

6 Views of Cellnet

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Introduction

6.1. Cellnet provided us with detailed views and other evidence principally in five written submissions, in its responses to our questionnaire and at three hearings (including the joint hearing referred to in Appendix 1.1). This evidence related to the three references made by the DGT relating respectively to the termination charges levied by Vodafone and Cellnet and to BT's retention on fixed-to-mobile calls. As explained in Appendix 1.1, the investigation for all three references was conducted by the same Group of members in parallel, and evidence was not sought separately for each of them, but rather all evidence was considered in relation to each reference where relevant. In this chapter we summarize Cellnet's key arguments on the major issues relevant to this inquiry.

Competition in the mobile telecommunications industry

6.2. Cellnet submitted that UK mobile phone services were highly dynamic and innovative and subject to increasingly intense competitive pressures. Call prices from mobile phones had fallen and would continue to fall as a result. This intense competition provided the context in which Cellnet set both its outbound prices and its inbound termination charges.

6.3. Cellnet said that the four MNOs, with their six mobile networks, competed aggressively with each other to acquire and retain subscribers. In particular, they were continually devising new tariff packages to try to gain a competitive advantage. 'Cellnet First', which took effect on 1 July 1998, was an obvious example of this type of competition.

6.4. Any MNO not constantly innovating, and doing so successfully, was very quickly left behind. This was reflected in the volatility of the MNOs' shares of market growth. The sector was heavily driven by 'comparison shoppers' actively seeking value from new tariffs or other forms of communication including fixed-link phones, fax, e-mail and pagers (see below). Cellnet supplied details of its churn and migration levels (see paragraphs 4.90 to 4.92). It pointed out that nearly one-half of its customer base made a decision about their mobile phone package in 1997/98. Almost one in every three Cellnet subscribers disconnected and one in four kept their number whilst migrating or upgrading their digital handset. Cellnet said that no matter how the numbers were analysed, it had to find nearly 1 million new customers in 1998/99 merely to maintain the size of its customer base—to minimize loss of market share it must clearly attract well over 1 million.

6.5. Cellnet considered that Orange and One2One now competed as equals with the original two MNOs. They had together already secured 26 per cent of all UK subscribers and they accounted for more than half the total growth in the number of subscribers in 1997/98. One2One, in particular, had been extremely successful in growing its customer base, [*Details omitted.*
See note on page iv.]

6.6. In addition dealings with customers were managed by entrepreneurial suppliers who all put pressure on network operators to provide competitive products. There were some 40 service providers (80 per cent of Cellnet's sales came from 'tied' service providers) and over 10,000 retailer/dealer outlets all actively competing for business. Moreover handset manufacturers launched their own marketing initiatives designed to position their brands and create customer loyalty for their products, independent of the networks. The customer base was characterized by a desire to change handsets ever more frequently, as much for fashion as functionality.

6.7. Mobile industry fixed and common costs were high and customer numbers were growing rapidly. Attracting new subscribers was vital to allow unit costs and charges to fall. As a result, competitive packages and innovation were increasingly focused on marginal, more price-sensitive customers.

6.8. The overall effect of this competitive activity had been expansion of the mobile networks, strong growth in demand, a succession of new products and services and a fall in average charges for outbound calls of around 20 per cent in the past two years (around 25 per cent in real terms). Cellnet believed that this evidence clearly demonstrated the existence of effective direct competitive pressures on outbound call charges.

Competitive pressures on termination charges

6.9. Cellnet considered that there were adequate, and growing, competitive pressures on inbound termination charges and that these charges were linked to charges for outbound calls which it had shown were set in a highly competitive environment. Average retail prices of calls to and from mobiles were about the same and had fallen broadly in line with each other.

6.10. In Cellnet's view the strongest evidence of the competitive pressures on termination charges was empirical. Cellnet's termination charges had been falling dramatically—by 50 per cent between July 1996 and August 1998. Cellnet's contract with CWC committed Cellnet to further indexation and similar reductions with BT were envisaged (see paragraph 6.58). Prices had fallen further than specified in the indexation clause in Cellnet's previous long-term interconnect agreement with BT which expired in August 1997.

6.11. In setting termination charges Cellnet was subject to a variety of competitive pressures which defined a range within which Cellnet believed the charges could be set. The ceiling to this range was set by the need for charges to be competitive with other MNOs; for calls-to-mobile to be competitive in relation to other forms of communication; and to avoid prices for inbound and outbound calls

becoming so far apart as to encourage 'call-back' activity (see paragraph 6.15). If, on the other hand, charges were to be set below the floor of the range, this would lead to reverse call-back activity. Since, in addition, revenue from inbound calls would be artificially depressed, Cellnet would need to seek to recover a greater proportion of its revenue from subscriptions and outbound call charges in order to compensate. However, any move away from an optimal balancing of the different tariffs could reduce subscriber numbers and hence Cellnet's ability to reflect economies of scale in lower charges.

6.12. Within the range determined by market forces Cellnet stated that termination rates were a matter for commercial negotiation. In these negotiations Cellnet also took into account a number of other factors including the requirement to recover the overall costs of its business and achieve an appropriate return for investors; non-discrimination between interconnecting networks; and, where compatible with commercial pressures, the need to meet concerns for termination rates to fall along with other UK telephony prices.

