

8 Views of the DGT

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The DGT's overall approach

8.1. In his introductory comments at his first hearing with us the DGT explained why he had felt it necessary to make this reference. He saw his obligations under the Act as broadly to promote the interests of consumers, principally through more effective competition and enhanced efficiency and economy. At the heart of the NP problem and regulatory issues generally was the choice made by the Government in 1984 to privatize BT as one single vertically integrated company which would provide a network infrastructure as well as all services over that infrastructure. The Government had concluded that the way to achieve effective competition was by encouraging infrastructure competition, including crucially in the access market (the wires between the individual customer and the local switch). This was a fundamentally different position from that taken, for instance, by the US authorities which had divided AT&T structurally, separating the local access system from long-distance transmission, although the US authorities were now considering afresh the introduction of infrastructure competition in the access market.

8.2. The DGT said that there was a general perception that the telecommunication market in the UK was becoming more dynamic and competitive. There was indeed competition to BT and that competition had had a marked effect on customers, not least in promoting efficiency gains in BT itself, but the competition varied between different parts of the market. There was as yet no broad-based effective challenge to BT's scope and scale. Many of the benefits that customers had derived were the result of regulatory devices such as limitations placed on BT's lines of business, price-cap restrictions and direct intervention by OFTEL. Other benefits were the product of BT preparing for competition in advance. In consequence the DGT considered that the UK telecommunication market was competitive only to a limited extent and that the policy of infrastructure competition had not yet proved successful.

8.3. OFTEL recognized three kinds of obstacle to effective competition: structural advantages to BT, dominance advantages and control advantages. The structural advantages of scope and scale such as network ubiquity, brand awareness and price leadership arose from history rather than BT's competitive success. Dominance advantages related to BT's market position as a former 100 per cent monopolist and included its vertically integrated structure and its ability as the dominant player to affect competition in the market-place. Control advantages, also inherited at privatization, arose from BT's ownership of information and technical systems. OFTEL saw the absence of NP as prime among these control advantages. BT's proposals for implementation would inhibit competition through increasing the costs of switching between operators.

8.4. The DGT accordingly felt that the absence of NP had to be addressed. He believed an important benefit from NP would be the added boost it would give to competition, leading to further improvements in price, quality and innovation on the part of BT. The DGT argued that all customers would gain, including those for whom the issue of NP had not arisen.

8.5. The DGT also explained in his introductory comments his definition of NP for the purpose of the reference to the MMC:

- (a) Central to the reference was the portability of geographic numbers, that is numbers used by ordinary telephones in the home and office and currently allocated in the numbering scheme as 01 (and possibly 02 in the future) (referred to as geographic numbers because they are currently region-specific and hence indicate the geographic location of the subscriber).
- (b) The reference also covered portability of non-geographic numbers, that is numbers such as those currently allocated 0800, 0345 or 089X in the numbering scheme, and associated with particular services such as freephone, local rate or premium-rate calls (called non-geographic because the numbers are not specific to, nor indicate, any particular locality in the country). Non-geographic numbers also included personal numbers in the 07 range where there were a number of operators, though as yet not many numbers in use.

In the DGT's view the reference did not cover portability of numbers for mobile phones, for instance from one mobile network to another, though he expected this would become an issue in due course. BT did not supply mobile services under its main licence but had a controlling interest in Cellnet, which was one of the first two companies licensed to provide mobile services. Nor did the reference cover portability between number ranges where numbers allocated for one type of service were ported for use in another. OFTEL's market research indicated that customers wanted to know something about where they were calling and did not, for instance, wish an 01 number to be used for an 08 service.

8.6. In the course of the inquiry we received a submission from a telecommunication consultant who was a former official at the DTI and had been involved with the passage of the Act and the drafting of BT's licence (paragraph 10.136). The submission argued that portability was the provision of a service to the originator of a call who sought to be connected to a former BT customer by dialling that customer's former BT number; this was a service that BT was bound to provide under the terms of Condition 1 of its licence. OFTEL told us that it did not accept this interpretation. In OFTEL's view the primary service was to the recipient of the calls at whose request NP had been made available; originators of calls merely lived with the consequences of NP, though they gained indirectly from the service of NP provided to others.

