Telecom Italia response to
ERG DRAFT Common Position
on
Next Generation Networks Future Charging Mechanisms / Long Term termination Issues

10th December 2009

General comments

Telecom Italia welcomes the opportunity to comment on this further ERG consultation on charging models possible evolution for NGN interconnection in the long term, with a relevant focus on the Bill and Keep charging model.

Any regulation regarding the future evolution and development of the telecommunications infrastructures certainly has a high impact on the operators business plan; therefore Telecom Italia underlines that future regulatory intervention on charging models evolution should be carefully assessed before any action is taken, and should be fostered only in case of market failure evidence. Otherwise, regulators should leave to the market the solution to any business needs evolution.

In order to appropriately address a charging mechanisms evolution analysis, it is an essential starting point to consider that NGN is always divided into access network, core network and service/application levels. Furthermore, NGN shall have the possibility to manage customized quality of services and to assure, *inter alia*, reliability, protection from undue traffic, session control, service continuity across different technologies and providers.
NGN is thus not a pure IP connectivity network without multi-services awareness and any possible charging model evolution shall take into account and encourage such features as well as adequate investment remuneration.

Moreover, NGN interconnection should reflect requirements from both fixed/mobile operators and service providers and it should accommodate the business of international carriers as well: differences between fixed and mobile networks services will remain also in a NGN context.

As a consequence, the use of NGN network resources needs to be remunerated and the related charging model should emerge from market dynamics, without influencing the network architectures and/or technologies; in fact these relevant issues are mainly driven by business and economical company decisions.

Before addressing the specific questions proposed by ERG, Telecom Italia would like to make some additional general comments:

1. **Regulators should not impose any charging mechanism, which should be the outcome of market dynamics** (see answer to question 1).

Nowhere in the world has Bill and Keep (BaK) been imposed by the Regulator on fixed and mobile networks, but it has been defined on the basis of commercial negotiations between operators. The possible imposition of BaK on NGN would represent the first time ever of such a regulatory intervention. As an example, in Hong-Kong, one of the few countries that has adopted in the past BaK for mobile services and where NGNs infrastructure is a reality, the Mobile Party Network Pays charging method has recently been abandoned[1]. Interconnection charges for fixed-mobile interconnection have been thereafter settled among fixed and mobile operators by commercial agreements without any ex ante regulatory intervention.

[1] The Office of the Telecommunications Authority (OFTA) announced on 26 April 2009 that the regulatory guidance on fixed-mobile interconnection charge (FMIC) in favour of the Mobile Party's Network Pay (MPNP) model has been withdrawn as planned on 27 April 2009, when the two-year transition period ended.

ERG should consider that the Industry's migration to multi-service (including voice) NGN IP-networks and convergence of services is far more gradual than originally anticipated; in addition to that, fixed and mobile networks will migrate towards NGN with different speed.
It is therefore hard to foresee for that time what will be the market scenario and the impact of introduction of BaK. It is way too soon to define a charging mechanism, given demand uncertainties, not yet defined architectural solutions and business model instability for NGN scenarios.

Furthermore, charging models are mainly influenced by services characteristics rather than by particular technologies. The coexistence of different charging mechanisms (for example for Internet access service and for telephony) rather than a "one size fits all" model is the most likely scenario in a NGN context, in which a multitude of services with different characteristics will be provided.
The most efficient interconnection model will therefore be chosen by the market also taking into account Quality of Service, availability, security and reliability requirements of the specific service.

Telecom Italia retains that a potential migration to BaK regime will eventually be pushed by market forces, through bilateral agreement among network operators, and there is no need to over-regulate nowadays a scenario that is under development and still uncertain.

2. **TI doubts there is a legal basis to impose BaK as a regulatory remedy** (see answers to questions 1 and 11)

The imposition of a BaK regime is in clear contrast with the current regulatory footprint, which has been confirmed in the new Framework (expected to be officially published by the end of the year). The European Commission orientation has indeed confirmed the cost orientation approach on interconnection rules and possible migration to BaK is not tackled in the new rules of the Telecommunication Sector for the next four years.

BaK would indeed not allow the network cost recovery and remuneration of investments, which are currently guaranteed by art 13 of the Access Directive. In particular, the new text of the above mentioned article introduces a new element in the definition of price control and cost orientation, by making a specific reference to the obligation for NRAs to take into account the risks related to a specific (NGN) investment in determining the adequate investment remuneration.[2]

The above principle is also confirmed by the recent Recommendation on Termination rates, published in May 2009, which sets the rules up to far beyond 2012.

With regards to voice services, the trend towards symmetric charges within Fixed and Mobile markets, as foreseen by the recent Recommendation on termination (still to be implemented at national level), as well as the convergence of absolute values of termination fees between fixed and mobile would *de facto* remove the problems ERG anticipates in the development of converged offers.

[2] Art 13 Access Directive: "....*To encourage investments by the operator, including in next generation networks, national regulatory authorities shall take into account the investment made by the operator, and allow him a reasonable rate of return on adequate capital employed, taking into account any risks specific to a particular new investment network project".*

In the light of the above mentioned aspects, Telecom Italia deems the introduction of BaK viable only as a consequence of radical changes in the regulation framework and in the definition of relevant market, above all termination market.

3. **Regulators should not define PoI** (see answer to question 3)

Telecom Italia welcomes the effort made by ERG introducing the new concept of Boundary, as a "variant" of traditional BaK model, in order to reduce (unfortunately only some) the distortional effects stemming from a charging model equal to zero. Nevertheless, by defining the number of PoI, the regulators would de facto force operators to choose a defined architectural solution, which is instead a strategic decision of operators and is against the technological neutrality envisaged by the current framework.

Owing to the external imposition, the regulation could lead to a not necessarily efficient network architecture, in addition to influence technical and economical operators choices.

4. **TI rejects, being not compatible with multiservices NGN provision, the decoupling of transport and service layer** (see answer to question 2)

With regards to the separation of transport and service for interconnection, it is essential to remark that transport and service layers separation doesn't have to be considered as a commercial model, but a functional architectural tool to technically enable multi-services characteristics of NGN, as it is defined by UE recognized international technical standard organizations (ETSI/3GPP and ITU).
The proposed separation in the draft Common Position would not in fact allow the end-to-end quality of service necessary to provide high or different quality performance, especially for critical services in an NGN environment (i.e. real-time, transactions, multimedia streaming, with predefined availability and reliability levels).
The necessary vertical linkage between service and transport layers is required at interconnection to allocate the necessary network resources and guarantee the expected service characteristics between operators and end-to-end towards end users.

5. **TI challenges the idea that migration to BaK is a natural consequence of NGN multiservice network implementation and that the implications on operators would be negligible** (see answers to questions 1 and 8)

ERG suggests applying BaK to all services on the basis that it would be consistent with the current charging model adopted for unregulated IP services: that is not completely correct and viable in the market. Internet services now rely on Peering and Transit models that foresee payments from lower to upper Tiers, as well as between Peers for unbalanced traffic.

Furthermore, BaK model implies, and also ERG presumes so when considering pure BaK model, that volumes will be balanced among fixed and mobile operators in the long term[3].

[3] ERG CP page 43: "termination fees ….are collected from other operators in a zero-sum game on the level of the total fixed and mobile voice services".

According to Telecom Italia's opinion, ERG doesn't take into account the all IP service demand evolution and thus underestimates the impact of the BIG NET on Telecom networks in terms of a) unbalanced volumes received from Service Provider and Content Provider, b) the implications of an unbalanced regulation as well as different charging model between ECS market and neighbouring markets.

The different services provided over NGN will use different service and transport resources in accordance with the service characteristics also in terms of quality, availability and reliability.
Not allowing an adequate return on investment, the infrastructure operators will not be motivated to invest in NGN networks. Besides the inevitable impact on the quality of the offered services, this could lead to a concentration in the market.

