. EETT announced to MTOs the final version of the Bottom-up model in December 2004.

This model calculates network cost in relation to a number of services that includes outgoing traffic to other networks, traffic within the network and incoming traffic from other networks. The method of Long-Run Incremental Cost (LRIC) is used for these calculations that has the following characteristics:

- Uses a demand profile that was constructed based on the number of subscribers and the volume of use,
- Takes into account a network configuration based on algorithms specified by demand and other input parameters including the actual circumstances of each network,
- Calculates total network costs combining the results of the network design, the investment and operating cost.

The results of this model are very important in the EETT work context in order to analyse the level of competition in the market of call termination to mobile networks and to impose obligations to SMP providers. More specifically, the Bottom-up model has the following characteristics:

- It provides strong indications on the level of competition in the market of call termination to mobile networks. In particular, by using the model on the market, significant deviations were found out between the cost for call termination and existing termination fees. This implies that the specific market is not competitive.
- It enables the identification of the target price for fees in cases where identification is made on the basis of a cost-oriented or reasonable price.

Using this model, EETT ensures that its regulatory policy with respect to the amount of termination fees for calls to mobile networks is based on objective foundations and protects in the best possible way the interests of mobile and fixed telephony users.

4.2. Regulatory Interventions based on the New Framework

The new Regulatory Framework of the European Commission on Electronic Communications requires that each NRA identifies the individual markets, taking into account the national market conditions. Subsequently, the NRA must perform an analysis to ascertain effective operation in each one of those markets. Where it is ascertained that an individual market is not competitive enough (market failure), the NRA must identify the SMP provider(s) in that market and either impose the necessary obligations or maintain/modify the existing ones.

Individual markets, as identified in the European Commission Recommendation[20] in relation to markets of products and services within the electronic communications sector, which are subject to regulation, are shown in Table 18.

In this context, EETT's actions have been focused on two directions:

1. Competition analysis for the market of call termination to mobile telephony networks (started in 2003).
2. Competition analysis for the remaining markets (started in 2004).

4.2.1. Market Analysis of Call Termination to Mobile Telephony Networks

With respect to the provisions of the new Regulatory Framework of the European Commission, EETT has

[20] European Commission's Recommendation of 11 February 2003, C(2003) 497 (Recommendation on product and services market within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 220/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services).

identified and analyzed the level of competition in the market of call termination to mobile telephony networks. This was conducted according to the Guidelines of the European Commission for market analysis and SMP evaluation.

EETT has proposed to define the market of call termination to mobile networks as a separate market for the network of each MTO (i.e. COSMOTE, Q-TELECOM, TIM HELLAS and VODAFONE) and then to designate each company in its network as an SMP Organization in that particular market. In a Public Consultation held in September 2003 the market definition and analysis were submitted to the market factors' judgement. Six (6) telecommunications providers participated in this Public Consultation and half of them agreed with the views and analysis of EETT.

Table 18

Individual Electronic Communications Markets

1.	Access to the public telephone network at a fixed location for residential customers
2.	Access to the public telephone network at a fixed location for non-residential customers
3.	Publicly available local and/ or national telephony services provided at a fixed location for residential customers
4.	Publicly available international telephony services provided at a fixed location for residential customers
5.	Publicly available local and/ or national telephony services provided at a fixed location for non-residential customers
6.	Publicly available international telephony services provided at a fixed location for non-residential customers
7.	Minimum set of Leased Lines (up to 2Mb/sec)
8.	Call Origination from the public telephone network provided at a fixed location
9.	Call Termination on individual public telephone networks provided at a fixed location
10.	Transit services in the fixed public telephone network
11.	Wholesale Unbundled Access to metalic loops and sub-loops for the purpose of providing broadband and voice services
12.	Wholesale broadband access (bitstream and potentially other similar except 11 and 18)
13.	Wholesale terminating segments of Leased Lines
14.	Wholesale trunk segments of Leased Lines
15.	Access and call origination on public mobile telephone networks
16.	Voice call termination on individual mobile networks
17.	The wholesale national market for international roaming on public mobile networks
18.	Broadcasting transmission services and networks which deliver broadcast to end users

EETT, taking into account the conclusions of the above Consultation, proposed a number of regulatory obligations. The most important ones are the provision of access and use of special network facilities, the transparency and non-discriminatory treatment as well as the publication of Reference Offer and price control.

Issues of the specific market and the proposed obligations were posed in a Public Consultation during the period from 11 February to 18 March 2004. Thirteen (13) telecommunications providers participated in this Consultation and 75% of them agreed with the views of EETT. EETT, taking into account the results of the Consultation, announced its final position in relation to the imposed regulatory obligations. In particularly, the obligation for price control was defined on the basis of cost-oriented prices for COSMOTE, TIM HELLAS and VODAFONE and on the basis of a reasonable price for Q-TELECOM.

In accordance to the new Regulatory Framework and in order to ensure that Decisions at national level do not cause an adverse impact to the common European market, the NRAs are required to communicate to the European Commission and the other NRAs the drafts of regulatory measures that they intended to impose. The NRAs may discuss with the European Commission every Draft Measure that they intend to impose before they officially communicate it.