Consultation on NP

8.7. In his main submission to us in June 1995 the DGT provided summary details of the history of the attempt to introduce NP. In July 1989 the then DGT had issued a consultative document entitled *Numbering for Telephony Services into the 21st Century* which presented the preliminary findings of research carried out by consultants to establish the features required by users from a numbering scheme, to analyse the ability of network operators to implement different schemes in the future and to review the experience of other telecommunication administrations. These preliminary findings had included options for the future introduction of telephone numbers that would be portable (a) from one address to another using the same operator and (b) from one operator to another; and had indicated that universal implementation of NP would bring major economic benefits which everyone in the UK would enjoy. The consultants had estimated that NP would cost an additional 30p per subscriber a year to provide. The consultants' report had been completed in June 1990 and published in February 1991.

8.8. In November 1990 the Secretary of State for Trade and Industry had published a consultative document as part of the duopoly review. He had identified the need to change telephone numbers when switching between different operators as a barrier to competition in the local market owing to various costs associated with a number change and the potential loss of business. Following consultation within the industry the Secretary of State had published in March 1991 the White Paper entitled *Competition and Choice: Telecommunications Policy for the 1990s*. The White Paper recorded, *inter alia*, the support expressed by

users for NP between operators and the view of the DGT that transferability of numbers between operators was desirable in ensuring effective network competition.

8.9. Following the duopoly review, BT had agreed to the insertion in its licence of Condition 34B addressing numbering in general and NP in particular. The DGT pointed in particular to Condition 34B.13 which stated that 'a direction or determination under this Licence will not determine how the costs of Portability are to be borne' and Condition 34B.15 which entitled BT to require other operators to bear all the reasonable costs of routing calls associated with providing portability to them, with the DGT having only a limited power to determine what those costs were.

8.10. The DGT told us that his interpretation of his powers and duties under Condition 34B had regard to the contents of a letter from the Secretary of State to BT dated 22 February 1991 which made clear what was in the minds of the parties at the conclusion of the duopoly review. Condition 34B was based on those intentions. It did not provide discretionary powers to the DGT on cost allocation and so it was not adequate in present circumstances to ensure the introduction of NP.

8.11. In accordance with Condition 34B, OFTEL had commissioned NERA in December 1992 to carry out the cost-benefit analysis required by the condition. At the time the preliminary NERA findings were circulated by OFTEL in August 1993 for consultation in the industry, the DGT had issued a separate consultation paper of his own entitled *Sharing the costs of number portability*. In that document the DGT had stated that in considering the sharing of the costs of NP (provided that its benefits in the aggregate exceeded the costs) two aspects relating to efficiency were relevant: cost minimization and efficient market structure together with the scope for profitable entry. The DGT had also analysed in the consultation paper a number of options for cost allocation.

8.12. In January 1994 the DGT had announced that, in the light of the NERA analysis and the subsequent consultation, he intended to use the powers in the licence to bring about early introduction of portability. He asked the NICC (the industry body charged with agreeing technical interfaces to enable calls to be routed between networks-see paragraph 3.41) to produce an interface for NP to enable operators to pass numbers to each other, a task which it completed in August 1994. In the same month the DGT had formally directed BT to provide portability to Videotron by 7 October 1994. Negotiations had then taken place between BT and Videotron, but the two parties had been unable to reach agreement by the date specified by the DGT. In November 1994 the DGT had written to BT expressing his concern about the failure to agree terms with Videotron and proposing a modification to Condition 34B of BT's licence that would in particular have given him a residual power to determine the commercial terms of NP in the event of deadlock. The text of the draft modification established the key principles on which the DGT considered such a determination would be made, including that each operator should bear the costs which it incurred in establishing the means for NP (system set-up). Following a period of informal discussion the DGT had sent BT a revised proposal for a modification in January 1995 and the proposed amendment had been circulated for formal consultation in February 1995.