The business of the international carriers would be hampered as it is mainly based on the differences between termination tariffs, according to which carriers propose to the clients worldwide the best solution to terminate their traffic wherever they want. Applying BaK will reduce the margin of the international carriers whose profit will be linked only to the transport charge that is, as known, very low and with a decreasing trend.

Finally, ERG CP does not adequately analyse the differences between fixed and mobile, especially in terms of different use of services and network resources, thereby failing to adequately address BaK implementation viability in mobile network. In particular, it does not take into account the fact that MTR is not differentiated between origination, transit and termination.

TI also notes some implications stemming from BaK adoption on the Quality of Services future strategies: if the market dynamics will lead to empower the Network in order to manage advanced services, a zero termination rate would not entitle the operators to remunerate the enhanced quality of service strategy
As matter of fact, the implementation of a BaK regime would make any QoS commercial strategy unfeasible.

6. **TI challenges the welfare benefits foreseen by ERG** (see answers to questions 4, 7, 8 and 9)

ERG affirms that: "BaK is expected to lead to higher average usage per capita and a lower average price per minute" (CP page 7).
It is not appropriate to assume that a change in interconnection model alone would necessarily lead to the changes in market outcomes identified by ERG.

The impact on retail market still needs to be assessed, but most probably the benefit of lower outgoing calls prices will be out weighted by having to pay for incoming calls or retail prices might need to rise to compensate the loss from termination (waterbed effect). In both cases, this would particularly affect low-income customers, which should be a concern to regulators.
A likely introduction of RPP could be disruptive, especially in a successful market as European one is.

International benchmarks are very difficult to make and comparing different parameters and BaK applications often results in very different conclusions. In particular, the ERG's analysis is not accurate and makes many assumptions, for example the adjustment for double counting of on-net calls seems insufficient, and the benchmark includes only a small sample of BAK countries.

Subsidy and Arbitrage between BaK and CPNP areas are issues which TI believes ERG has underestimated. In case of not simultaneous introduction of BaK, operators of the first country to adopt the new charging model would be disadvantaged, having to pay termination fees on outgoing traffic towards CPNP countries, while receiving no fee for incoming calls from those areas.
Even in case of simultaneous application of BaK within EU, the phenomenon in the internal market would be limited, but the incidence could be quite significant towards emerging countries (i.e. Africa) characterized by very high Termination Rate levels.

7. **The regulatory cost reductions foreseen by ERG are not realistic** (see answer to question 5)

ERG mentions the reduction of regulatory cost as one of the positive effects of the introduction of BaK[4]. Telecom Italia grants that eliminating the termination would lead to the reduction of the regulator's efforts in setting the right termination price and determining the relevant cost prices, but it is not clear to which extent as it has not been estimated by ERG.

On the other hand, operators will have to continue to manage cost accounting systems and regulators to determine fair prices due to (a) the limited applicability of BaK (boundary) to the termination level, (b) the coexistence of CPNP charging model on transit, for communications towards premium services and for originating communications through Carrier Selection or Carrier Preselection, as well as (c) the necessity to determine a fair mark-up for CPS.

In order to guarantee a correct calculation of transit/transport traffic revenues and a suitable level of quality, each network operator should maintain, also in BaK regime, the same operating and management system used for traffic monitoring and reporting. This would not bring any advantage to operators in terms of cost reduction. Moreover, it could be hard to manage and resolve disputes on quality degradation because, in case of BaK, the termination tariffs are null, so economic penalties are difficult to apply.

Moreover, litigation will presumably simply shift to the negotiation on transit prices transit or transport costs[5], and would therefore not be eliminated.

It is very difficult to appreciate the entity of the regulatory cost reduction mentioned by ERG and it would seem that the benefits will be mainly on the regulator's side. Telecom Italia deems it not to be a sufficient reason to justify the imposition of a new charging model.

[4] ERG CP, page 6: "...BaK reduces regulatory cost and uncertainty"
[5] as defined by ERG at page 18 ss. Par. 3.2. of the Draft Common Position

Answers to specific consultation questions

Question 1 (Section 1):
Do you agree that in a multi-service NGN environment, in which different services use a shared transport layer, different interconnection regimes for different services could create arbitrage problems? If yes, could you describe the problems that you foresee or that have already occurred. If no, what prevents these arbitrage problems in your view?

Charging model emerges from market dynamics

The Industry's migration to multi-service (including voice) NGN IP-networks and convergence of services, the key assumption for ERG CP, is far more gradual than originally anticipated. It is way too soon to define a charging mechanism, given demand uncertainties, no yet defined architectural solutions and business model instability for NGN scenarios.

Telecom Italia is of the view that the only approach leading to a more efficient market environment is let the market play. As welfare economics demonstrated, the maximum efficiency is achieved when customers – having the correct information about prices and market conditions – are able to drive market to the most efficient allocation of resources according to their set of preferences. As wholesale markets are even more rationale than retail markets, if wholesale buyers had the opportunity to choose between different charging systems, they would select the most suitable one, leading the market to the most efficient equilibrium. In this view, the contemporaneous presence of several charging models it is not a danger but a competitive stimulus. If one of the charging model (BaK, CPNP, or even another one) proves to be the most efficient, market players will adopt it, without any regulatory intervention.

In the light of the above considerations, Regulators should not impose any charging mechanism, which should be the outcome of the market dynamics. If BAK proves to be the most efficient charging mechanism, market players will select it to compete effectively with their competitors. However, this is not foreseeable at present. So far, market and competitive environment led operators to opt for the CPNP charging mechanism, which proved very successful in determining the huge development of mobile market in Europe (which has by far not been replicated in the US, in terms of penetration as well as coverage).

While this approach preserves the current interconnection regime, it obviously does not exclude that in the future customers' preferences will drive market players for specific services towards a BaK model, if it will prove to be more efficient than CPNP. In other words, we cannot exclude that when all-IP networks will have replaced existing circuit switched telephone networks and all-IP services will be widespread, then interconnection charging models may adjust to new business models. However, Telecom Italia believes that this could happen in a long term.

Services will influence the charging models

Telecom Italia agrees with ERG[6] that charging mechanisms and models are in principle technology neutral, in particular regarding interconnection, since services characteristics influence specific charging model applicability in the market.

[6] ERG CP page 15: "...charging mechanisms are applicable in a technologically neutral manner...".

For instance, possible migration of telephony on NGN "IP-based" network, although a multiservice network is used, in principle does not cause a direct effect on charging model: telephony remains indeed the same service, with the same interconnection requirements between operators regarding interconnection technical performances and parameters and remuneration modalities, even if provided by different network technologies. Of course, specific commercial agreements can be negotiated by operators, but there is, in Telecom Italia view, no direct relation between NGN and the necessity to change existing interconnection charging model or to have any regulatory intervention on this matter.

The coexistence of different charging mechanisms (for example for Internet access service and for telephony) rather than a "one size fits all" model is the most likely scenario in a NGN context in which a multitude of services with different characteristics will be provided.
Thus the evolution toward multi-services NGN does not mean one charging model for all provided services, but a plurality of charging models could emerge in the national or international markets. Telecom Italia does not see any direct linkage or dependability between appropriate charging model choice for specific services and arbitrage issues: in any case each operator has to be remunerated in accordance with the service, control and network resources employed in the provision of a specific service.

Regulators should adopt a conservative approach in enforcing a possible NGN interconnection charging model obligation, , since if the charging model does not reflect the actual architecture and commercial need, it might be particularly risky. As stated above, a variety of models employed across different circumstances could be the best promoter of an efficient market.

Traditional Voice Services charging model

With regards to voice services, the trend towards symmetric charges within Fixed and Mobile markets, as foreseen by the recent Recommendation on termination (still to be implemented at national level), as well as the convergence of absolute values of termination fees between fixed and mobile would *de facto* remove the problems ERG anticipates in the development of converged offers[7].

