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**3 Group's response to
the ERG's draft Common Position on Next
Generation Networks Future Charging Mechanisms/
Long Term Termination Issues**

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Introduction

This paper sets out the response of the **3** Group (*“the 3 Group”*) in Europe to the ERG’s draft Common Position on Next Generation Networks Future Charging Mechanisms/ Long Term Termination Issues (ERG(09)34).

The **3** Group is part of Hutchison Whampoa Limited's telecommunications division and includes the following operating companies in the EU: Hutchison 3G Austria GmbH, Hi3G Denmark ApS, Hutchison 3G Ireland Limited, H3G Spa (Italy), Hi3G Access AB (Sweden) and Hutchison 3G UK Limited (together, H3G).

The HWL telecommunications division, comprising the **3** Group, Hutchison Telecommunications International and Hutchison Telecommunications Hong Kong Holdings Limited, is the first global 3G operator, with licences in 9 countries¹. Our 3G services were first rolled out in March 2003. The HWL Group had over 25 million 3G customers globally and close to 17 million in Europe as of 12 August 2009.

Summary

The **3** Group strongly supports the ERG’s conclusion that bill and keep (BAK) charging arrangements offer the best long term interconnection regime for Europe. The **3** Group has for some years been calling for a change in the interconnection regime to (i) remove the competition distortions resulting from the current system of termination rates and (ii) align telecoms with the internet recognising that these technologies are increasingly direct competitors.

The ERG is correct to conclude that moving to BAK will benefit consumers and overall welfare. The current system of termination rates distorts competition and harms consumers. The Commission recognised the competitive distortion in its recent Recommendation², which, if correctly implemented by national regulators, will lead to much lower fixed and mobile termination rates (FTRs and MTRs).

However, the convergence of telecoms and the internet will require regulators to take the additional step from low termination rates to zero termination rates (BAK). Convergence means that telecoms and internet services are becoming direct substitutes for each other. It will be unsustainable to have different interconnection arrangements for competing services.

Given the benefits to consumers from zero termination rates, the absence of insurmountable hurdles and the need to have a single interconnection regime for telecoms and the internet, the ERG is correct to conclude that BAK is the most attractive interconnection regime for the future.

Benefits of BAK

This section summarises the benefits from moving to a BAK regime from the current system of termination rates (Calling Party’s Network Pays (CPNP)).

¹ Australia, Austria, Denmark, Hong Kong, Ireland, Italy, Macau, Sweden and the UK.

² Commission Recommendation on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU, 7 May 2009.

Removal of competition distortions

The 3 Group has for some time been explaining to regulators the competition distortions and consumer harm that arise from the system of MTRs in Europe. In previous submissions to the ERG and the Commission, the 3 Group has explained in detail the way the current system of high termination rates in Europe distorts competition. In particular, high termination rates:

- provide incentives to strategic and inefficient pricing at the retail level by large operators to the detriment of small operators (on-net/ off-net price discrimination);
- lead to significant financial transfers from small to large operators;
- distort competition between fixed and mobile operators;
- distort convergence between telecommunications and the internet;
- delay the introduction of new services and distort tariff innovation; and
- keep retail prices high.

These points are supported by recent studies, which have demonstrated the potential for large firms to use high MTRs, and on-net/ off-net price discrimination, to distort competition.³ A key insight of these studies is the role of call externalities. The studies have shown that a combination of high MTRs and the call externality enables large networks to engage in on-net/ off-net price discrimination to the detriment of their smaller rivals. On-net/ off-net price discrimination deters customers of large networks from making calls to a small network, thus reducing the value of that small network to potential subscribers. On-net/ off-net discrimination also creates so-called ‘tariff mediated network externalities’,⁴ which make large networks more attractive to subscribers. When on-net calls are priced below off-net calls, *ceteris paribus*, subscribers to large networks will experience lower average call charges than subscribers to smaller networks, since more of their calls are made on-net. Moreover, the traffic between a small network and a large network will not be in balance, even under a so-called “balanced calling pattern.”⁵ This has a further negative effect on the competitiveness of small networks because it creates a permanent “access deficit”, whereby the smaller network’s profits from termination charges are significantly reduced, while the wholesale charges it pays to larger networks remain constant, or decrease only slightly. With symmetric MTRs this results in a transfer of profit from small to large operators.