The DGT's proposals on NP

8.13. In the proposed licence modification put informally to BT in January 1995 the DGT had analysed the costs of NP as including set-up costs (covering both system set-up and per line set-up) and additional conveyance costs. As regards the system set-up costs, the DGT told us that his view had been that each operator ought to pay its own costs, even though that might result in certain operators paying more than their share of total costs relative to BT. As regards per line set-up costs, the DGT similarly considered it equitable for each operator to bear its own costs. Finally, as regards the additional conveyance costs, which the revised wording would say were to be shared 'as appropriate', the DGT proposed that these should not be carried through into specific charges for delivery of calls to customers who had ported their number, but instead should form part of the costs used in calculating BT's standard services, and thus be spread over all services.

8.14. For the proposed changes to BT's licence circulated for formal consultation in February 1995 the DGT changed his position, suggesting that BT should be able to recover the costs for per line set-up and mobility (paragraph 6.3), though as before each operator would bear its own system set-up costs. The DGT sought power to determine the charges between operators, which were to be based on BT's fully allocated historical costs (together with a reasonable return on investment). The DGT told us that although BT remained

unable to agree the principles on which it should bear certain costs of NP, BT had offered in April 1995 that its charges for additional conveyance should reflect long-run incremental costs rather than fully allocated costs, with the generality of fixed and common costs being spread across BT's other services. BT had later indicated to the DGT that, in its view, charging on the basis of the long-run incremental cost of additional conveyance would amount to between 60 and 80 per cent of charges based on fully allocated costs.

8.15. The DGT told us that, after he put forward his proposals for a licence modification, further information had come to light about the charges which BT proposed to levy on other operators in the course of the NP trials, and which would be likely also to apply to full commercial availability. This new information included a much higher charge for per line set-up than BT had originally estimated-£36 as opposed to £3 (paragraph 6.10). The DGT considered that allowing BT to recover at such a level from other operators would fundamentally alter the balance of cost allocation in favour of BT and to the detriment of other operators. He thought the disparity between the figures now being quoted and the earlier figures might also indicate that BT was responding to OFTEL's cost allocation proposal by reducing its initial capital expenditure (ie system set-up costs), which it would be required to bear in full, with the result that arranging the transfer of the number for each ported line would require inefficient and costly manual processes.

8.16. Accordingly the DGT now believed that in respect of per line set-up costs, as in the case of additional conveyance costs, there should be a power for him to determine the allocation of costs as between BT and other operators. Such a modification should not bind the DGT to a rigid cost allocation framework in making determinations, as this would prevent him responding effectively to rapidly changing technology and dynamic market development. The DGT said that he needed sufficient discretion to be able to operate in a way which he considered best calculated to preserve the public interest at any given time, taking those volatile factors into account and subject to his duties under the Act and the general principle of reasonableness.

8.17. In his first hearing with us the DGT emphasized that the main issues on which he was seeking a finding were the possible detriment to the public interest from the continued non-provision of NP and the appropriate remedies via licence amendment. The DGT hoped that any modification proposed by the MMC would give him a discretion to decide on the appropriate cost allocation and on the level of charges. The DGT explained that on the information available it might be difficult to determine charges, even unilaterally. It was for this reason that he sought discretionary powers rather than a setting down of principles or guidelines in advance. The DGT said that, for instance, he was still considering the marginal or incremental nature of the costs of NP and did not have enough information from BT.

The DGT's submission

8.18. In his written submission to us, the DGT said that he had made the reference to the MMC in the light of a lacuna in the present regulatory arrangements: there was no power for the DGT to resolve deadlocks between BT, the monopoly provider of local telecommunication services, and other operators as to the terms on which NP should be provided. In the view of the DGT, the absence of such a power operated against the public interest and needed to be remedied through an appropriate modification to BT's licence. The DGT considered that the implementation of NP was a matter of the very first importance: its absence represented a major constraint on the future development of competition in the telecommunication market. Its absence was also a barrier to the realization of the many benefits to the public interest that were likely to flow from such increased competition.