6.13. The absence of a direct relationship with inbound callers meant that the pressures on inbound charges were more subtle and varied and, in the main, less direct than those on outbound charges. However, the need to acquire and retain subscribers which exerted direct pressure on outbound charges also underlay many of the indirect pressures on inbound charges. The interaction of these pressures occurred in a highly complex way and affected the conduct both of inbound callers and of subscribers.

6.14. As to the specific nature of these indirect pressures, Cellnet pointed out that substitutes existed for calls-to-mobile. Options included calling a fixed line (virtually all mobile phone subscribers also had a fixed line), sending a message to a pager, sending an e-mail or fax or leaving a message with another person. Around 9 per cent of Cellnet's customers voluntarily disconnected their mobile phone each year. These people still needed to be contactable, so they must believe they had appropriate substitutes. Such options would become more attractive if inbound prices were to move out of line with their prices.

6.15. Even if one or other of these options was not a completely effective substitute at the time of making the call, the caller could react to high prices by reducing call duration. One way to do this would be to ask the called party to call back. MNOs needed to discourage call-back activity as it would lead either to reduced revenue (where the call-back did not use the mobile network) or to inefficiencies due to re-use of call set-up capacity (where it did use the mobile network). It would also cause dissatisfaction among mobile-subscribing customers who would bear the cost of a disproportionate share of the telephone conversations in which they were involved. Cellnet told us that it could not put a figure on the degree of imbalance between incoming and outgoing call charges that would be necessary for it to start getting worried about call-back activity. The value both to potential and existing subscribers of contactability through mobile phone ownership placed a particular constraint on termination rates because, by contrast with tariffs for subscribers, MNOs were unable to set different tariff structures for different types of customer for termination charges. As MNOs sought to attract marginal and more price-sensitive customers, termination rates were driven down for all customers.

6.16. Because both inbound callers and subscribing customers could compare call costs across different networks, competitive pressure was brought to bear on incoming call charges through the choice of network exercised by a subscribing customer.

6.17. Cellnet said that it also had to take into account the need for broad parity with the rate of decline of fixed-to-fixed termination charges, particularly given the availability of substitutes for mobile phones. Further, individuals' experiences of calling a mobile phone were likely to influence their willingness to buy and use one: if they considered the price of calls-to-mobiles too high, they would be less willing to buy a mobile phone.

6.18. Cellnet commented that the forms of direct and indirect substitute were increasing. For example, two-way paging was being introduced; e-mail was becoming a standard business tool; corporate customized solutions were now becoming more viable for smaller businesses; a number of operators were trialling a bundled service of fixed and mobile calls; and other operators took rapid

advantage of any temporary arbitrage opportunities, such as international tromboning (see Chapter 4). Cellnet fully expected the pace of these dynamic pressures to increase.

6.19. Cellnet added that growing pressure for lower termination charges came from the FNOs, who wished to offer lower-priced calls-to-mobile in order to enhance customers' value for money and to encourage more call traffic. Such operators would also use any opportunity for arbitrage, no matter how artificial, and a 15p daytime rate for a call-to-mobile was by no means unheard of.

6.20. Cellnet told us that the vast majority of calls-to-mobiles were made by customers who were likely to be well-informed and with an incentive to cut costs. Over 85 per cent of calls-to-mobiles were made by businesses or the top 20 per cent of residential fixed-line users. In addition, according to BT, a single customer would typically call only three mobile numbers. Many incoming calls were also from customers forming part of closed user groups involving the relevant subscribers, such that the subscribers themselves paid some or all of the costs of the calls from those customers. A recent independent survey for Cellnet indicated that on average personal customers paid personally for 23 per cent of incoming calls received on their mobile phone, with members of their immediate family on average paying for a further 33 per cent of all calls. The survey also indicated that businesses expected to pay the fixed-line bill for 53 per cent of all incoming calls to corporate mobile phones, with a further 28 per cent paid for by customers or suppliers.

6.21. Cellnet submitted that the effects of the pressures on inbound charges needed to be assessed in the context of the commercial imperatives that drove the network operators. In particular, mobile telephony in the UK was a dynamic, rapidly growing market, requiring continual investment and exposure to risk. The long-term success of the operators depended on their ability to increase the number of their subscribers and the use that inbound callers as well as subscribers made of their networks. As indicated by churn data, however, a number of existing subscribers already found that, for them, the utility of a mobile phone was outweighed by its cost. The ability of the MNOs to achieve long-term success was both a function of, and dependent upon, their ability to reduce their unit costs so that they could reduce their charges.

6.22. Cellnet said that if charges for inbound calls were to be unreasonably high, this would deter people from making inbound calls and encourage them to communicate in the other ways it had described. It would also be a significant factor when people were deciding whether or not to become (or to remain) mobile subscribers, through the mechanism of closed user groups in which subscribing customers clearly took incoming call charges directly into account to the extent that they paid for all or part of the costs of the inbound calls they received on their mobile phone (see paragraph 6.20). In addition, even where individuals who made the majority of incoming calls to a mobile phone subscriber were not part of the subscriber's closed economic group, there were still important linkages between them. In particular, it was generally the case that those who made incoming calls would have a sensitivity to call charges similar to that of the subscribing customer, thus putting pressure on incoming and outgoing call charges to be similar (to avoid call-back and to ensure that those who decided to subscribe to a mobile phone service on the basis that they were prepared to pay outgoing call charges did not decide to cease owning a mobile phone because those they knew were reluctant to make incoming calls). As mobile phone ownership penetrated into the more price-sensitive, lower-volume, part of the population, so there was increasing sensitivity of those making calls to subscribers to the level of inbound charges.