³ Relevant studies include: Jeon, Laffont and Tirole (2004) “On the Receiver Pays Principle,” *RAND Journal of Economics*, 35, 85-110; Armstrong and Wright “Mobile call termination in the UK” *UCL* September 2007; Calzada and Valletti (2007) “Network Competition and Entry Deterrence,” *Economic Journal*, forthcoming; Hoernig “On-net and off-net pricing on asymmetric telecommunications networks” *Information Economics and Policy*, 19(2), 171-188; Cabral “Competition and Regulation in Wireless Telecommunications: A Dynamic Perspective,” New York University, forthcoming; Berger (2005) “Bill-and-Keep vs. Cost-Based Access Pricing Revisited,” *Economics Letters*, 86(1), 107-112; Harbord and Pagnozzi “On-net/ off-net Price Discrimination and ‘Bill and Keep’ vs ‘Cost Based’ Regulation of Mobile Termination Rates” forthcoming; Parcu and Manganelli “Powerless Monopoly: call termination and new entrants” *Mercato Concorrenza Regole*, 2007.

⁴ Laffont, Rey and Tirole “Network competition: II. Price discrimination” *RAND Journal of Economics*, 29(1), 38 – 56.

⁵ That is, if all consumers would call each other with the same probability in the absence of tariff differentials.

The presence of the call externality and the possibility for large networks to set prices strategically to harm their smaller rivals has led these studies to conclude that optimal termination rates are below cost, with some studies concluding that the optimal solution is to have no termination rates.⁶ The incentive to set high off-net tariffs does not disappear with termination rates below cost, but they become more difficult to sustain and are less damaging to the new entrant because it can respond with lower off-net prices.

In calling for a change in termination rate policy, the immediate concern for the 3 Group has been to remove the competitive distortions to enable it to compete on an equal footing with incumbent mobile operators. One way of removing those distortions is to have much lower termination rates based on the incremental cost of providing termination.⁷ This is the approach that the Commission set out in its recent Recommendation. A proper application of this approach would lead to significantly lower MTRs.⁸

High MTRs also distort competition between fixed and mobile operators. This is evident in the 'home zone' services that some mobile operators offer. These mobile services allow call origination and call termination at fixed prices within the customer's home zone. In this way mobile operators can offer cheaper fixed termination rates to those customers who are price sensitive whilst continuing to charge much higher mobile termination rates to customers who are not. Mobile operators' GSM Gateway products create similar arbitrage opportunities by allowing corporate customers to make on-net calls at low rates by avoiding call termination charges.

These services that substitute mobile calls for fixed calls are already showing the distortions from having mobile termination rates much higher than fixed termination rates. They also raise questions about the correct treatment of dual fixed and mobile handsets. These services allow a call to be terminated via a fixed network and via a mobile networks and can, without the knowledge of the caller, switch between the two. In those circumstances, it is not always clear which termination rate applies.

For all of these reasons, the 3 Group has urged regulators to adopt zero termination rates (that is, BAK) as the long term interconnection arrangement. BAK satisfies the recent economic studies which, as noted above, have concluded that welfare maximizing termination rates are likely to be below cost. It also removes the competition distortions between mobile operators and between fixed and mobile operators. Equally important, however, is that convergence of telecoms and the internet will require both technologies to have the same interconnection arrangements.

The remainder of this section expands on the merits of BAK and, in particular, (i) why BAK is likely to enhance welfare; (ii) the arguments that BAK will harm consumers are not valid; (iii) the need for a single interconnection arrangement with converged telecoms and internet services; and (iv) the benefits to the regulatory regime.

⁶ See, for example, Harbord, David and Pagnozzi, Marco (2008): "On-Net/Off-Net Price Discrimination and 'Bill-and-Keep' vs. 'Cost-Based' Regulation of Mobile Termination Rates."