BT and the market

8.19. The DGT told us that at present BT provided exchange line services (sometimes referred to as the local loop) to roughly 97 per cent of all businesses and domestic customers in the UK, and the competitive disciplines on BT in that area of its business were extremely weak. The need to change telephone number when changing supplier was a powerful disincentive to users to switch their custom from BT. The DGT said that for large business users the cost of changing operator without NP could run into tens of thousands of pounds, with internal telephone systems and computer systems needing to be reconfigured. Costs for small and medium-sized businesses would be lower, but the burden might be greater through the risk of losing custom, together with the costs of new stationery and promotional material and of notifying suppliers and customers. For the residential customer costs would be smaller again, but being obliged to use a new number would be highly inconvenient.

8.20. To illustrate the importance of NP to effective competition, the DGT referred to various studies including those of consultants (paragraph 8.7), NERA (paragraph 8.11) and a survey carried out by CA in March 1995. The CA survey had found that 36 per cent of those BT domestic subscribers interviewed who had (or might have) a choice of supplier did not want to move because they would have to change their number, and that 55 per cent did not switch because it was 'too much of a hassle to change'. Further, 70 per cent of the BT subscribers who were interviewed said that they would be tempted to switch to another supplier if they could keep their existing numbers. The DGT said that his assessment of the importance of NP mirrored the view of the US FCC which had required the introduction of NP for the 800 service (a type of non-geographic number) in recognition of 'the significant benefits that number portability can bring to consumers, through heightened competition and increased choice'.

8.21. In assessing the benefits of NP to consumers in his written submission, the DGT used a similar classification to that of NERA (paragraph 7.10) and included some of the NERA estimates of the quantum of benefits. The three categories of benefit identified by the DGT (broadly corresponding to what NERA referred to as Type 1, 2 and 3 benefits) were:

- (a) avoidance, by subscribers porting their numbers, of the cost associated with changing numbers and the benefit of cost savings from switching to more efficient operators;
- (b) dynamic benefits from removing the barriers to more effective competition (such increased competition was likely to enhance the effectiveness of regulation in stimulating further innovation, to exert pressures for cost reductions and to lead to further general price decreases); and
- (c) benefits to persons calling the individuals and firms who had taken advantage of NP, including fewer misdialled calls and fewer calls to directory enquiry points.

8.22. The DGT said that there was consensus in the industry and a clear message from consumers as to the desirability of introducing NP. He referred to repeated statements by BT that it accepted the need for NP and was committed to implementation, including a press release from BT of 27 April 1995 claiming that 'BT and the UK lead the world in being ready to implement portability'. However, the DGT told us that BT could be expected to have a profit incentive to resist or delay the introduction of portability and to impede the growth of competition in an area where it presently enjoyed a near-monopoly in supply. BT might be expected to have an interest in requiring rival operators to pay high charges for the provision of portability, so raising their costs and restricting the discounts they could offer to BT customers to change network operator. Additionally, BT would be enjoying a substantial revenue stream which would reduce the pain of losing customers and lessen the competitive spur on BT to improve its own performance. The DGT thought that in the absence of regulation there would be a real risk of BT abusing its dominant position as a provider of portability services in order to extract profit from that dominant position, to forestall competition in the market for directly connected services and to minimize the impact of competition on its own behaviour.

8.23. Although under the present conditions of BT's operating licence the DGT was able to direct BT to provide NP to other operators, the DGT considered that he had no power to resolve a dispute as to who should bear the costs of establishing and maintaining the facility. The DGT said that experience had shown that the extent of the scope for deadlock in negotiations between BT and other operators on the cost issue was such as to jeopardize the introduction of NP generally. BT had collaborated with Videotron in developing the necessary technical and operational specifications to enable a transitional form of portability to be introduced,

but the companies had been unable to reach agreement on the commercial terms of a portability agreement. In particular, the DGT said, BT had sought to require Videotron to bear all BT's fully allocated costs of establishing and subsequently maintaining NP, including the cost of the precontractual negotiations with Videotron. Videotron had rejected those terms, observing that if BT's charges were passed to the porting customer, he or she would end up paying roughly double Videotron's basic installation and rental charge in order to keep the BT telephone number: no customer would be prepared to accept such an offer. In the DGT's view, the fact that BT made a proposal along those lines clearly indicated the dichotomy between the public interest and BT's interest in the matter. The DGT did not think it was an offer calculated to form the basis of a deal; and if Videotron had accepted it, it was likely that many of the benefits expected from portability would have been reduced or eliminated.