6.23. Cellnet commented that, in consequence, if charges for inbound calls were to be unreasonably high there would be a reduction in the rate of growth of the subscriber base, the usage of the network and its utility to existing and new subscribers. This would run counter to the commercial imperative to reduce charges in order to increase revenue through the twin effects of increased subscriber numbers and larger call volumes.

6.24. Cellnet pointed out that, as well as responding to the market pressures described above, the MNOs had to negotiate interconnection charges with FNOs—who needed to be satisfied that they were offering their customers a value-for-money service. In addition to all the commercial and competitive pressures upon them, the MNOs also had to conduct their businesses within a regulatory framework overseen by OFTEL and the European Commission.

6.25. In Cellnet's view, although there was an insufficient statistical basis accurately to measure or analyse price elasticity or subscriber entry elasticity, such evidence as existed tended to support Cellnet's views and to demonstrate the existence of commercial pressures and incentives for operators to reduce charges (see paragraphs 4.194 to 4.196, 4.210 and 4.212).

6.26. In Cellnet's view, therefore, there were ample competitive pressures on incoming call charges and Cellnet rejected the DGT's notion that the MNOs enjoyed a bottleneck monopoly in terminating such calls. As it was not possible, from a purely theoretical perspective, completely to accept or reject either Cellnet's or the DGT's view of these competitive pressures, Cellnet considered it crucial that the two hypotheses be examined by looking at the available empirical evidence. Cellnet provided an analysis of this, looking at seven areas where its own views differed from the DGT's. Cellnet said that its analysis found that overwhelmingly the evidence supported its view that there were competitive pressures on incoming call charges and that these were linked to charges for outgoing calls. As a result, average retail rates in each direction were now at a similar level (22p) and had remained within around 10 per cent of each other over the past years. The linkage was therefore real, not merely theoretical, even if that linkage was an indirect one and might result in a degree of 'lag' due to the absence of a direct contractual relationship between MNOs and inbound callers.

Prospective competition

6.27. Cellnet believed it was undoubtedly true that competition was now much more intense than it was in the years before Orange and One2One entered the market and, moreover, that the competition was set to increase further. New technologies, such as General Packet Radio Service, UMTS and satellite, the convergence of mobile communications and Internet services, the development of mobile commerce and traffic management services, and the growth of international services were all bringing new players, new propositions and new competitive dynamics into the mobile industry.

Reasonableness of Cellnet's termination charges

6.28. Cellnet said it was important to appreciate that, proportionately, incoming calls made more intensive use of the mobile network facilities than outgoing calls, for several reasons related to the need to locate and reach the mobile phone (see Chapter 5). The fact that there was broad parity between Cellnet's current inbound and outbound charges demonstrated that Cellnet's termination rates were reasonable and appropriate.

6.29. Cellnet stated that it built and operated its network to convey call traffic. It raised its revenue from the charges paid by two customer groups—customers who subscribed to Cellnet's network and customers who made calls to phones on Cellnet's network. Subscribing customers accounted for 59 per cent of all call minutes on Cellnet's network, but contributed 73 per cent of Cellnet's total net revenue. By contrast, those customers who made incoming calls to Cellnet mobile phones contributed only 27 per cent of Cellnet's total net revenue but accounted for 41 per cent of all call minutes. Thus, in theory, termination charges could be higher, given the use that calling customers made of the Cellnet network.

6.30. Cellnet drew to our attention action taken following a parallel investigation by the EC's Competition Directorate-General, DGIV, in relation to termination charges. DGIV had formally notified Cellnet that it was proposing to take no further action in Cellnet's case. Cellnet said this indicated that the EC did not regard Cellnet's termination rates as possibly excessive or discriminatory and that it showed that, *prima facie*, the charges were reasonable.

6.31. With regard to the significant increases in the termination rates of Orange and One2One in 1997 (see Table 4.4), Cellnet said that these could not be taken to imply that termination rates were not subject to effective constraints. Orange and One2One had made clear at the joint hearing (see Appendix 1.1) that they had set especially low rates as an entry strategy and to reflect their early limited coverage (a lower proportion of inbound calls would reach the person called). One2One had told the hearing that it felt it appropriate to raise termination rates to a reasonable level once it had invested further and achieved greater coverage. Orange had also highlighted in its prospectus that it

would probably raise its termination rates following flotation. No general conclusion could be drawn from such temporary pricing behaviour on the part of Orange and One2One prior to the convergence of their termination charges towards competitive market rates as they became established.

6.32. Regarding the January 1998 increase in Cellnet's termination rate to CWC, Cellnet explained that Mercury had, since 1991, paid a charge to Cellnet that had been determined by OFTEL. Cellnet had always felt the charge to be unreasonably low, but that there was not sufficient traffic to warrant a challenge. Mercury's retail price remained a little lower than BT's—apparently following the same retail pricing principles as all other Mercury prices. In 1998 the DGT accused Cellnet of discriminating between the rates charged to BT and to Mercury. Cellnet felt it had no option but to renegotiate the rate charged to Mercury. By this time, incoming international traffic had become a significant part of Mercury's business, and it was paying the full termination rate for such calls to Cellnet. The renegotiation allowed it to pay the standard 5 ppm for these calls. Mercury also put forward competitive price and quality bids for the sale of private circuits and international outbound calls. All these elements in the round formed an agreement commercially acceptable to both Cellnet and Mercury. As a result, Cellnet's termination charges to all other operators would be at the same level from August 1998.