Moreover, Telecom Italia disagrees with ERG belief that Bill and Keep would be the natural evolution towards a single charging mechanism for all NGN services[8].

First of all, this statement is based on the assumption that BaK is the current used charging mechanism for unregulated IP services, while Internet services now rely on Peering and Transit models that foresee payments from lower to upper Tiers, as well as between Peers for unbalanced traffic.

Secondly, it would be wrong to compare NGN to the Internet (as it is known today), since the former is aimed at a managed network, characterized by customized quality of services, reliability, protection from undue traffic, security, session control, traceability and accountability of user

[7] ERG CP page 11: "A converged multi-service NGN-IP seems to benefit from a single terminating charging mechanism. This convergence is considered an important factor driving the need to assess which interconnection regime is appropriate for the long term."
[8] ERG CP page 15 : "..considering the migration to all-IP networks it seems plausible to apply the charging mechanism of the IP networks."

activities, mobility control, roaming and ubiquity of services, service continuity across different technologies and providers; while the latter is based on simple best effort.

Telecom Italia is of the opinion that even in a converged multi-service NGN IP-network different charging mechanism will be sustainable as the control layer of the network will be as in the present situation (PSTN) able to distinguish between different services charging differently regulated or unregulated services, voice or video or data services. This is the reason why Telecom Italia does not see future arbitrage problems between different services leading to competitive problems; moreover, similar services will be charged in the best efficient way as determined by the market forces.

Question 2 (Section 1 & 2.2):
What is the influence of the separation of transport and service for the interconnection regime and in particular the charging mechanism and in what way are NGNs and BaK related?

Transport layer versus Service layer

With regards to the separation of transport and service for interconnection, it is essential to remark that transport and service layers separation doesn't have to be considered as a commercial model, but a functional architectural tool to technically enable multi-services characteristics of NGN, as it is defined by UE recognized international technical standard organizations (ETSI/3GPP and ITU).
In other words, it does not mean that the mere transport layer is sufficient to support any service, as service and transport layers have a vertical connection to associate to each service and each communication session the appropriate transport resources with the relevant performance, quality, availability, reliability, etc.. Interconnection remuneration involves both service and transport levels resources used for the provision of the expected service characteristics between interconnected operators and end-to-end toward users.

In case of "session-based" and "content-based" services interconnection, generally speaking, both service and transport layers have to be strictly involved (so called in technical international standards SoIX – Service Oriented Interconnection), since specific transport resources, associated to each active session or communication, have to be allocated to satisfy service requirements regarding performance, real-time requirements, quality, reliability, security, etc.. Indeed, in an interconnection context, service awareness is always required, also regarding different IP connectivity transport services, since diverse performances and qualities have to be recognized and provided, when appropriate to respect specific agreement between operators. Therefore service interconnection does not include solely service-specific aspects, but both service and transport layers requirements.

Telecom Italia does not see how service and transport layers can be possibly separated in interconnection's technical and economical agreements definition and, as a consequence, no relation with the proposed BaK can be identified, at least from the regulatory point of view. Of course, in multi-service NGN context, two operators can also interconnect their own networks to provide pure IP connectivity service, but in this case we have a particular connectivity-only service. Even so, at interconnection different pure IP connectivity services can be characterized by specific performance and QoS characteristics, which can imply a diversification in the remuneration agreement definition.

Point of Interconnection

The above analysis leads us to conclude that Points of Interconnection can generally be different among various services, also in term of number. Interconnection at transport level could be located in different points with respect the service level, but service and transport linkage is always required to provide the expected performances in terms of quality, availability, real-time requirements, reliability, etc. defined in commercial agreement between operators.

Question 3 (Section 3.2):

How would you define the boundary for the application of BaK and where should it be located (i.e. points of interconnection where BaK is applicable)?

Telecom Italia welcomes the effort made by ERG introducing the new concept of Boundary, as a "variant" of traditional BaK model, in order to reduce (unfortunately only some) the distortional effects stemming from a charging model equal to zero: "*The principle of "hot-potato" routing is one of the most frequently mentioned alleged drawbacks of BaK.[..] this alleged drawback is based on the wrong assumption whereby BaK is applicable everywhere and you are allowed to drop any traffic anywhere for free. This is not the case. BaK, as considered and defined in this CP, is only applicable at a defined boundary of the network to which the receiving users are connected*"[9]".
Nevertheless, TI deems it relevant to underline some aspects.

Boundary decision impacts on the network architecture

The evolution of the telecommunication networks into a Next Generation Network is likely to happen taking different forms depending on competitive conditions, network architecture strategic decision on the replacement of the traditional network, the regulatory environment etc. and a single evolution path toward an NGN network does not exist. The evolution may for example entail a rearrangement of core network nodes, changes in the number of network hierarchy levels and consequently a geographic rearrangement of Points of Interconnection (PoI).

In this context, the decisions about the number of network nodes/PoI and the definition of local interconnection are particularly relevant in IP/NGN networks and in most countries the number of network nodes/PoI at each hierarchy level for NGN is not defined yet.
In Telecom Italia's view the definition of a boundary where BaK applies is neither foreseeable nor desirable at present.

Although it is generally agreed that the number of PoI will decrease, it is highly questionable that any one best number can be identified for any particular type of NGN implementation. By defining the number of PoI, the regulators would *de facto* force operators to choose a defined architectural solution, which is instead a strategic decision of operators and is against the technological neutrality envisaged by the current framework.

In order to maximize the efficiency of the network architecture of an operator, favouring competition, the number of PoI for each service and the level of the boundary where BaK could be

[9] ERG CP, page 44.

eventually applied should then be defined only by commercial agreements between the interconnecting operators.

Practical implications for Mobile network and fixed overlay scenario

In mobile networks, the radio access network is comprised of base stations, related equipment and the radio spectrum. Carrying higher traffic volumes across mobile networks will generally require an increase in many network elements particularly in the relatively expensive radio access network. For example, additional cell sites will be needed to support higher traffic volumes given limited spectrum resources. The cost of supporting that traffic will include the opportunity cost of spectrum and coverage capacity that could otherwise have been used to carry other services.

Most operators believe that the supply of mobile termination will continue to result in a significant cost to operators which should be reflected in termination charges. These operators note that regulators' cost models have found that the type of 2G/3G mobile networks that can be expected to remain common across Europe over at least the next 5 years have a significant, non-zero cost of termination. These operators also believe that sound efficiency reasons exist for termination also to contribute to fixed and common cost, 3G license cost above all.

Furthermore, the proposed model based on the separation between "boundary BAK" and "transit" doesn't fit so well to the mobile termination model that, as known, doesn't reflect the distinction between origination/transit/termination as fixed model does. Indeed, the base station and the Mobile Switch Centre are part of termination service and, at interconnection level, since operator delivering the communication does not know where the called user is, a transit service is always included and so an economic exchange is necessary even if a Bak model is applied to the local radio access.

Moreover, in a likely scenario of a long term overlay of NGN and PSTN, it is not clear how to conciliate the boundary of BaK for services (especially voice) that could be delivered across the two networks, inside the same network operator's domain. In any case the choice of the point for the boundary of Bak application is up to the operators depending on the implemented architecture and the economic exchange for transit and traffic transport in general shall take into account the cost of the crossed network (PSTN or NGN).

Question 4 (Section 4.2):
What is your conclusion on the relationship between the charging mechanism and penetration, usage and price level?

Relation between charging mechanism and market results

It is argued in ERG's paper that Bill and Keep leads to lower retail prices for call origination and appears to increase usage due to the price elasticity of demand[10].
These statements are exclusively based on a benchmark with a limited sample of countries who are currently applying BaK (USA, Hong Kong and Singapore), which Telecom Italia, as explained below, deems highly misleading.

[10] ERG CP page 7: "BaK is expected to lead to higher average usage per capita and a lower average price per minute" and par 4.