8.24. The DGT said that since October 1994 BT had indicated that it would be prepared to enter into portability agreements with other operators on less onerous terms, including bearing its own system set-up costs but not the additional conveyance costs. The DGT said that he (and OLOs) considered that BT ought to bear a substantial proportion of additional conveyance costs, for the following main reasons:

- (a) It was BT which had the means to reduce (and ultimately to eliminate) additional conveyance costs arising in its own system.
- (b) BT's own customers, who would account for the major proportion of directly connected customers in the UK for some time to come, stood to gain most of the benefits of the enhanced competition that the introduction of NP to the UK market was likely to stimulate.
- (c) BT's incentive to adopt the most economic and efficient implementation of portability would be weakened if it could pass costs on to other operators.
- (d) Ability on the part of BT to recover the full amount of additional conveyance costs might have the effect of emasculating the further competition in the market that would otherwise be stimulated by NP, to the detriment of users.

8.25. The DGT thought it was clear that there remained substantial scope for disagreement between BT and other operators, especially in relation to the allocation of the additional conveyance costs. As new technical solutions for portability were developed it was to be expected that further scope for disagreement would emerge. Having regard to BT's position, and the divergence between its private commercial interests and the public interest, the DGT considered it necessary to secure a power to resolve deadlocks in negotiations between BT and other operators and to ensure NP was implemented so as to maximize its benefits. The DGT thought an MMC finding that he should not obtain such a power, and would thus be unable to promote competition through NP, might be perceived as an indictment of the regulatory regime and could stifle long-term investment by BT's competitors.

8.26. The DGT told us that the competitors to BT were currently making a huge investment in the UK (he said that in 1994 other operators collectively invested a comparable amount to BT's capital expenditure), but were not at present profitable due to the large up-front outlays needed to construct a network from scratch. It was important for these competitors to receive an ongoing cash flow from their ability to win new customers. The DGT added that continuing investment was being made on the basis of expectations about the way in which the UK regulatory regime would operate-in particular that the regulatory regime would continue to promote competition and address the competitive effects of BT's dominance.

8.27. The DGT explained to us the history of the cable companies during the duopoly period. Until the duopoly review in 1991 the cable companies had been prevented from offering telephony services in their own right and very few had offered telephony services as agents for BT or Mercury (see paragraph 3.12). Before 1991 the cable companies had struggled to meet the build obligations for their networks (targets set for the number of homes passed by specified dates), which had been placed on them when their licences had been awarded. Since 1991 (and particularly during the last two years) the fortunes of the cable sector had picked up, with an increase in network construction activity linked to the potential for realizing economies of scope from the provision of both cable television and telecommunication services over a largely common network. The DGT noted, however, that the cable operators had in the aggregate still completed only about a third of the construction work necessary to meet their build obligations.

8.28. Since the duopoly review the DTI had also issued 62 other licences to companies wishing to operate fixed telecommunication networks (with more than 30 applications pending). Some of these new licences concerned extensions to the scope of existing licences or were intended to permit operators to provide niche services, but the figure also included 14 PTO licences for new companies wishing to compete more widely with BT and Mercury. Two of the newly licensed companies were, the DGT thought, particularly significant because they were planning to build national networks using radio technology, a potentially cheaper process than laying a cable. Others of the new emergent competitors had a variety of strategies, although the DGT said that none of them had significant plans to provide directly connected services in competition with BT, save to large business centres. Thus in the area of local access services to residential and small business users, the cable operators at present offered the most advanced source of potential competition to BT.