Cost-reflective pricing models

6.33. Cellnet told us that it set prices for all its services in such a way as to recover the overall costs of its business and earn a reasonable return. In this broad sense, prices were cost-reflective. Individual tariffs, however, were set by reference to market conditions.

6.34. Cellnet believed that price-setting on a formulaic cost-plus basis would be wholly inappropriate for a mobile network. The existence of a large proportion of fixed costs meant that inevitably there was a great deal of subjective judgment in allocating costs to particular services. The range of prices which might be justified on this basis was therefore extremely wide and highly sensitive to the precise cost allocation methodology used. Thus the cost assigned to a terminating call for 1997/98 could arguably range from zero (once the network had been established and a subscriber connected, the incremental cost of handling a call was negligible) to 33 ppm (since Cellnet's business was to supply call minutes—whether incoming or outgoing—its revenue should simply be raised evenly across all call minutes). In addition, in a sector as intense and dynamic as the mobile industry, it was impossible to forecast either unit costs or usage with any degree of confidence more than a few months ahead.

6.35. Cellnet believed that, putting such reservations to one side, it could nevertheless justify its termination charges in relation to FAC. It observed that its current average termination rate of 14.8 ppm was significantly below the estimate of its own FAC from any allocation model, including the MMC's own base model (see Chapter 5). Further, it believed that the particular approach which the DGT had adopted to FAC modelling had serious flaws. In particular, the OFTEL model assigned some 30 per cent of Cellnet's costs to an access service, whose definition was unclear, and whose allocated costs were not to be recovered from incoming call charges.

Access

6.36. Cellnet commented that many tariffs for individual mobile services contained a fixed fee and a variable usage charge. This was the most efficient tariff structure for a network industry with high fixed costs and low variable costs. It did not represent separate charges for 'access' and 'conveyance'. Any consideration of the issues related to the conceptual aspects of 'access' would quickly lead to the conclusion that defining 'access' was a highly complicated and theoretical exercise without any definitive answer. This point in itself made it unreliable as the basis for formulaic tariff setting.

6.37. Cellnet believed there were two bases on which a separate 'access' service might be justified:

- (a) as a separate service bought by customers:
- (i) there could be customers who subscribed to mobile phone services with no expectation of making or receiving calls, but simply to have the ability to do so, for example in an emergency;
 - (ii) more generally it seemed likely that there were low-use customers who attached a higher value to mobile phone ownership and to the ability to make and receive calls and a lower value to actually making calls. Cellnet's low-use tariffs reflected the preferences of these customers;
 - (iii) for higher-use customers, the distinction between 'access' and 'conveyance' was conceptually irrelevant. They were interested in the total tariffs they paid and how these related to the number and duration of calls they made and received;
 - (iv) that this was the case was evidenced by customer demand for bundled tariffs and, Cellnet said, prepay packages, both of which combined 'access' and calls in a single package purchased by the customer; and
 - (v) thus, while 'access' might be a separable service bought by a few customers, it was mainly hypothetical; and
- (b) as a separate service provided by the network:
- (i) this was more conceptually difficult to define. It implied a distinction between those assets put in place and costs incurred for establishing 'access' to the network, and those involved in actually conveying calls;
 - (ii) this involved defining what must be provided to allow 'access'. There were a large number of possible definitions, with widely differing implications for cost allocations;
 - (iii) for example, OFTEL's definition of 'the capability to make and receive calls' could be interpreted at one extreme to imply that all Cellnet's customers should at all times be able to make and receive any call. In the worst case, this would imply providing capacity across the network so that if all the subscribers were in the same location at once their calls could still be handled;
 - (iv) more realistically, it could be interpreted as saying that the current network configuration had been designed to deal with the realistic demands of the current customer base to make and receive calls, so that all costs should be allocated to 'access'. This would be consistent with the fact that the incremental costs of conveying a single additional call were virtually zero;
 - (v) alternatively OFTEL's definition could be interpreted as saying that 'access' was the capability to make a single call at any point on the network at any one time. Additional capacity provided to allow multiple calls to be handled would form part of conveyance; and
 - (vi) finally, the definition of 'access' used by OFTEL in applying its LRIC methodology to fixed networks implicitly defined 'access' as covering those elements needed to connect an individual customer to the network (in the fixed network this was the local loop). In a mobile network, this would be a small proportion of costs, covering only aspects of hand-set identification and location signalling.

These points linked the concept of 'access' as a service to customers with its use as an element within a cost allocation model. Depending on the view taken of the concept of 'access', the amount of costs allocated to it would vary enormously, from the entire cost of the network to a small proportion or none.

6.38. Cellnet added that a final point regarding the applicability of ‘access’ costs to tariffs concerned incoming calls. It was clear from the DGT’s Statement of March 1998 that when it referred to ‘the customer of the mobile network’ it meant only the subscribing customer. However, Cellnet had other customers—those who made calls to phones on the Cellnet network. They could not make these calls without getting ‘access’ to the Cellnet network. Therefore, even if ‘access’ could be identified as a separable service and costs allocated to it, it would be inappropriate to use this as a basis for artificially reducing the levels of charges on those making incoming calls to the Cellnet network.