As a matter of fact there isn't a complete awareness about the relevance of the relationship between charging mechanism and the market dynamics, as proved by limited ERG analysis on this matter. The market is surely influenced by the charging model as one of the several marketing factors handled by operators, but the possible beneficial effect on the market can not be easily isolated and demonstrated.

In fact, while outgoing charges might indeed be lower in RPP countries (all countries applying BaK at wholesale level have a RPP regime at retail level), this does not necessarily imply a welfare improvement since the consumer surplus increase associated with lower outgoing prices might be more than offset by the loss of consumer surplus attributable to the charges levied on calls received.

Looking at the mobile market, mobile penetration rates are higher in CPP countries than in RPP countries. Higher market penetration is achieved through a progressive enlargement of the customer base towards individuals with lower spending propensity and thus toward subscribers with lower usages. The larger the customer base the more it includes consumers with lower spending propensity. Thus the higher usage rate of RPP countries might rather be due to the selective and higher spending customer base than to the affordability of outgoing tariffs. Conversely customer bases of more mature markets include many more individuals with lower spending capacity and thus they are bound to have lower average usages.

Finally, there are no countries adopting pure Bill and Keep for all the communications, but limitations on types of communications and perimeter of application always applies in Bill and Keep implementation. That, in addition to the different regulatory and market conditions of each country, makes even more difficult any comparisons.

The "misleading" comparison with USA market

ERG bases its evaluation of Bill and Keep mainly on the evidence emerging from the US. As a matter of fact, the US mobile market is characterized by a retail price structure which considerably limits access to mobile services by customers who are usually charged with very high flat offers. Flat rates lead to lower average price per minute than in the EU, but also exclude from the mobile market many low income consumers. In fact, as a consequence of the pricing model, the penetration of the US mobile market is significantly lower than the EU average.[11]

With regards to the higher usage in US, we should note that the consumption per capita in the US is typically higher than in Italy for both mobile and fixed network and this difference is not necessarily linked to the BaK charging mechanism. Indeed, for fixed networks, the regulatory context in the USA provides for the general obligation to settle "reciprocal compensation rates" regarding the interconnection regime (and thus not pure BaK)[12]. This model corresponds to what ERG defined as a "variant of CPNP"[13] .

In fact if the goals for the introduction of BaK are the higher consumption levels and the lower charges, we could presume that also the introduction of symmetrical termination rates could be a useful solution.

[11] The quality of service in US is perceived as poor. Major claims concern are: spotty coverage, poor service quality, very high contract early termination fees, pricing or other billing disputes, locked phones...
[12] See further details in the following paragraph.
[13] ERG comment during ERG Workshop, Nov 4th, 2009.

TI further analysis on USA market

In the U.S. the FCC has been working for years towards harmonisation and symmetry of termination rates between fixed and mobile operators but not for the application of an absolute BaK regime (see on this matter recently "Order on Remand and Report and Order and further notice on proposed rulemaking, November 5, 2009 on Development a Unified Intercarrier Compensation Regime", page C-123, para. 271-276, hereinafter also "FCC Order"). The view of the EU Commission and of the FCC on this issue are similar. In fact the FCC takes as an example for a symmetry policy on termination rates the EU Commission Recommendation on the regulatory treatment on fixed and mobile termination rates in the EU (see page A-126 of the FCC Order).

In sum, nowhere the FCC or U.S. regulation says that termination rates should be "zero", but consistently with the EU policy, simply promotes symmetric and uniform compensation arrangements that are economically efficient and sustainable.

Moreover, pending adoption of the final Unified Intercarrier Compensation Regime, with specific reference to technological advancements, the FCC in its Order expressly recognised the need to create incentives for carriers stating that "*as carriers shift from circuit-switched telephone-only networks to packet-switched broadband networks supporting numerous services and applications, it is important that intercarrier compensation rules create the proper incentives for carriers to invest in new broadband technology… (FCC Order page C-67 , C-68).*

Having the said objective in mind, the FCC has adopted a *gradual ten-years transition plan with separate stages, designed to reduce rates over a sufficient period to minimize market disruptions and to cushion the impact of the reform on both customers and carriers* (see FCC Order page C-84).
The methodology adopted by the FCC to set termination rates is based on incremental cost as specified in details in para. 266-270 of the Order following a CPP approach: *the calling party service provider is(..) responsible for the payment of the uniform terminating rate to the called party service provider (see Order page C-123).*

Limits of the benchmark

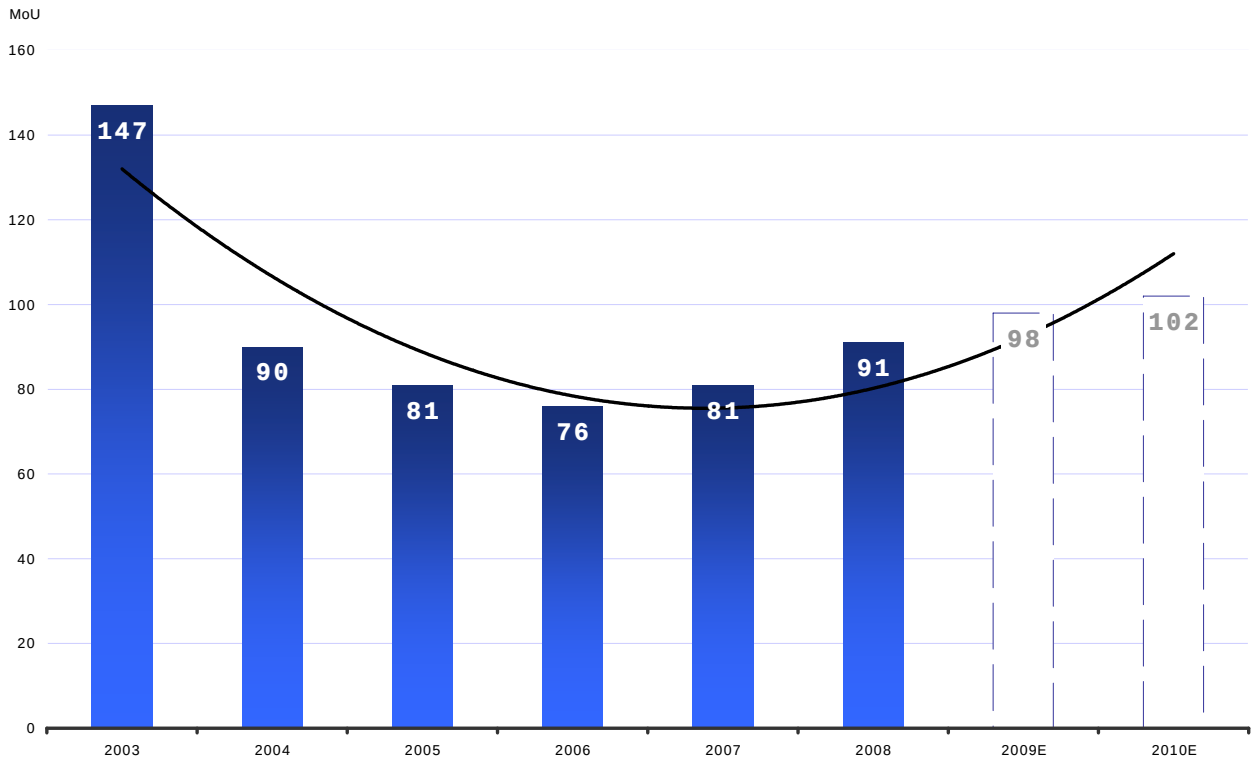
Based on Merrill Lynch figures, ERG points out that usage per capita in BAK countries is higher than in CPNP countries, while price per minute in BAK countries is lower than in CPNP countries[14]. Telecom Italia is of the view that this approach is based on best-effort estimated figures and it expresses concerns about the conclusions this figures can suggest. There almost 3 main reasons that could affect results shown in section 4.2 of ERG CP:

1. Quality of data: Even if Telecom Italia is aware about the work done by ERG to make the Merrill Lynch figures comparable for CPNP and BAK countries, it is impossible to ignore that while the minutes of traffic in the former are actually known, the minutes of traffic in the latter are based on hypothesis on traffic splitting between incoming and outgoing. Obviously Telecom Italia expects that important regulatory decisions such as the change in charging regime, be based on more robust figures.