8.29. In addition to the general barriers to competition, such as the cost of market entry, the DGT indicated three specific obstacles: the need for interconnection between BT and other operators, BT's control of the numbering resource and the absence of NP. Since 1991 a focus of OFTEL's activities had been to prevent exploitation by BT of its market power as far as possible and to seek to remove those specific barriers to entry. The DGT said that in the 11 years since privatization it had been necessary for him (or his predecessors) to make a determination in nearly all cases involving working relations between operators (such as on interconnection). He also told us that the introduction of greater competition in the local loop through NP could be expected to lead to improvements in the regulatory regime. In his statement in July 1995, *Effective Competition: Framework for Action*, the DGT had stated that his underlying approach was to seek to withdraw from detailed regulation and to move towards a less interventionist role of policing fair trading wherever industry structure and competitive pressures allowed.

Technical aspects

8.30. The DGT explained that he did not consider that it was his role to require any specific technical solution to be used by operators for NP, though any solution should seek to minimize costs. OFTEL had worked closely with the telecommunication industry in the UK over a number of years to develop thinking on efficient technical solutions for the provision of portability. A call diversion solution using existing service software in local exchanges had been explored in 1994 when data decode (in both tromboning and call drop-back versions) was still regarded as some way off. The DGT told us that he expected that tromboning would be available before the end of 1995 and that the estimated time for the introduction of call drop-back was two years. The main barrier to the introduction of call drop-back was the need to write new software for the existing switches to enable the function to take place. However, relatively little innovation was required and the solution was generally recognized to be practicable.

8.31. The DGT told us that he was asking for further work on possible IN solutions to be undertaken in the NICC (paragraph 8.12). OFTEL considered that a partial IN solution, in which only calls conveyed over the trunk network would interrogate an IN database, might well be a possible solution in the future. A full IN solution in which all calls to all numbers would interrogate an IN database was too expensive an option if the sole purpose of the database was to cater for NP.

Cost implications of different solutions

8.32. The estimate of BT's system set-up costs for the tromboning solution notified to the DGT in February 1995 (paragraph 6.7) was £30 million. The DGT said that this represented a very much smaller proportion of BT's turnover than was the case for other operators which were working actively to introduce NP. Estimated system set-up costs as a percentage of 1994/95 turnover were 0.2 per cent for BT, 2.9 per cent for NYNEX and between 1.8 and 2.2 per cent for TeleWest. For Ionica, a company in its start-up phase, substantial system set-up costs would need to be funded despite the absence of any initial customer base.

8.33. The DGT told us that the size of the per line set-up costs continued to be a matter of dispute between operators. BT had claimed that several manual processes were involved in its then estimate of £36 per occasion, whereas a number of other operators had stated that the process could be done virtually automatically on their customer support systems with costs of between £3 and £8 for porting a line from an OLO to BT. The DGT said that OFTEL was investigating BT's claim, which it found surprising (details of subsequent cost estimates on the part of BT are given in paragraphs 6.10 to 6.14).

8.34. In his submission to us the DGT included a BT estimate of £40 million for additional conveyance in 1997/98 under tromboning if it were introduced in 1995/96, and a cumulative cost of more than £200 million by the end of the decade. The DGT said, however, that BT had indicated that call drop-back could be available by the beginning of 1997, by which time, on BT's own assumptions, cumulative additional conveyance costs for tromboning would be only about £30 million. The DGT noted that these figures were sensitive to the number of customers porting, the number of incoming calls they received and the accounting methodology used to calculate cost. The BT estimates of additional conveyance cost had been made using the fully allocated historical cost methodology which OFTEL and BT currently employed.

8.35. Following the first hearing OFTEL provided additional details of its assessment of BT's conveyance costs. Since tromboning would quite quickly be replaced by other technical solutions, such as call drop-back, OFTEL argued that the appropriate cost concept for BT's additional conveyance costs was the short-run incremental cost. OFTEL considered that additional conveyance under tromboning was unlikely to require BT to install significant extra capacity in the short run, because most of the capacity was required before the introduction of NP to convey incoming and outgoing calls. Even if extra capacity was needed, the effect was likely to be only a slight acceleration of BT's investment programme. OFTEL therefore took the view that additional conveyance as a result of tromboning should not cause BT to incur significant costs.