6.39. Cellnet considered that the concept of ‘access’ to any network should be restricted to those network elements that were unique to the individual. In the case of a mobile network, this was the SIM card, plus a few lines of software on a database. As noted, this definition was the one used by OFTEL in the regulation of fixed networks. In addition the ‘minimum geographic network’ used by OFTEL as an outline definition of mobile access was not reflected in reality. This definition would mean that operators would build networks with possibly only a few base stations and perhaps only allowing a few thousand calls at any time. The networks that were actually being built were clearly very different and much more expensive.

Detailed cost allocations

6.40. Cellnet’s detailed comments on individual line items of cost in the three FAC models put to it are described in Chapter 5. Its views on the appropriate cost of capital are set out in Appendix 5.6.

Long-run incremental costs

6.41. Cellnet told us that it did not believe that the DGT’s approach to LRIC would provide a more appropriate basis than FAC modelling for assessing the reasonableness of termination charges (see Chapter 5). In particular, the approach of ‘equal proportionate mark-ups’ would result in a methodology close, in effect, to FAC, apart from replacing historic cost valuations with current cost valuations.

Cellnet’s efficiency

6.42. With regard to the statement by the DGT that, although Cellnet’s costs were higher than Vodafone’s, the DGT did not consider it appropriate for the customer to pay more because of Cellnet’s relative inefficiency, Cellnet strongly believed that it was efficient and that its termination charges should reflect its own costs, not those of another MNO. It said that it did not yet have the same economies of scale as Vodafone—if it carried Vodafone’s traffic and put in place the extra network to carry that traffic, then its costs would be close to those of Vodafone. A consultant’s report (see paragraph 5.132) showed that this level of extra ‘X-inefficiency’ (additional costs incurred by Cellnet to carry the same amount of traffic as Vodafone) was relatively small. Cellnet found it hard to understand how the concepts of ‘efficiency’ could be applied in any simple way when different MNOs had different market strategies, different technologies by licence and were at different points on the growth curves. In any event the empirical evidence showed that the commercial and competitive pressures on Cellnet were such that it already had every incentive to manage and reduce its costs without any regulatory intervention.

Interconnection Directive

6.43. The views of Cellnet regarding the implications of the Interconnection Directive for this inquiry are summarized in Appendix 2.1.

Unanswered and diverted calls

6.44. Cellnet told us that it was its practice to charge for calls which were answered by specific recorded announcements and for the diversion of such 'unanswered' calls. Both of these types of call utilized its network assets and involved significant processing power. Cellnet believed that recorded announcements were part of the service offered to mobile customers and their callers in circumstances that had no precise equivalent in fixed telephony. It considered that in principle it should be a commercial decision for each MNO as to whether or how it wished to charge for such announcements having regard to the utilization of assets involved and the value to the calling customer of the information provided. Wherever possible, the economic agent making decisions should incur the liabilities and consequences of those actions. The caller, who decided to try to place the call, should pay a charge that reflected the use of network resources.

6.45. Cellnet recognized that fixed-line operators had a long history of not explicitly charging the calling customer for unsuccessful calls, despite the fact that the calls made use of the network. Instead, they spread the cost recovery across all successful calls. Cellnet had adopted a different approach that directly recognized that there were costs associated with such calls. However, it acknowledged that it could recover this revenue in another way, one of which might be to spread the costs across all successful incoming calls. It told us that this would result in an increase in the region of 0.7 ppm in the termination rates which would not benefit incoming callers, particularly those customers who predominantly made successful calls who would now face higher charges.

6.46. During the course of our inquiry Cellnet told us that it was proposing to adjust its charging practices in respect of diverted and unanswered calls. It stated that, irrespective of the outcome of our inquiry, it had decided that in the future it would charge for diverted calls only from the moment when they were answered. It further stated that it was making arrangements for the necessary changes to be implemented as from 1 January 1999. It believed that this would meet some of the concerns expressed about transparency once MNP was introduced.

6.47. Cellnet confirmed that it remained of the view that imposing a termination charge for a call terminated by a recorded announcement was appropriate. However, it stated that it was in principle prepared to cease charging for calls terminating on recorded announcements. Cellnet expected the MMC to find that its termination rates did not operate against the public interest. Given that event, Cellnet would cease charging directly for calls terminating on a recorded announcement. It said that it would be able to implement this change shortly after publication of the MMC's report.

6.48. Cellnet did not, therefore, believe that it would be appropriate for there to be a modification to its licence prohibiting it from charging for unsuccessful calls, even if the DGT had the power to regulate its termination charges. However, it considered that if the MMC were to recommend licence modifications regulating the level of Cellnet's termination rates (see paragraph 6.63 and following), one of the matters that should be taken into account in establishing the initial specified level for the regulated termination rate would be Cellnet's lost revenue if there were also to be a prohibition on explicit charging for unsuccessful calls. Cellnet took the view that if it were prohibited from charging for unsuccessful calls, or if it should cease charging for such calls for its own commercial reasons, this lost revenue should be recovered across all successful incoming calls. It strongly believed that any attempt to allocate the costs across both incoming and outgoing calls would not only be inappropriate but also arbitrary.