⁷ An alternative is to have asymmetric termination rates such that smaller operators receive a higher per minute rate to offset the competitive disadvantages they face in a high termination rate system.

⁸ Estimates based on cost modelling undertaken by 3UK show the Commission's methodology would produce MTRs of under 1 ¢cent per minute.

Welfare enhancing

As well as removing the competition distortions highlighted above, interconnection based on BAK will directly benefit consumers through:

- enabling flat rate access pricing and large bundles of minutes;
- lower average retail prices, leading to higher average usage; and
- removing disincentives to innovate.

High MTRs prevent the emergence of flat rate access pricing and of large bundles of minutes. The existence of high per minute termination charges means that, in the words of the draft Common Position, there is a “cost risk” in offering flat rate access tariffs. This “cost risk” is eliminated by BAK, thus making it easier for operators to offer flat rate access tariffs and large bundles of minutes. The evidence from sectors where flat rate access pricing is available, such as fixed broadband and some fixed telephony, shows strong consumer demand for such tariffs.

As the ERG notes, termination charges tend to set a “floor” on call prices. The removal of a floor to prices and the ability to offer flat rate tariffs mean that average prices for making calls are likely to fall following a move to BAK. This will lead to higher average usage. Comparisons with countries that have low or no MTRs show that those countries have lower average retail prices and higher average usage of mobile phones. Indeed, the 3 Group’s experience of BAK in Hong Kong is that it has resulted in low retail prices for mobile services and high usage. For this reason, the 3 Group shares the ERG’s conclusion that a move from CPNP to BAK is likely to benefit consumers and be welfare enhancing.

Further, BAK will remove the disincentives on incumbent operators to innovate that exist with high MTRs. This can be tariff innovation such as flat rate access pricing, but it is also innovation in new services. The 3 Group offers VoIP and Instant Messaging (IM) but few other operators do so. Most mobile operators discourage their customers from using these services by making them difficult to use, trying to block them or threatening to terminate the customer’s contract. The reason for this is that VoIP and IM bypass call termination and so mean a loss of lucrative termination revenues.

For all of these reasons, consumers will benefit from a move to BAK and overall economic welfare will be enhanced.

Alleged detrimental effects of BAK

The 3 Group is aware that some operators, notably the large European incumbent mobile operators, have sought to demonstrate detrimental effects from BAK. Their arguments seem to be that reducing MTRs will remove a source of revenue from the mobile industry and this will (i) lead to higher prices especially for low users, which will (ii) reduce mobile ownership, again especially amongst low users, and (iii) reduce incentive of mobile operators to invest. These alleged detrimental effects cannot be substantiated.

These arguments are based on the so-called “waterbed effect”, whereby a reduction in MTRs will inevitably result in retail prices rising to compensate for the loss of termination revenues. This argument rests on the idea that there is an unchanging lump of network costs which are invariably recovered from other charges (that is, the amount of “water” in the waterbed is fixed and

constant). If true, it would mean that there is no potential for changes in overall welfare from reducing MTRs but simply a redistribution between different groups of customers.

For this argument to be correct, a number of extremely strict assumptions must hold: (i) the level of MTRs must have no effect on the degree of competition; (ii) there can be no further scope for any efficiencies and no scope to develop innovative services which can also contribute towards common cost recovery; and (iii) the volume of traffic must be broadly invariant (that is, price inelastic) such that changes in the regulated rate simply mean higher per minute recovery elsewhere. These assumptions do not hold in practice.

The 3 Group does not agree that the level of MTRs has no effect on the degree of competition. For the reasons explained above, the current system of MTRs leads to competition distortions. Remove those distortions and competition will become even more effective. If an interconnection system is imposed that enables all operators to compete on equal terms then competition will drive down retail prices through incentivising additional efficiencies. In addition, as the ERG correctly identifies, if the common costs currently recovered from regulated termination rates must instead be recovered from retail charges, then this will expose such costs to competition and hence incentives to greater efficiency.