[14] ERG CP page 25: "BaK countries have on average twice the usage of that of CPNP countries, while the retail price per minute in BaK countries is half of that of CPNP countries.

2. Comparability of data: Evidences from the supposed higher efficiency of BAK over CPNP are based on a very limited and specific number of cases. Actually, it is very difficult to compare Hong Kong or Singapore, whose territory is respectively half or one quarter of the small Luxembourg, to the larger European countries, which experienced a high level of investments to cover the whole country. By contrast, there are cases that do not comply with conclusion drawn by ERG, even if based on the same sources of data: according to Merrill Lynch data, Brazil, which passed from a partial BaK to a CPNP regime in July 2006, inverted the former declining MoU trend to an increasing one.

MoU in Brazil: from partial BaK (up to July 2006) to CPNP (since July 2006)

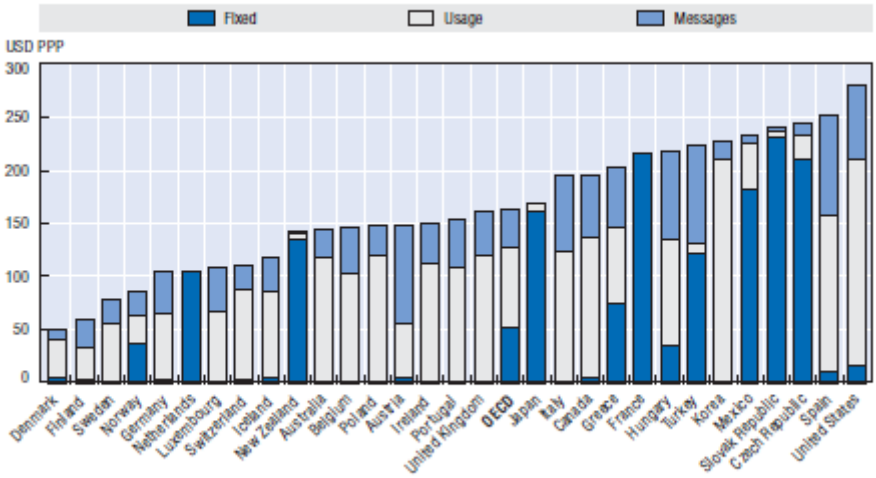


Source: Merrill Lynch Global Wireless Matrix – April 2009

As a matter of fact, large disproportion by countries can be explained by differences in market structure, as well as in data gathering or even in different definitions of similar aggregates.

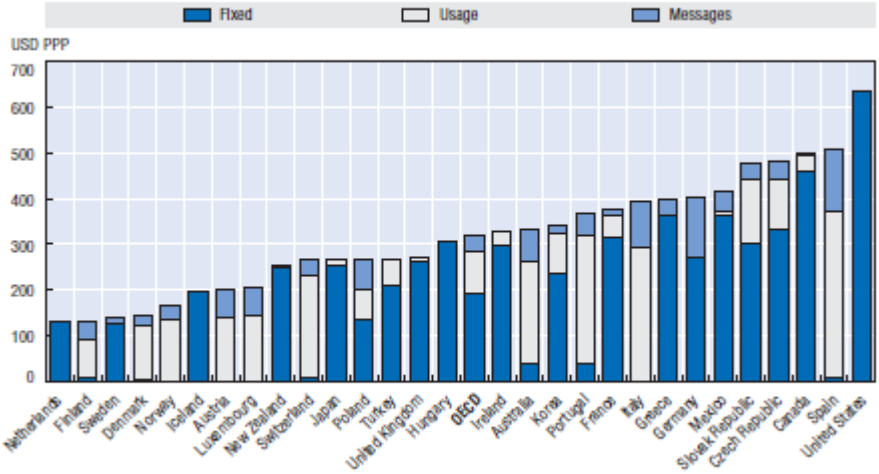
3. Price discrepancy vs OECD analysis: ERG claims that prices in US, based on the proxy variable RPM, is by far lower than charges in all the EU countries. According to the latest OECD Communication Outlook, US price for a basket of mobile services is top of the ranking for low and medium usage profiles and it is ahead of the large majority of EU countries for the high usage profiles. Note that OECD correctly compares countries by PPP currency, in order to avoid a biased ranking.

Figure 7.9. **OECD mobile low-use basket, August 2008, tax included**



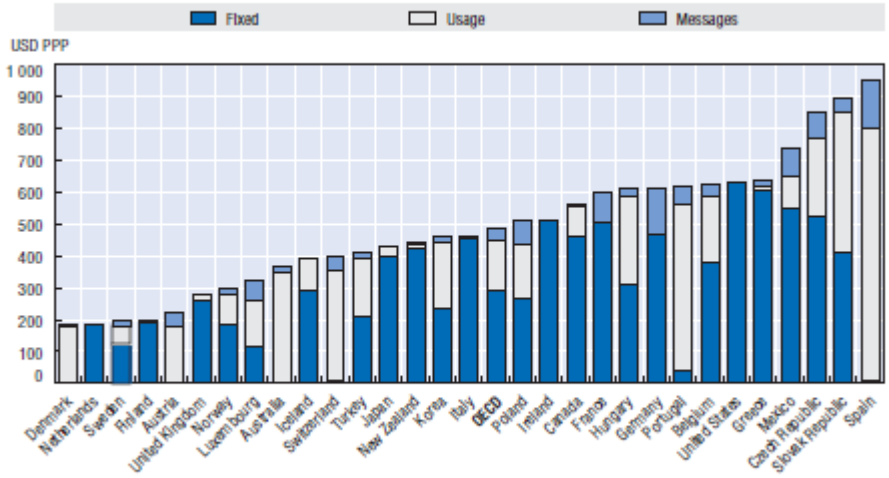
Note: The existing mobile basket methodology does not include discounted or free calls to pre-selected phone numbers as part of "friends and family" or "preferred numbers" plans. The inclusion of these calls will be considered as part of a future update of the mobile basket methodology.

Figure 7.10. **OECD mobile medium-use basket, August 2008, tax included**



Note: The existing mobile basket methodology does not include discounted or free calls to pre-selected phone numbers as part of "friends and family" or "preferred numbers" plans. The inclusion of these calls will be considered as part of a future update of the mobile basket methodology. Pre-paid plans are excluded.

Figure 7.11. **OECD mobile high-use basket, August 2008, tax included**



Note: The existing mobile basket methodology does not include discounted or free calls to pre-selected phone numbers as part of "friends and family" or "preferred numbers" plans. The inclusion of these calls will be considered as part of a future update of the mobile basket methodology. Pre-paid plans are excluded.

Even if the OECD ranking is based on a basket and not on a price, it is peculiar that ERG conclusions on this issue are by no means different from OECD benchmarking.

Moreover, ERG took into account only a limited sample of countries applying BaK and didn't consider that in some of these, regulators recently decided to go in a different direction, assuming that CPNP would bring more benefits to the market; or, having analyzed different options, decided not to impose BaK.

In Hong-Kong, one of the few countries that adopted in the past BaK for mobile services and where NGNs infrastructure is a reality, the mobile party pays charging method has recently been abandoned. The Office of the Telecommunications Authority (OFTA) announced on 26 April 2009 that the regulatory guidance on fixed-mobile interconnection charge (FMIC) in favour of the mobile party's network pay (MPNP) model has been withdrawn as planned on 27 April 2009, when the two-year transition period ended. Interconnection charges for fixed-mobile interconnection have been thereafter settled among fixed and mobile operators by commercial agreements without any ex ante regulatory intervention.