Public interest

6.49. Cellnet believed that, irrespective of the legal position, there had been no case to refer Cellnet's termination charges to the MMC. These charges did not operate, nor could they be expected to operate, against the public interest. They had been falling and would continue to fall. They were fair and reasonable, having been set in the context of the highly competitive and dynamic UK mobile phone industry. Cellnet recognized that it took time for strong competition to be established when Orange and One2One entered, but there could be no doubt that competition was now forcing rapid change across all aspects of the mobile sector, including termination. Cellnet firmly believed that full evidence of competition in all parts of the mobile industry would quickly become apparent.

Price regulation

6.50. Moreover, Cellnet saw the prospect of further regulation as not only unnecessary but also very counter-productive and potentially damaging to the industry's development. It said that regulation was recognized to be a poor substitute for competition and that this would particularly be the case in such a dynamic and innovative industry, where prices were already falling rapidly as a result of intense competition. It had shown that the mobile industry was changing rapidly, that shares of growth were highly volatile, that the change would accelerate, as market strategies and technologies became more sophisticated, and that a cost-based approach to pricing or regulation would be rapidly overtaken by competitive dynamics. Detailed regulatory intervention would act as a brake on competition and innovation. In particular, if termination charges as low as those proposed by the DGT were to be imposed, then Cellnet would need to consider how to compensate for the lost revenue stream. Whatever action it took would ultimately lead to reduced investment and network leverage, increasing overall unit costs and hence tariffs. This would be detrimental to Cellnet, its customers and the UK generally.

Public policy considerations

6.51. Cellnet also considered that such adverse effects would undermine the objectives of section 3 of the 1984 Act, which, it believed, were entirely consistent with the public policy considerations underlying the Interconnection Directive (see Appendix 2.1).

6.52. A paper commissioned by Cellnet on price cap regulation covered some of the broader policy considerations and included the following main points:

- (a) price cap regulation had generally been used for controlling monopolies or near monopolies, and had been introduced when these were being privatized or the market in question was being liberalized;
- (b) there were no apparent examples of price cap regulation being applied to businesses in their start-up phase;
- (c) there were no apparent examples of price cap regulation being applied in an industry with four effective competitors, strong market growth and deep price reductions; and
- (d) the mobile industry did not share any of the critical characteristics of a regulated utility.

6.53. In Cellnet's view, public policy considerations and past practice indicated that it would be neither appropriate nor lawful to seek to regulate Cellnet's termination charges.

Hypothetical remedies

6.54. Cellnet commented that a number of issues needed to be borne in mind in considering hypothetical remedies put forward by the MMC. Since remedies were, in Cellnet's view, not only unnecessary but also unlawful, all Cellnet's comments on their relative merits and demerits were entirely without prejudice to that view. Other relevant considerations included the criteria and constraints listed in a letter from Cellnet (see Appendix 6.1) and, in particular, the fact that the termination rates of Orange and One2One had not been referred to the MMC; the inappropriateness of any simple notion of 'the most efficient operator'; the complexities inherent in the introduction of MNP; and the need for any recommended remedy to be set out in detail.

Orange and One2One

6.55. Cellnet considered that, given the competitiveness and market positions of Orange and One2One, there appeared no rational basis for those two operators not to be subject to regulation if Cellnet and Vodafone were regulated. Any remedy should take account of the fact that Orange and One2One, which had not been referred to the MMC, would remain free to set their termination rates without intervention by the DGT.

Most efficient operator

6.56. Cellnet said that it did not believe the costs of the most efficient operator should be used for the purposes of judging whether termination charges were reasonable, or as the basis for imposing a regulated charge. Setting aside the difficulties in allocating costs between different services provided by a single network, Cellnet disagreed with the implicit rationale that in a competitive market the price would settle at that which the most efficient operator would charge if it were to make only a normal profit. In competitive dynamic markets, a company which was more efficient than its competitors would earn a rent, or producer surplus, rewarding it for its efficiency. It would not be sustainable for the market price always to be set at the level implied by the cost base of the most efficient firm—if this were the case then, at any point in time, the most efficient company would make 'normal' returns while all other companies would make inadequate returns. Companies would alternate between making normal returns (at those times when they were the most efficient company) and sub-normal returns (at times when they were less efficient than one or more of their competitors). Overall returns would therefore be sub-normal and this position would not be sustainable in the long term and might cause companies to exit the market. In support of this analysis Cellnet drew our attention to what it considered a highly respected text on regulation which emphasized the distinction between producer surpluses and monopoly profit, and the importance of regulators understanding that the former arose naturally, were important to incentivize efficiency and innovation and should not be subject to elimination through regulation.

6.57. Cellnet also noted that the report prepared for the EC (see paragraph 6.30) took as its benchmark an industry-wide definition of best practice. Moreover, the benchmark figure of 0.207 ECU per minute equated almost exactly to Cellnet's current average charge of 14.8 ppm. In addition Cellnet thought it possible that regulation involving the concept of the most efficient operator would, because of its possible financial consequences, be inconsistent with the duties of the DGT under section 3 of the 1984 Act, a matter which the MMC were bound to take into account.