8.36. To explain why it considered that no additional use was likely to be made of BT's network components as a result of portability, OFTEL took the simple example of a customer with one outgoing and one incoming call in the busy hour and compared network utilization after porting with the position while the customer was still served by BT. OFTEL thought the increased usage due to the tromboning of an incoming trunk-delivered call was likely to be compensated for by the reduced usage on the outgoing call, as illustrated in Table 8.1. This showed, OFTEL stated, that the total BT network utilization for both incoming and outgoing calls before change of operator and porting took place was greater than the BT network usage for incoming calls only after change of operator and porting.

TABLE 8.1 Use of BT network components before and after porting

	<i>Customer's local exchange</i>	<i>Trunk exchange</i>	<i>Transmission between customer's local exchange and trunk exchange</i>
BT customer (before porting)			
Outgoing call	1	1	1
Incoming call	1	1	1
Total	2	2	2
Competitor's customer (after porting)			
Incoming call	1	2	2

Source: OFTEL.

OFTEL said that the simple analysis suggested that if porting customers' busy hour usage was equally divided between outgoing and incoming calls, BT would require no additional capacity under NP. Although no capital costs were incurred, there might be a small amount of operating costs, such as fault repair. A more detailed analysis was also provided by OFTEL covering different call routings for the various call types, but neither this nor particular qualifications (such as variation of the assumption of balance between incoming and outgoing calls) altered OFTEL's main conclusion that at most a small amount of extra capacity might be required in the short run.

8.37. In response to BT's argument that OFTEL's analysis failed to take account of the effect of 'lost own-exchange traffic' OFTEL pointed out that BT's own analysis was acknowledged by BT also to be only theoretical, and not necessarily reliable in practice. Indeed, OFTEL said, the difficulty of determining in advance the extent of costs was an additional reason to allow the DGT discretion as to their allocation.

8.38. OFTEL also provided further information after the first hearing on its proposals for the recovery of additional conveyance costs, which were intended to allocate the costs of additional conveyance between operators broadly by reference to market share in the network as a whole. OFTEL told us that any extra costs

of conveyance would be reflected in the plant, overhead and capital costs of BT's network business (BT Network: paragraph 4 of Appendix 6.3). If no extra capacity was required and no extra operating costs were incurred as a result of NP the costs of BT Network would not increase at all. Any incremental costs of additional conveyance would not in practice be separately identifiable, because the level of costs in the absence of portability would not be known. In order to calculate the cost (and the related charges to operators for the provision of interconnect services) for the use of individual BT Network components the total component cost would be divided in the normal way by the number of minutes for which the component was used, but excluding the number of minutes required to provide additional conveyance for NP. The effect of this procedure would be, OFTEL said, that the incremental cost of additional conveyance was spread over all calls on BT Network, rather than being recovered through specific charges for additional conveyance.

Interests of customers

8.39. OFTEL believed the costs of additional conveyance were unlikely to be significant and that spread over all UK customers the effect on the bills of residential customers would be tiny. Table 8.2 shows OFTEL's assessment of the range of additional quarterly charges per customer (spread over all UK customers on the basis of the 1994 level of 27.38 million lines), assuming that the additional conveyance costs were reflected in full in prices to customers. For the upper end of the range OFTEL used estimates of additional conveyance costs provided to it orally by BT, but it reduced these amounts by 20 per cent to reflect long-run incremental cost rather than the fully allocated historical cost used by BT (paragraph 8.14 and Appendix 6.3, paragraph 8). For the lower end of the range OFTEL assumed that there were no additional conveyance costs. The years after 1997/98 were not considered by OFTEL, as call drop-back should by then have been introduced.

TABLE 8.2 Range of charges to average customers (all UK) for additional conveyance under tromboning

<i>Incremental cost to be recovered from all customers</i>	<i>pence per quarter</i>		
	<i>Lower quartile residential customer</i>	<i>Average residential customer</i>	<i>Average customer (all types)</i>
1995/96 (£6m)	0-1	0-4	0-5
1996/97 (£18m)	0-4	0-13	0-16
1997/98 (£33m)	0-8	0-24	0-30

Source: OFTEL.