In its statement, the regulator said that the transitional period was intended to give mobile and fixed operators time to negotiate new FMIC arrangements, and that the deregulation of FMIC followed the government's market-driven policy by removing regulatory asymmetry which was not conducive to the development of fixed-mobile convergence.
According to OFTA, the CPP, calling party pays, will prove to be successful for mobile operators as the volume of fixed-to-mobile calls in Hong Kong outweighs mobile-to-fixed traffic.

In Singapore, the local NRA, IDA, back in 2006, considering the evolution to an NGN environment, initially proposed to have a long-term interconnection arrangement based on BAK system regardless of the nature of the interconnecting networks. The industry opposed the adoption of BAK as a regulatory measure and so IDA decided not to impose BAK but to monitor the development in telecommunications market worldwide and domestically, and formulate the appropriate long-term approach when necessary. So also in Singapore the

regulator decided for an ex-post approach to interconnection in an NGN environment and did not adopt BAK as an ex ante rule[15].

Therefore imposing BaK in the European environment will have a negative impact on European operators that will be the only operators in the world where such a regulatory burden could be imposed as an ex-ante rule.

Question 5 (Section 5.1.3):
How does BaK affect regulatory certainty and the risk of legal disputes?

Telecom Italia considers that ERG overestimates the benefits of implementing BaK on regulatory costs reduction.
The obligation for operators to continue to implement cost accounting and wholesale billing systems and for regulators to determine fair prices would de fact remain, due to (a) the limited applicability of BaK to the termination level, (b) the coexistence of CPNP charging model on transit and "transport costs", for communications towards premium services and for originating communications through Carrier Selection or Carrier Preselection, as well (c) as the necessity to determine a fair mark-up for CPS. Regulatory cost could therefore be reduced only in minimum part, which would not justify the imposition of a new charging model.

Litigation will most probably simply shift to the negotiation on transit prices or transport costs, which will become the ultimate tool for operators to recover their investments, and would therefore not be eliminated.

Moreover, operators currently use both price and capacity as negotiation tools in determining their interconnection agreements. In a BaK environment, price would no longer be available as negotiation tool and operators would adjust their interconnection agreements on capacity. Disputes and congestion problems on capacity dimension would not be eliminated.

In order to guarantee a correct calculation of transit/transport traffic revenues and a suitable level of quality, each network operator should maintain, also in BaK regime, the same operating and management system, used for traffic monitoring and reporting. This would not bring any advantage to operators in terms of cost reduction.
Moreover, it could be hard to manage and resolve disputes on quality degradation, because, in case of BaK, the termination tariffs are null, so economic penalties are difficult to apply.

The introduction of BaK regime could also increase the legal disputes among retail consumers and network operators. In fact, if the terminating traffic should be remunerated by the end user, the actual legal disputes among interconnected operators could be translated to retail end users with their network operator.

In synthesis, it is the opinion of Telecom Italia that the introduction of BaK will bring very limited benefits to the amount of legal disputes and the amount of operational activities under the responsibility of each network operator.

[15] (see Report by Analysis Mason for Ofcom "Case studies of mobile termination regimes in Canada, Hong Kong, Singapore and the USA – 26 November 2008, page 26).

Question 6 (Section 5.2.1.3):
How do different wholesale charging mechanisms impact on the number of unwanted calls? Do you expect (other) effects on consumers/consumer groups? Where possible, provide a quantitative assessment of the expected effects.

Telecom Italia expects an increase in unwanted calls due to the lower costs incurred by the calling party for making these calls.
In case RPP is applied at retail level, unwanted calls further penalize the called user in terms of involuntarily costs sustained. Furthermore, applying RPP to customers who are familiar with CPNP (i.e Italian customers) could have negative impact on traffic volumes and revenues.

As indicated in the Ofcom report[16] in the countries where BaK is applied, unwanted calls represent such an issue that specific do-not-call lists had to be implemented.

Moreover, the study refers only to the mobile sector, where the problem is less felt as in the majority of countries mobile numbers are not listed in any directory. Telecom Italia thinks the problem will have a higher impact when also the fixed market is considered.

Finally, the possible impact on increase of unwanted SMS should be taken into consideration.

Question 7 *(Section 5.2)*:
How do you assess the quantitative relevance of call and network externalities?

ERG recognizes that in two-sided market termination there are two kinds of externalities influencing the termination rate: call and network externalities.[17] The relating conclusions are that *"BaK is likely to internalize call and network externalities better than CPNP"*[18]*.* and " [..] *BaK could be less efficient in capturing the network externality"* [19].

BaK has been thought as a way to *inter alia* internalize the externalities of the calls by allocating the cost of the call between called and calling party. BaK could thus work only if associated with the RPP principle, whereby the called party pays its own share of termination costs.

If we introduce a different option to re-allocate the termination charge by assuming that the costs must be allocated on the basis of a *double-sided* utility of the calls, we must also presume that the utility is proportional to the costs; in fact, if the utility were not proportional to the costs, one of the two side of the call would pay a share not related to his willingness to pay.

More problems will arise in a NGN environment: it will be very difficult to appreciate the utility of advanced services and to re-allocate transport costs to the service layer according to hypothetical utility functions, beside the not feasibility of the technical separation, as mentioned in the previous answers.

[16] "Case study of mobile termination regimes in Canada, Hong Kong, Singapore and the USA", by Analysys Mason for Ofcom (Nov 2008)
[17] ERG CP page 30: "In this case of termination there are two types of externalities, being call and network externalities"
[18] (see ERG CP page 33)
[19] (see ERG CP page 34)

In Telecom Italia's view, also in the CPNP regime call externalities are likely to be internalized since callers expect to soon be the receivers and vice versa. Somehow it is as if the caller is willing to bear the whole phone call cost on the assumption that the call he or she originates will soon prompt the receiver to call back (induce a subsequent call originated from the receiver). In other words, since a high percentage of calls are from known parties, there are likely to be implicit or explicit agreement to split the origination of calls. Therefore, as call externalities are internalized, the CPNP regime does not lead to suboptimal market equilibrium and thus there is no potential consumer harm.

As a further evidence of the above, CPNP perfectly reflects the cost causation criterion. Indeed the costs incurred by the called network are sustained for a decision taken by the caller; the cost should therefore be attributed to the calling network. On the contrary BaK moves from the principle of cost causation.

As far as the network externalities are concerned, Telecom Italia agrees with ERG conclusions.
In particular, we recognize that CPNP is best fitted to allow the right remuneration to operators who see a marginal customer (typically characterized by higher incoming than outgoing traffic) joining its network.

Question 8 (Section 5.3.5)
How would your business be affected by a move from CPNP to BaK? Please explain the expected impact on prices, volume of supplied services and profit.

BaK impacts on retail business model

By imposing a swift in the charging model from CPNP to BaK and eliminating termination services, the recovery of access costs incurred for supplying termination services would be moved from the wholesale market to the retail market. In this sense, retail markets would be indirectly regulated, and the major impact would be felt especially by MNO, who would be forced to apply to each customer a fixed pricing regime, while today the majority of mobile end users prefer to pay on per use base.

The implementation of BaK indeed strongly impacts on the pricing model of the retail market, without considering the actual implementation issues and without estimating the real benefits for end customers.
In case of introduction of RPP at retail level, we are convinced that the situation for the users in terms of welfare will remain unchanged: the customers will pay less the outgoing calls and more the incoming ones. Even if we might consider that the net effects of this redistribution effects on the overall social welfare would be those of a "zero sum" game, there would be negative impacts on low-income customers, who would be the most affected by a price increase/introduction of a fee for incoming calls.