As well as increasing competition and incentives to efficiency, a BAK system will lead to increased call volumes. As the ERG's analysis indicates, lower MTRs lead to higher usage. The greater competition and removal of the floor to retail prices will also lead to lower average prices, which will further increase total call volumes. Greater call volumes mean that a lower per minute contribution is required to cover the same amount of fixed and common costs. Therefore, retail prices will not need to rise if common costs are not recovered from terminating minutes. Additional revenue streams from new services (for example, mobile broadband) will also provide alternative sources of revenue to contribute towards common costs.

One version of the waterbed argument is that operators will be forced to charge for incoming calls at the retail level. The ERG also seems to believe that BAK at the wholesale level is inevitably associated with RPP at the retail level. RPP is clearly a deeply unpopular idea in Europe and would represent a significant retail upheaval. However, it would be odd for an operator to introduce RPP tariffs given the likely consumer reaction and the fact that there are alternative ways in which price structures could be changed (for example, increasing fixed charges or reducing handset subsidies) which would be more acceptable to operators. The 3 Group does not accept that price increases are a necessary result of BAK but, even if they were, operators in Europe are unlikely to introduce RPP.

Some operators have argued that the rebalancing of retail tariffs that will occur following the introduction of BAK will make low usage tariffs relatively more expensive. They argue, such tariffs are profitable only because of incoming revenues from termination charges and, therefore, removing the termination revenues means that the retail prices must increase (either retail call prices or the cost of handsets). Given that these tariffs are, by definition, sold to more price sensitive consumers, this will mean that some low usage customers will decide not to purchase mobile services anymore and hence overall levels of subscription will fall. The ERG seems to agree that this may arise to some extent. As explained above, the 3 Group does not agree that BAK will force operators to increase retail prices. In any event, the use of high termination rates to provide a cross-subsidy for low income users is economically inefficient. It would be far better to target a direct subsidy at those users who require it.

The opponents of BAK have sought to use international comparisons to substantiate their claim that BAK results in lower penetration of mobile services. These comparisons should be treated with caution. First, the relevant measure of penetration should be numbers of unique mobile subscribers (not the number of active SIMs which is the more usual metric in use in Europe).⁹ Further, slower growth in mobile subscriptions (which is the only conclusion that can be drawn from comparisons with BAK countries) is a different matter to customers actually deciding they no longer need a mobile once they have one. There is very little evidence on how low-usage customers would actually react to changes in the structure of their prices, assuming price increases would occur. For example, handset subsidies could be reduced which may lead not to a lower overall level of subscriptions but simply less frequent upgrading. Fundamentally, the incremental costs of maintaining customers on the network is very low, which suggests that operators will find alternative ways of charging low usage customers so that they do not leave the network. There is already significant tariff innovation, such as SIM-only deals, which means that low usage customers will continue to be served.

When considering incumbent operators' arguments about the detrimental effects of BAK, the ERG should recall that these operators have previously argued in market reviews that lowering MTRs would lead to higher retail prices, customers paying to receive calls, customers giving up their mobile phone subscription or a combination of these.¹⁰ MTRs have subsequently decreased markedly and none of these effects has materialised. Further, some of these operators have supported lower termination rates, including BAK in other jurisdictions where they are a new entrant.¹¹

The system of CPNP with per minute call termination charges is just one of the possible conventions for arranging interconnections. Other conventions include receiving party's network pays, mixtures of the two and no termination rates. There is no inexorable reason why regulators in Europe should be bound to set per minute termination rates according to cost models. Other interconnection arrangements exist in other parts of the world and are consistent with vibrant telecoms sectors. Mobile operators in countries where CPNP is not followed are able to finance their networks and retail strategies, showing that there is no requirement to have termination rates as a source of funding for the industry.

If, however, some operators, for whatever reason, continue to believe the mobile sector requires a subsidy from fixed operators, then they should be explicit about that. Any subsidy should be clearly identified as such and it should be paid and funded in a way that avoids harming competition.

Convergence of telecoms and the internet

An important motivation behind the 3 Group's support for BAK has been the convergence of telecoms services with internet services.