In this context, EETT sent on 1st of July 2004 to the European Commission a Draft Measure related to the market of voice call termination to individual mobile networks. The European Commission communicated[21] back to EETT its positions in relation to the aforementioned Draft Measures in August 2004. The remarks focused on the following issues:

- On the clemency of the measure for the gradual reduction of termination fees over a period of three years, as it was also proposed by EETT. European Commission stressed the need to review the duration of this measure, due to high termination fees to mobile networks,
- On the necessity of immediate imposition of the obligation for accounting separation in addition to the other proposed obligations and verifying compliance with the obligations for non-discriminatory treatment.
- On the review of the reasonable price obligation for Q-TELECOM in the next market analysis.
- On the more adequate reasoning that within the context to avoid discriminatory treatment, the confrontations with issues entailing the use of GSM gateways is precluded, and in any case it consists a necessary element, without whom the imposed cost orientation obligation on the relevant market is ineffective.

It is noted that the European Commission in relation to the proposed measure on the obligation for price control in call termination fees to mobile networks points out that "the very high termination fees in Greece have caused an imbalance between wholesale and retail fees and they must be effectively adjusted as soon as possible". European Commission has also mentioned that "in this context, EETT is called to review the clemency of the gradual application of the measure as proposed in this case".

Having taken the remarks of the European Commission into account, EETT reviewed the Draft Measure. The new Draft will be communicated to the interested parties under a Public Consultation that will be completed in early 2005. The Consultation results and the Draft Measure are published on the EETT website[22]. Subsequently, the results of the Consultation will be taken into account and the Draft Measure will be communicated again to the European Commission.

[21] *In accordance with article 7(3) of the Framework Directive.*
[22] *http://www.eett.gr/gr_pages/telec/AnalisiAgoron/ (available in Greek only).*

Finally, EETT, following completion of the last phase of Communication and with the transposition of the new Regulatory Framework in the Greek legislation, will be in the position to proceed to the imposition of obligations described in the draft provision.

4.2.2. Analysis of Other Markets

Following a tender in 2004, EETT assigned to an independent consultant the preparation of a study on the identification and analysis of the level of competition in all electronic communication markets, except the one of voice call termination to individual mobile networks (Market 15 according to Table 18).

At the same time, EETT continued the collection, processing and checking of quantitative and qualitative data in relation to the progress of the electronic communications market in Greece and the competition level of this market (see Section 4.6.). This preparatory work is very important for the quick completion of the market analysis, since it minimizes the time required to collect the necessary data.

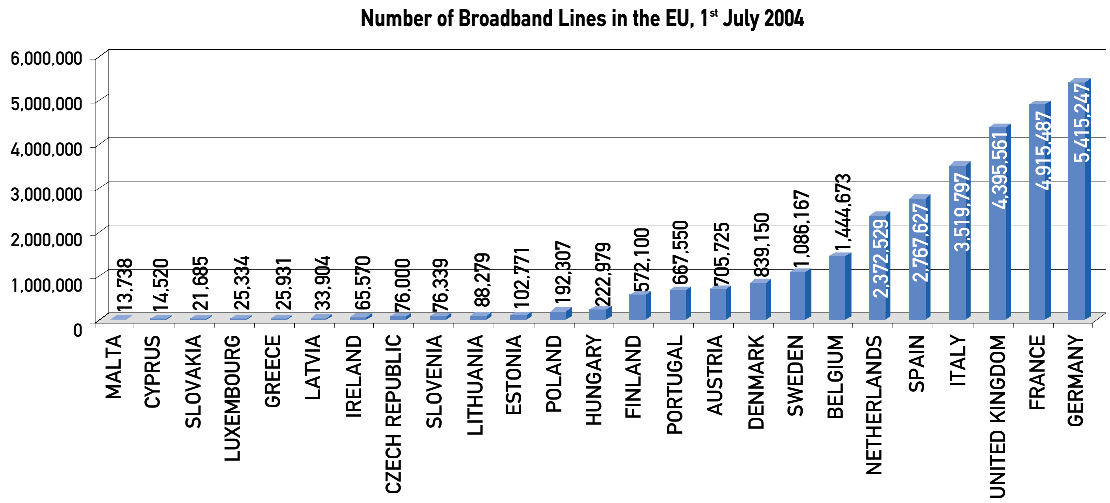
In addition, EETT grouped the markets shown in Table 18 and selected those markets where priority will be given, taking into account the national conditions of those markets and the completeness of the data collected. The markets selected for immediate intervention were those of broadband access and wholesale Interconnection. The identification and analysis of competition in those markets is expected to be complete in the first half of 2005, while the analysis of all remaining markets will have been completed by the end of 2006.

4.3. Actions for Broadband Development

4.3.1. Broadband in Greece

According to the 10th Report of the European Commission (see subsection 7.1.4.), Greece lags significantly in broadband access behind the other EU member states. This lag is shown in Charts 74 and 75 presenting the penetration of broadband lines in Greece as compared to other EU member states at the end of the first half of 2004.

Chart 74



Source: EETT and 10th Report of the European Commission