In countries which have adopted Bill and Keep arrangements, operators systematically charge customers to receive calls. This strongly suggests that instead of making RPP optional, Bill and Keep actually makes it inevitable.
In this case, the most affected would be low-income customers, which should be a concern to regulators.

Differently, in case of maintenance of CPP at retail level, the final result on overall welfare would be even worse, due to a consequential pricing policy of outgoing tariffs/monthly fees (waterbed effect) from operators aiming to recover its costs as all customers would be affected by the higher charges.
By eliminating termination services costs would simply be moved from one service (wholesale) to another (retail).

Furthermore, the application of a Bill and Keep regime to both fixed and mobile operators would artificially eliminate the asymmetry between fixed termination rates and mobile termination rates.
Telecom Italia believes that termination-charge difference between fixed and mobile market is justified by the use of diverse transmission resources and the different costs of the equipment involved in the two termination services.
In any case, the expected MTR lowering trend as a consequence of the recent Draft Recommendation will make the termination among the two different markets converge, making BaK Introduction unnecessary.

BaK impacts on single operators

According to ERG, the introduction of the BaK regime would cause negligible effects on the revenues of the operators concerned[20].
So, from the operator's point of view, the costs are recovered simply by re-allocating them to the parties of the call (outgoing and incoming traffic) without consequences on profits.

It's worth noting that this conclusion could be right (theoretically) only in case of perfect traffic balance, when operators have similar market shares and similar customer expenditure profiles so as to generate balanced traffic flows among networks.
Especially with regards to the fixed network, in most European countries the size of operators can be very different, leading to unbalanced traffic flows. Being this the case, BaK would result in a transfer of revenues from the dominant network to the other operators, without any real benefit for the end customer.

The traffic volume unbalance will be even worse in a NGN environment, where the traffic volume developed on the all-IP network will not presumably have the same trend of today. It seems ERG neglects or underestimates the impact of the BIG NET where volumes will be more incoming than outgoing and where ISP offers more focused on IP new services (IPTV, Videogames...) will influence the balance of volumes.

BaK impacts on investment

TI disagrees with ERG's statement that BaK has no positive or negative impact on investment incentives[21].
The introduction of a BaK regime could lead the operators not to invest in their network due to the fact that the costs of the termination service will only be sustained by the terminating operator. Clearly, an operator will not have reasons to invest in the upgrade of its network (apart for the respect of minimum QoS) if the investments' remuneration will be not guaranteed by an appropriate margin.

[20] ERG CP page 2: "..in parallel to the eliminated wholesale revenues for termination there is overall the same amount of eliminated wholesale costs [...]this reflects the zero-sum nature of termination revenues."
[21] ERG CP page 43: "...there does not seem to be a direct effect of BaK on investment incentives".

As regards NGAN, the amount of investment needed for the implementation of the networks and the high level of risk associated with the (uncertain) development of the services call for a clear and long term approach in terms of charging principles. BaK presents several difficulties to be implemented (the distinction to be made between transport network costs to be recovered by the services is not clear), and so the uncertainty about the full recovery of the costs borne by the network operators raises the level of risk. Telecom Italia doesn't believe that the introduction of criteria moving from a clear recovery model is opportune at this stage of network implementation.

Furthermore, in an NGN environment the ISP remuneration from broadband access is only a part and probably a small part of the revenue for broadband clients as a good part of the revenues will be acquired by other entities such as content providers. Content providers will probably be the only party of the game gaining from the upgrading of the networks to be guaranteed in order to be able to transport any kind of service at any provided technology. In this context, the category of providers who would be affected by this charging model (just TLC operators or also operators like Google, Skype, Yahoo,...) is not clear.

Considering that in the NGN context many operators are seeking to merge because of the significant savings in operating costs of the networks (as the proposed merger between Orange and T-Mobile in the U.K. is demonstrating), the application of BaK to this context may strengthen this kind of concentration because many operators loosing the termination fees will not be able to sustain competition and innovation.

We are witnessing a consolidation trend as scale and therefore increased efficiency are becoming relevant growth factors, given the maturity of the market. With such trend and even more considering the proposed BaK introduction in the EU, there could be an higher risk for the European Electronic Communication market to be populated by a fewer number of operators, namely those who have heavily invested at least in a pan-European or even global advanced infrastructure and have developed a capillary network of contractual relations worldwide. Infrastructure is a key success factor in the wholesale market and it is well known that international backbones are CAPEX intensive.

Telegeography (see Report Traffic Analysis 2009 - page 20) analyses this process. According to Telegeography, the migration from TDM to VoIP is changing the strategy of international carriers. In light of this convergence trends, TeleGeography believes that a growing number of carriers, including many incumbents, will choose to exit the international voice business. They will still provide international service to their customers, of course. But rather than investing capital in a segment that faces both daunting challenges and limited growth prospects, many will choose to get out of the business of international voice transport, either by selling their voice business to another carrier, or by merging their international carrier business into that of a larger entity.
While current capital market conditions may slow the pace of consolidation, the continued decline in per-minute prices and the growing complexity of the international voice market makes such consolidation almost inevitable. The international long-distance market will be around for years to come, but the number of participants will inevitably decline.

As said, excluding network's remuneration will lead operators to concentrate or will create the necessity of public interventions to improve the networks, restraining the game of competition. As for example, the Dutch regulator, OPTA, has recently proposed to allow fixed termination rates to increase more than 5% during the period 2009 to 2011. On the other hand, the charges for full and shared access would decrease significantly. This experience shows that in this country the migration towards NGN is accompanied by measures stimulating innovation by the incumbent

operator without depressing OLOs past investments and not by avoiding a fair network's investment remuneration.

Today's investment in new and advanced infrastructure (such as LTE for mobile access) could be adversely affected by ex ante regulation, like BAK application via a regulatory ex ante decision from NRAs in relation to NGN transition: in such a case Europe, that has been the most important market in the world for mobile users and penetration rate, could fall behind other emerging market, such as Far East and Africa, where BAK does not applies or, if it applies (as in the case of Singapore) has not been imposed by regulators but has emerged as a business choice.

BaK impacts on International market

In the international context a move from CPNP to BaK will certainly have a strong impact on prices, volume of supplied services and profit.

The business of the international carriers is mainly based on the differences between termination tariffs, according to which carriers propose to the clients worldwide the best solution to terminate their traffic wherever they want. Applying BaK will reduce the margin of the international carriers whose profit will be linked only to the transport charge that is, as known, very low and with a decreasing trend. As a consequence, in this scenario a reduction of the competitive arena due to the introduction of BaK charging mechanism is foreseeable; only biggest and cross-country providers will survive due to their position in some specific retail domestic markets.

Moreover, as correctly observed by ERG[22], the application of BaK in EU will cause distortion of the competition due to the fact that worldwide CPNP is the most commonly used regime. This means that an EU operator will pay a termination tariff when interconnecting with an operator using a CPNP charging regime while, on the contrary, no payment will be required.

The dimension of the operator is also important considering the boundary of BaK. For instance, operators with fewer points of interconnection will be disadvantaged if BaK applies at a low level of the network because of the high cost of transport to be sustained, while on the contrary biggest operators will be favoured. Often, in the international context, carriers have a single point of presence in different countries and again, the foreseeable risk is a concentration in the market and finally, of the clients' possibilities to choose between a variety of solutions.

BaK impacts on Network Management

If we extend our analysis to other regulatory issues related to the new NGN environment that we consider significant and in some way connected to issues such as future interconnection regimes, we can say that even the application of the principles of the net neutrality in our view may not lead to a zero cost of the use of the network by the content providers. In our opinion there should be exceptions for which a content provider requiring particular forms of access is obliged to pay fees. With this regard it is interesting to see what is currently happening in the USA.
Recently, FCC published a "Notice of proposed rulemaking" (October, 22, 2009) a draft proposal aimed at codify rules related to the net neutrality debate.