6.58. Cellnet reiterated that if the reasonableness of its charges was assessed, as it ought to be, by reference to Cellnet's own costs, there was no basis on which its charges could be found to be operating against the public interest now or to be expected to do so in the future. In this connection, under Cellnet's contract with CWC, Cellnet's current average termination rate of 14.8 ppm was subject to indexation of RPI-6 as at 1 August 1999, 2000 and 2001; and the non-discrimination obligation that applied to Cellnet would require it to offer the same price to BT. This meant that Cellnet's inbound charges to CWC and BT would fall significantly in real terms in each of the next three years in any event. Moreover, contractual indexation provisions of this kind had resulted in charges dropping more rapidly than required by the contract in the past (see paragraph 6.10).

6.59. It seemed to Cellnet that the only possible basis for suggesting that its inbound charges were contrary to the public interest would be to use the costs of another operator—ie the unit costs of Vodafone—as a benchmark of the reasonableness of Cellnet's charges. Cellnet was aware that Vodafone held a unit cost advantage. It believed this was predominantly as a result of Vodafone's historic success in achieving a higher level of traffic than Cellnet, as the Andersen report had found. The level of 'X-inefficiency' (additional costs incurred by Cellnet to carry the same amount of traffic as Vodafone) was relatively small and was being addressed by Cellnet.

6.60. Cellnet told us that requiring Cellnet to move to a termination rate based on Vodafone's costs would cause significant difficulties for Cellnet's business. Furthermore it would raise a number of other serious issues:

- (a) Cellnet was not aware of any regulatory regime under which a party's allowable charges were determined on the basis of the costs of a third party.
- (b) It was not possible for all four MNOs to achieve Vodafone's share of subscribers; therefore regulation on this basis would inevitably imply that at least one of the operators would have no prospect of making a normal return. Indeed, if all four operators were equally successful then none would make a reasonable return—contrary to normal regulatory principles.
- (c) The relative traffic volumes of the networks could change—especially with the advent of MNP on 1 January 1999, at which time the strength of Vodafone's corporate subscriber base might make it especially vulnerable to such changes.
- (d) The effect of a further competitive challenge to Vodafone's customers and thus to its traffic volumes would be to increase its unit costs (or to slow down the rate at which they would otherwise reduce).
- (e) The scale of a one-step reduction in charges to the Vodafone benchmark of 10.07 ppm hypothesized by the MMC (see paragraph 5.45) would be without precedent.
- (f) There would be particularly serious implications for Orange and One2One. Either they would suffer a competitive disadvantage if they were to leave their charges around 14.8 ppm, or they would suffer a significant loss of revenue if they reduced their charges to the level of Vodafone's and Cellnet's. Further, such a level might, for them, prove unsustainable.

Mobile number portability

6.61. Cellnet also observed that any differences in termination rates would have obvious implications for the introduction of MNP in the limited form currently proposed. The proposed system of payments between MNOs lent itself to uniformity of termination rates. Already there was a tendency for termination rates to converge in any event because the four MNOs competed aggressively on equal terms and hence faced the same competitive pressures on price. This did not mean, however, that the rates should be regulated at a uniform level. Cellnet believed it important for there to be the potential for termination rates to differ once a long-term MNP solution was available to replace the arrangements being put in place at present.

Detailed recommendations

6.62. Cellnet believed that it would be inappropriate for the MMC, following their detailed investigation, to recommend a licence modification in general non-specific terms that would, in effect, leave the DGT free to determine termination rates. Any licence modification recommended by the MMC should be detailed and clear so that it led to regulatory certainty.

Licence modifications

Initial specified levels

6.63. We put to Cellnet a number of hypothetical licence modifications, including three modifications designed to control the level of its termination charges. Cellnet observed that all three of these modifications were based on an initial specified maximum level or levels, with an adjustment formula applicable over time. It commented first on issues arising in relation to the setting of the specified level or levels and then on the adjustment mechanism.

6.64. Cellnet said that the setting of initial prices in any regulated business was extremely complex. Mobile telephony raised a series of issues without parallel in other regulated industries:

- (a) There were choices of architecture facing a mobile operator. The choice made by an operator would be dictated by its view of how the market might develop, how it would wish to position itself within the market, how it would roll out its programme and how it thought it might deal with future increases in volumes and with improved quality issues. The chosen architecture might appear to be the best but within a few years might seem to have certain deficiencies in respect of the next phase of growth (for example, TACS compared with GSM). In regulated utilities the need to take account of specific company issues as well as efficient operation had been recognized. Therefore, in keeping with the price regulation of all other network industries, the initial specified level should be reflective of the architecture which a particular operator had chosen to use.
- (b) As regards traffic volumes, it would be completely unreasonable to use the traffic of one operator to determine the unit costs of others. Any unit cost differences would result from differences in traffic profile and mix, not differences in efficiency. In particular the traffic obtained would depend on the timing of entry to the market, ie how long the operator had been in the market, the geographic distribution of customers and the mix of business and non-business traffic. If operators who had a poor mix of traffic were able through marketing to improve their mix it would be to the detriment of an operator who started with a good mix, thus changing the benchmark for an efficient operator. Moreover there could be no certainty that a customer profile that maximized outbound minutes also maximized inbound minutes.
- (c) In principle this led to the view that any initial allowable price ceiling would have to be different, not only as between Cellnet and Vodafone on the one hand and Orange and One2One on the other, but between each mobile operator. However, that would be in direct opposition to the DGT's desire for harmonization at a single rate which the DGT presumed was needed in order for MNP to work. Diverse rates would harmonize (provided that ceilings were not also floors) towards those of the operator with the tightest price cap, causing difficulty for higher-cost operators. It might even lead to a view that the DGT had not complied with his primary duty under section 3 of the 1984 Act to ensure that any person providing services was able to finance their provision. Alternatively, the diverse levels would remain and network switching by customers would follow.
- (d) All this tended to the view that any ceiling would need to be the same for all operators and set at a level that would not damage the financial health of any operator. There should be no floor.
- (e) Detailed regulation down to specific time-of-day rates based on average traffic flows would be impracticable and manifestly unfair. It involved a very specific form of regulation, where there would be a number of different initial specified levels for different defined periods of the day or week. This would be an extremely intrusive form of regulation and would, in essence, mean that the DGT would be running Cellnet's business. Operators would have no ability to change their termination rates to manage individual traffic profiles as an operator's busy hour changed over time. Cellnet could not see that there would be any public benefit in such an approach. If, on the other hand, regulation were limited to the weighted average termination charge, the industry would at least have some flexibility in managing its operations efficiently and some ability to manage capacity, to react to changes in traffic patterns and to initiatives by competitors.