⁹ Lower SIM penetration may actually be more efficient if, for example, there is multiple SIM ownership because of high off-net tariffs.

¹⁰ See for example the 2002 Competition Commission inquiry into mobile termination rates in the UK.

¹¹ Vodafone has sought zero termination rates in Qatar (see ictQatar Interconnection and Access Dispute between Vodafone Qatar QSC and Qatar Telecom (Qtel) QSC) 10 February 2009, para 8) and proposed BAK in New Zealand.

As switched telephony converges with the internet the current termination rate system will become unsustainable. It is inevitable that the telecoms world will adopt the internet charging principles of peering and transit; it is simply a matter of timing. In the long run two different charging regimes cannot exist together. The per minute call charges that are a consequence of high MTRs will be undermined by VoIP, which has no incremental cost for the consumer. It is most unlikely that the internet will adopt the European telecoms system of termination rates. The WIK study on the future of IP Interconnect concluded that, in the short term, some operators will try to block the evolution to IP.¹² It is increasingly the differences in regulatory treatment of the services and not the underlying technology that is driving commercial behaviour and holding back innovation. Regulators need to remove the barriers to convergence, one of which is the current system of regulated termination rates.

Aligning the telecoms and internet interconnection regimes is part of a wider need to ensure that future regulation is neutral between telecoms operators and internet services. Currently telecoms operators are highly regulated whereas internet service providers are largely unregulated. With convergence these service providers will compete. Unless regulation is neutral between them, there will be a distortion of competition.

Reduced regulatory costs

Moving to BAK would also represent a significant deregulatory step, which would lead to lower regulatory costs for the industry as a whole and greater regulatory certainty. The current system of market reviews with cost modelling, determination of efficient costs and appropriate glide paths and the inevitable appeals, imposes significant costs on regulators and operators and gives rise to regulatory imposed uncertainty as to future revenues and costs. This is not to say that BAK will completely remove the need for regulatory intervention. There may still be interconnection disputes in the future. However, it will remove a significant element of the current regulation of termination rates.

Implementation of BAK

This section deals with the outstanding concerns that need to be addressed when moving to a BAK regime.

Defining the points of interconnection

The ERG notes that it is important to define the minimum number of points of interconnection (PoI) for operators to participate in the BAK regime. The 3 Group agrees that it is important to ensure all participants in the BAK regime have made a sufficient investment to avoid free riding (such as the possibility of ‘hot potato’ routing). For mobile operators, ‘hot potato’ routing is less relevant because interconnection will tend to be at the core network level and cannot be at lower levels, because the originating operator does not know the location of the call recipient. In this sense any mobile to mobile call tends to be a *de-facto* hot-potato routed call.

¹² The Future of IP Interconnection: Technical, Economic, and Public Policy Aspects, WIK Consult, 28 January 2008. WIK concluded that lower MTRs will be required with the evolution to IP interconnection.

Quality of service

The 3 Group does not believe BAK will lead to problems in ensuring quality of service. As far as the 3 Group is aware, countries in which BAK operates, such as Hong Kong, have not experienced greater quality of service problems than countries with termination rates.

Unwanted calls

The 3 Group does not believe that voice spam is likely to be any more of a problem under BAK than it is already for fixed networks with existing low termination rates. There are, today, occasional complaints about unwanted or automatically generated (and sometimes 'silent') calls to fixed numbers. These are dealt with through the existing regulatory and enforcement powers that national regulators have. In addition, it is possible for networks to implement filtering and blocking mechanisms to reduce voice spam, such as is the case in North America.

Traffic from outside the BAK domain and arbitrage possibilities

The ERG raises the possibility that calls from outside the BAK area could be re-routed to take advantage of the BAK system.