FCC recognises that some services, such as some services provided to enterprise customers, IP-enabled "cable television" delivery, facilities-based VoIP services, or a specialized telemedicine

[22] ERG CP page 49: "...a subsidy from the BaK domain to the CPNP domain can probably not be prevented.

application, may be provided to end users over the same facilities as broadband Internet access service, but may not themselves be an Internet access service and instead may be classified as distinct managed or specialized services.
Also European review de facto doesn't restrict the differentiation of quality for Broadband services. These services may require enhanced quality of service to work well. As these may not be "broadband Internet access services," none of the principles proposed would necessarily or automatically apply to these services and then, content application may be charged by network operators.
As matter of fact, the implementation of a BaK regime would make any QoS commercial strategy unfeasible.
If the market dynamics will lead to empower the Network in order to manage advanced services, a zero termination rate would not entitle the operators to remunerate the enhanced quality of service strategy. In TI view, the imposition of such a charging regime could further hamper and limit the future business development on NGN.

Question 9 (Section 6.1):
Do you agree with the conclusion that operators/users in the BaK domain will subsidise traffic coming from outside the domain (regardless of the legal aspect)? Are there any mechanisms to prevent this and how will they work in your view, in particular to avoid arbitrage?

Telecom Italia agrees with the conclusion reached by ERG [23] that if two charging systems will coexist (CPNP/BaK) throughout different countries this would result in a subsidy from the BaK domain to the CPNP domain, as termination charges would be paid for traffic leaving the BaK domain (outgoing traffic), while no termination revenue would be received for incoming traffic.

Additionally, considering developing countries (like Africa) where there is a lack of international infrastructure and where demand is high, international operators face considerable investments that, in case of the application of BaK would not be remunerated by the reverse interconnection. To make things worse, these markets are typically characterized by very high level of termination rates.

Subsidization is even worse when an operator is a net receiver as Telecom Italia, whose traffic is mainly destined to third world countries. Indeed, in this case, the majority of the traffic is composed of incoming calls that will be priced at zero level in the BaK domain while as said, the outgoing calls will be charged by high termination rates.

In sum, in the world market of electronic communication, imposing BAK as an *ex-ante* regulatory measure could have an adverse effect on competitiveness of European operators and on the evolution of "best in class" infrastructure and services in the European environment, especially considering that such a regulatory burden is not going to be imposed elsewhere (as far as we know, see above regarding U.S. and Far East regulatory systems).

Such an adverse effect could be envisaged not only on domestic infrastructure and services but also in international ones. Imposing BaK in Europe means that operators in other important emerging markets such as Africa, Far East and America will apply termination rates for international calls to their customers and to European carriers, while no interconnection fees could

[23] ERG CP page 49: "...a subsidy from the BaK domain to the CPNP domain can probably not be prevented."

be applied for calls terminated from abroad to European customers, putting European carriers at a competitive disadvantage *vis-a vis* their competitors in Non-EU countries, with a significant negative impacts on margin and revenues for international services for European carriers.

Question 10 (Section 6.3):
Do you see any implementation problems for a migration period towards BaK? How could such problems be addressed?

In Telecom Italia's view, as reflected in some part and in the conclusion of ERG document, common charging model evolution can only be a possible evidence from the market in very long term prospective, when NGN coverage should be wide enough to be able to influence the market itself: in fact, just in a pure NGN context, possible charging models, that could autonomously grew up in the market, could be considered with actual knowledge of their effect on telecommunication system and customers.

Nevertheless, ascertained that Telecom Italia strongly opposes the imposition of a defined charging mechanism' we agree with the issues outlined by ERG about migration from the current CPNP regime to BaK: ERG CP page 49: "[to avoid arbitration] BaK preferably should be introduced at least nationwide…Introduction within a block of adjacent countries would be preferable…".

In fact, in our opinion this migration should be synchronous for different operators or countries considering what above stated about a) unbalancing of the payments, b) the subsidization of networks based on CPNP regime and in the end, c) different competition conditions favouring certain markets or operators. In any case a correct timeframe of migration should be assessed, permitting operators the recovering of their past network investments and in any case the migration should not take place before the end of the rebalancing of the termination rates, already in place.

Nevertheless Telecom Italia is of the view that international context is subject to strong competition among international carriers without any viable possibility to manage any common charging model for interconnection transition, above all among EU and not-EU countries. As a consequence no viable possibility exists to impose any charging model for interconnection between different countries, since any imposition on EU operators and carries at least will hamper competition with extra-EU operators.

It could be worth noting that in most European countries, the current glide path in mobile termination market has been developed on a path starting from asymmetry tariff, in order to facilitate new entrants, and landed to a symmetry level. At this stage, new disruptive wholesale mechanisms will further hamper the incumbents, who are expecting to play natural dynamics in termination market (symmetry), and therefore it would introduce uncertainty regulation into the market.

Question 11 (Section 7):
Does the draft CP miss any other relevant issues?

Telecom Italia believes the following issues haven't at all, or at least haven't sufficiently been addressed in ERG Common Position:

- **Legal Assessment**
  There is no mention in the Common Position of which legal basis, if one exists within the current framework, NRAs would use to impose mandatory BaK.

  The imposition of BaK does not seem coherent with the current termination regulation regime, as cost based pricing is the basis of current legislation and the recent Recommendation on Termination rates sets the rules up to far beyond 2012.

  Furthermore, BaK wouldn't indeed allow network cost recovery and remuneration of investments, which are currently guaranteed by art 13 of the Access Directive. In particular, the new text of the above mentioned article introduces a new element in the definition of price control and cost orientation, by making a specific reference to the obligation for NRAs to take into account the risks related to a specific (NGN) investment in determining the adequate investment remuneration.[24]

  In the light of the above mentioned aspects, Telecom Italia deems the introduction of BaK viable only as a consequence of radical changes in the regulation framework and in the definition of relevant market, above all termination market.
  In this context, deeper analysis of BaK implications on margin squeeze test regime should be guaranteed.

- **Definition of Market**
  The evolution towards an NGN environment will open the market doors to a number of parties (i.e. content providers) who might take advantage of the resources of authorized network operators without being bound by the same rules.

  Other market players would be induced to benefit from free access to networks under mandatory BaK, without being compelled to participate to the costs of the network infrastructure they use.

  Regulators should ensure competition on a level playing field for all market players, both currently authorized network operators and service/content/application providers. New regulation or competition law intervention may be required to prevent players with dominant positions in other sectors from being able to use convergence to extend their dominance into communication services.

- **Impact Assessment**
  While the strength and associated benefits of BaK are accurately expressed in the Common Position, ERG does not equally examine and comment on BaK weaknesses and drawbacks in terms of wholesale and retail markets impacts, operators investments on new network infrastructures, provided quality and provision of differentiated quality services. Drawing conclusions on the beneficial impact of a move toward a drastic change of the wholesale (and possibly retail) charging systems requires cost benefit analysis in greater depth and a comprehensive impact assessment.

[24] Art 13 Access Directive: "....*To encourage investments by the operator, including in next generation networks, national regulatory authorities shall take into account the investment made by the operator, and allow him a reasonable rate of return on adequate capital employed, taking into account any risks specific to a particular new investment network project".*

As explained in the above answers, TI challenges the validity of the data used as basis for ERG conclusions, and in more general terms that such important conclusions could be made exclusively on benchmarks, without a throughout analysis of the consequences of a move to BaK for all parties concerned.

The Commission is in the process of awarding a Study which recognizes the importance of verifying *"the impact of BAK on investment";* this Study *"will also have to analyse the consequences of a BAK regime on investment incentives"*.
Whereas the ERG Document under consultation envisages that the impact on investment is negligible, without representing any analysis to justify this conclusion, TI would like to suggest that ERG should carry out a deeper analysis on market outcomes as well as on the effects on single operators (or wait for the results of the above mentioned study, which are expected for September 2010) before drawing its conclusions.