6.65. In consequence Cellnet believed that setting the initial specified level or levels would be an extremely complex and, in many ways, arbitrary process. These complexities would be exacerbated by the fact that Orange and One2One's termination rates had not been referred to the MMC and by the DGT's insistence that MNP be introduced by 1 January 1999.

6.66. Nevertheless, Cellnet believed that, even if the MMC's alternative model were used as the starting point for calculating an initial termination charge, and using the output from the model which used Vodafone's costs as the basis (notwithstanding Cellnet's views regarding the legitimacy of this), then, once the appropriate adjustments had been made, the current average termination charge of 14.8 ppm was clearly reasonable and could not be found to be against the public interest.

Price adjustment mechanism

6.67. Cellnet observed that two of the MMC's hypothetical licence modifications designed to control the level of its termination charges included an RPI-X formula, whilst the third envisaged an indexed trend of average outgoing charges. In principle, Cellnet believed that regulation of termination rates indexed to outgoing charges (which were determined by a fully competitive market) might be more appropriate than an RPI-X formula. Such a 'pricetracker' index would explicitly mirror the link that Cellnet had demonstrated existed between the levels for outgoing charges and those for incoming calls, and had the merit that it would adjust to outbound sector developments and cause least distortion to the competitive structure of the industry. Cellnet sent us detailed proposals for a possible price-tracker index, as shown in Appendix 6.1.

6.68. Cellnet stated that the acceptability (or otherwise) of an RPI-X formula clearly depended on the level of X. Whilst an RPI-X formula had the attraction of simplicity, Cellnet had grave concerns about how it would operate in practice in an industry as unpredictable and as fast-moving as mobile telecommunications. It was usual for the level of X to be set for a period of some years in regulated industries such as gas, water and electricity and fixed telecommunications where investment costs and demand levels were reasonably predictable. There was no such predictability in the mobile telecommunications industry, where operators had to make investment decisions at relatively short notice—sometimes on a quarterly basis—and growth, currently around 30 per cent a year, was highly variable. Cellnet said that it was unaware of any comparable industry subject to price regulation. Rapid technological change and variable growth in numbers of subscribers and levels of usage made it very difficult for MNOs to predict unit costs. In this type of industry RPI-X regulation would be a very blunt and inappropriate instrument.

Modification of BT's licence

6.69. We asked Cellnet to comment on possible modification of BT's licence as a means of remedying any adverse effects arising from Cellnet's termination charges. Cellnet took the view that retail price control could constitute a restriction on the free negotiation of interconnect agreements which would therefore be prohibited under Article 3 of the Interconnection Directive. It commented that, in any event, while BT could, in principle, maintain its current retail prices if Cellnet's termination charges were regulated without any corresponding regulation of BT, it was unlikely that BT would be able to do this in practice:

- (a) since other FNOs that interconnected directly with Cellnet would be charged the same termination rate as BT, they would be able to reduce their retail prices and thus have a competitive advantage over BT;
- (b) since BT would have to publish in its standard interconnect price lists Cellnet's reduced termination rate plus the standard transit charges across BT's core network, indirect access operators and any UK FNO would be able to take advantage of the lower termination rate; and
- (c) BT would face sustained competitive pressure if the difference between its retail charge for calls-to-mobile and its charge for conveying other operators' calls to Cellnet were to widen. Cellnet did not believe it would be in BT's interest for it to allow its retention to increase because of the competitive pressures BT faced—rather, it would be likely to reduce the level of its retention in response to these competitive pressures.

6.70. With regard to increased transparency as a means of raising the importance of charges for calls-to-mobiles as a factor of competition between the MNOs, Cellnet believed that many of the concerns raised by the DGT and others related to customer knowledge about these charges rather than to the actual level of the charges. It said that increased transparency would require details of the charges to be communicated to the customers of BT and other networks whose customers made calls-to-mobiles. This might be achieved in a focused way through the co-operation of these other networks. In Cellnet's view, increased transparency had a significant advantage over price regulation since it avoided most of the concerns Cellnet had raised in relation to regulation of its termination rates, not least the impact of the Interconnection Directive which precluded regulation of its termination rates by the DGT.