Unless BAK is universally adopted, operators will need to set two termination rates: a zero rate for operators in the BAK regime and a non-zero rate for calls originating from operators outside the BAK regime. To apply the correct termination rate, the terminating and any transit operator will need to be able to identify the ultimate source of the call. This requires the ability to carry out 'A-number' analysis (which enables an operator to identify the network/ country from which the call originated) and probably also 'trunk group' analysis (which enables an operator to identify the network from which it received the call). Some operators already have this functionality because it confers benefits to the operator, such as the ability to analyse incoming calls for marketing purposes. Implementing 'A-number' analysis would typically cost less than €1 million per operator.

The 3 Group accepts that even this analysis is unlikely to be fully effective. This is because operators outside the BAK regime will have the incentive to disguise their calls so as to take advantage of the zero termination rates inside the regime. The risk can be mitigated with contractual controls and monitoring, although this is unlikely to eliminate it entirely.

The incentive on operators outside the BAK regime is greater the greater is the difference between the termination rates for calls coming from inside (zero) and outside the regime. If the termination rate on calls from outside the BAK regime is low, as should be the case when the Commission's Recommendation has been properly implemented, the incentive to seek arbitrage opportunities (which, despite the term, are not generally without cost) will be much diminished.

It would also be wrong to believe that BAK will lead to arbitrage problems whilst CPNP is free of them. The current CPNP system has its own arbitrage problems that BAK will remove.

GSM Gateways allow users to make a call from a fixed line to a mobile with the call routed directly via a GSM link to the mobile network so as to avoid paying a termination charge. It converts a call to the mobile network into an on-net call. GSM Gateways are offered by third parties (often illicitly) but also often by the mobile operator itself as a way of offering attractive fixed to mobile call rates to corporate customers. With BAK the possibility and need to avoid high MTRs disappears.

A further arbitrage opportunity that would be eliminated by BAK is “international bypass”. International bypass operators have mobile number ranges allocated to them (or sub-allocated by a mobile number range holder), and receive termination rates at the mobile operator’s rate without having a network. They offer international calls to mobile customers for no more than the cost of a standard domestic mobile call (which may well fall within a customer’s bundle of minutes). The bypass operator then charges the mobile operator its full MTR but pays a much lower rate to an international operator for terminating the call. If the bypass operator’s MTR were reduced then the relative cost of international termination would be greater and there would be a much reduced margin for the bypass operator.

Finally, although the ERG is right to note that adopting BAK would lead to a net outflow of payments from the EU, it is also worth reiterating that a number of significant economic areas have BAK already (such as North America, Hong Kong and Singapore), and others (such as India and China) already have mobile termination rates much lower than those seen in the EU. Of course this means that European operators have benefitted from net inflows from these countries. Further, moving to BAK will send the right signals to countries outside these areas that continue to maintain high termination rates that they too should look to reduce their termination rates.

The transition to BAK

The ERG notes that the convergence of networks, the transition to NGN and the growth of data services all cause the per minute costs of voice termination to fall. The per minute costs of termination have been falling as traffic volumes have increased and, for an incumbent operator at scale, are now significantly below the level of MTRs in most EU Member States. This is shown by recent estimates of the cost of an efficient operator in Austria (2.01 €cents) and Sweden (2.5 €cents) to mention but two. As noted above, the 3 Group’s own estimate of the costs of termination for an efficient operator at scale under the Commission’s methodology is under 1 €cent.

The ERG is correct to conclude that falling termination rates provides an opportunity to transit from CPNP to BAK. The market situations in different countries, the current levels of termination rates and their rate of decrease will all determine the appropriate timing of transition from CPNP to BAK. Consequently the timing will differ from country to country. In addition, the transition from CPNP to BAK will need to be carefully managed by national regulators so as not to distort competition.

This is relevant both to the implementation of the Commission’s Recommendation and any future move to BAK. In its Common Position on Termination Rates¹³, the ERG concluded that an asymmetry could be justified (i) to take account of exogenous cost differences; (ii) to take account of the lower economies of scale of a late entrant; and (iii) during the transition before MTRs are at cost. These considerations remain. There is no reason to assume that the exogenous cost differences will diminish over time, unless the underlying causes of the differences are removed (such as through spectrum “refarming” and appropriate redistributions of legacy spectrum). Similarly, the 3 Group has previously cited research that shows it could take 10 to 20 years for a new entrant to reach a 20% market share.¹⁴ Even though the ERG points to decreasing

¹³ ERG’s Common Position on symmetry of fixed call termination rates and symmetry of mobile call termination rates, adopted on 28 February 2008.

¹⁴ First mover advantages in der mobilkommunikation: der einfluss des markteintrittszeitpunkts auf die marktanteilsentwicklung, Dr Hannes Leo.

MTRs, across the EU they were still at an average of 6.4 €cents as of 1 July, significantly above the true cost faced by an incumbent operator at scale. For these reasons, national regulators must continue to follow termination rate policies that remedy the competition distortions and enable fair competition.

In particular, national regulators must be careful to ensure that as termination rates decline they do not create financial transfers from small late entrant to incumbent operators. Regulators must also be careful to ensure their termination rate policies and their glide paths recognise the higher costs faced by small operators that are not yet at scale, and the continued potential for distortionary on-net/ off-net tariffs while termination rates remain above cost. This points to a continued need for asymmetric termination rates while rates remain above cost. The size and duration of the asymmetry will need to be determined at the national level.

Overall, the **3** Group agrees with the ERG that national regulators should be setting glide paths as part of their current or next market reviews that are consistent with the objective of moving to BAK. This would imply Member States being in a position to begin the move to BAK in the period 2012 – 2015.

Impact on operators

Termination charges are wholesale payments between operators. Reducing or eliminating termination payments does not imply an equivalent impact on profit because there is a loss in revenue but also a reduction in costs. Overall, within the whole telecommunications system, net termination payments sum to zero. Mobile operators are likely to suffer a net reduction in profit because their termination rates are higher than those of fixed operators. Amongst mobile operators the impact will differ, with some suffering a net reduction in profit, whilst others will gain from the move to BAK. In the **3** Group's experience, smaller, new entrant operators typically suffer a traffic imbalance and, therefore, will be net beneficiaries from BAK. However, the main benefit is the removal of competition distortions, which will mean that small operators can compete with the large incumbents on an equal footing. Of course, this means that large incumbent operators will, in general, suffer a net revenue loss and will also face a more competitive market as barriers to entry and expansion are removed.

ANNEX: Responses to questions

Question 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?

Yes. It is not sustainable to have different prices for services that are direct substitutes. Customers will quickly migrate to the service with the price that best suits them. Telecoms services such as voice and SMS typically have incremental charges. With convergence they will compete directly with VoIP and instant messaging (for example), which are incrementally free. If telecoms operators maintain incremental charges for voice and SMS they will face a migration of their traffic and revenues to the incrementally free internet substitutes. The only way to prevent this is to impose barriers to the use of the internet services. We see that happening already, where many mobile operators prevent their customers from using VoIP and instant messaging services.

Question 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?

The separation of transport and service layers allows content and application providers to offer services that compete directly with those offered by the network operator. This will increase competition and will lead to new innovative services.

Question 3: 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)?

For mobile networks it is unnecessary to define points of interconnection. The terminating operators will always receive the calls in the core network and route them, via the HLR, to the cell in which the mobile number is currently located.

Points of interconnection (PoIs) are unlikely to be an issue in fixed networks in the near future. We are increasingly seeing fixed operators running their networks with a limited number of switches. For example, in Austria, alternative fixed operators are already running networks with a flat infrastructure and serving the whole country from two switches. In addition, the incumbent operator has started migrating to an all IP network and will serve all its fixed line customers with two switches. The second switch is only needed for redundancy.

When interconnection is implemented as IP, the routing of IP packets and the exact PoI(s) that is/are used will be determined by the IP layer and the protocols that establish routes to other networks.

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

The 3 Group agrees with the ERG's conclusion that compared to the current system of CPNP, BAK is likely to lead to lower average retail prices and higher average usage. However, the 3 Group does not see an inexorable link between BAK at the wholesale level and RPP at the retail level. BAK is consistent with different retail pricing structures, including incrementally free, CPP and RPP. The 3 Group does not anticipate a fall in unique mobile users (even if SIM penetration falls).

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

BAK will reduce regulatory costs for all parties (regulators and operators) and reduce regulatory uncertainty, by removing regulatory intervention imposed around future costs and revenues. Although the Commission's Recommendation reduces uncertainty by describing the methodology to be used, there will still be discussion about the precise parameters to employ. BAK goes further to reduce uncertainty by removing debates about the cost of termination altogether.

Question 6: 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.

The 3 Group does not believe unwanted calls will be materially greater under BAK than is already experienced by fixed network customers. Filtering mechanisms together with enforcement by regulators should be sufficient to deal with this problem.

Question 7: How do you assess the quantitative relevance of call and network externalities?

The 3 Group believes the network externality is exhausted in most, if not all, Member States, that operators in any event have an incentive to offer tariffs to attract customers on to their network and that a surcharge for network externalities is an inappropriate regulatory tool that artificially inflates retail prices to the detriment of fixed and mobile subscribers. In its 2008 report on MTRs, the UK's Competition Commission examined the basis for taking account of the network externality when setting MTRs and reached the following conclusion:

*"...we remain of the view that the NES [Network Externality Surcharge] is not a proportionate regulatory mechanism for achieving its ends, that there is no longer a sound case for the NES, and that its inclusion within the MCT price control was an error."*¹⁵

CPNP works on the premise that all of the benefit of a call is captured by the calling party, and thus the receiving party derives no benefit from being called. This is obviously a false premise. The benefit that a receiving party gets from a call varies from call to call but on average will be greater than zero. Therefore, some sharing of the costs of a call between the calling and the receiving party is appropriate. Taking account of the benefit to the receiving party (the call externality) means that optimum termination rates are likely to be below the cost of providing termination.

Question 8: 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.

Moving from high termination rates to BAK would remove a barrier to entry and expansion for small and late entrant operators. The current CPNP system distorts competition in favour of large operators by enabling them to sustain on-net/ off-net price differentials that harm smaller operators and lead to traffic imbalances. Moving to BAK would, therefore, enable the 3 Group businesses to compete better against large incumbent operators. The 3 Group expects BAK would enable it to offer larger bundles of minutes at lower average call prices and that this would

¹⁵ Paragraph 4.160, Mobile phone wholesale voice termination charges, Competition Commission, 16 January 2009.

increase the volume of call minutes made by customers. BAK would also incentivise operators to offer new services (such as VoIP and Instant Messaging). It would increase the level of competition in the industry and lead to greater cost efficiency as large operators would lose their monopoly revenues and be forced to compete more vigorously.

Question 9: 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?

There is a possibility that there may be a net outflow of wholesale charges to operators outside the BAK domain. Of course, European operators have benefitted from net inflows from countries that already have BAK or much lower MTRs. It is likely that countries inside a BAK or low MTR domain will start exerting commercial and regulatory pressure to reduce net payment outflows over time.

It is possible to operate two termination rates: one for calls from within the BAK regime and one for calls originating from outside the BAK regime. Applying this effectively would require ‘A-number’ analysis and possibly ‘trunk group’ analysis also, which may involve some investment cost, but which has other benefits to operators. Contractual controls can also limit the scope for arbitrage, but is unlikely to be fully effective. Of course, if the difference between the termination rates applied to calls from inside the BAK regime (zero) and to calls from outside the regime is small, there will be a reduced incentive to seek arbitrage opportunities.

Since the number of calls outside the EU is small as a proportion of total traffic volumes, any subsidy flowing outside the EU will be immaterial. However, within the EU, there should be co-ordination between national regulators to ensure those countries with high termination rates bring them down quickly to levels consistent with the Recommendation and then BAK, so as to avoid subsidy, especially between frequently used routes (for example, Germany and Austria).

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

Inevitably migrating from one interconnection regime to another will require changes to be made. The 3 Group does not expect insurmountable implementation problems, but nevertheless, regulators and the industry will need to work together to implement solutions to the implementation changes that arise.

Question 11: Does the draft CP miss any other relevant issues?