The lower cost for residential customers reflected the significantly fewer calls made on the average residential line compared with the average business line: lower quartile residential customers made even fewer calls. OFTEL estimated that if instead of its proposals the cost of additional conveyance minutes was recovered through a charge to customers who had ported, the extra payment for the average residential customer would be about £3.60 a quarter or about 9 per cent of the average residential call bill.

8.40. The DGT told us that the effect of NP on BT was one of the factors of which he would take account in the course of the next price review for the period from 1997 onward, work on which was due to start in December 1995. BT's capital investment in NP and the consequences of NP for BT's efficiency would both be relevant in the review process. The DGT also commented that the RPI-X price control formula was a crude means with which to address any falling off of competition. In view of the constraint on the DGT under the Act to ensure that an operator is able to finance the provision of the telecommunication service, he needed to be cautious in setting a level for the efficiency factor of X.

Allocation methods

8.41. The DGT told us that he believed six principles were relevant to determining how the burden of cost recovery should fall upon operators and their customers. The six principles and their application to the OFTEL proposals for each of the three main cost categories are considered in more detail below.

(a) Cost causation

OFTEL said that one relevant consideration was to identify those whose actions caused the costs to be incurred at the margin. Cost causation was relevant to allocative efficiency, as were externalities. System set-up costs, in contrast to per line set-up costs, were not caused at the margin by the provision of NP to another customer. OFTEL's view on additional conveyance was that no significant costs arose, but even if significant costs were involved OFTEL considered that cost causation should not be the determining principle in arriving at an appropriate method of cost recovery.

(b) Cost minimization

OFTEL told us that the mechanism for cost recovery should ensure that those who had the ability to affect the size of the costs faced strong incentives to minimize costs. Cost minimization (or productive efficiency) involved both operational efficiency and the rapid adoption of cost-reducing technology.

(c) Distribution of benefits

OFTEL considered that the introduction of NP yielded significant benefits to consumers who ported their numbers (NERA Type 1 benefits) and significant general benefits to non-porting customers (NERA Types 2 and 3 benefits). Although the precise quantification of each of these three benefits and their relative sizes was a matter for debate, the cost-recovery mechanism should recognize that customers who ported numbers were not the only beneficiaries of NP. This was in the view of OFTEL not solely an equity principle, since allocative efficiency required that porting customers faced prices that reflected the additional benefit to telecommunication customers generally. OFTEL told us that the NERA study had been undertaken in accordance with a requirement in BT's licence in order that the DGT could reach a decision on the introduction of NP. The licence did not provide the DGT with power to allocate costs; the NERA work had therefore not been concerned with cost allocation.

(d) Effective competition

OFTEL said it was important that the mechanism for cost recovery did not undermine or weaken the pressure for effective competition that the introduction of NP should provide, by allowing one operator to raise unduly the costs of another. If an incumbent operator were able to raise its rivals' costs, the effectiveness of competition from such operators would be reduced. If an incumbent operator was able to obtain significant revenues even after losing a customer to a competitor, the incumbent's incentive to compete might also be diminished.

(e) Reciprocity and symmetry

OFTEL expected NP to be reciprocal and not a one-way phenomenon. All operators for which BT was obliged to make NP available would also have to allow their customers to port numbers to BT. Accordingly, OFTEL said, the mechanism for cost recovery should as far as possible be symmetrical for each direction in which customers switched operators.

(f) Practicability

A final consideration, and in the view of OFTEL an important one, was that the mechanism for cost recovery should be practicable and easy to implement. As well as raising administrative costs, complex mechanisms could inadvertently create perverse or inefficient incentives.

8.42. For system set-up costs OFTEL considered that the key principle was cost minimization, though its proposal for each operator to bear its own system set-up costs was also consistent with the other principles, in particular the need to maintain pressures for effective competition.

8.43. OFTEL told us that its proposal to allow BT to levy a charge for per line set-up recognized the nature of cost causation; moreover some of the benefits of NP were evidently enjoyed by porting customers. OFTEL's concern that BT's cost estimates might be artificially high, especially when compared with the estimates of other operators, suggested that some discretion on the part of the DGT was needed to recognize reciprocity and to provide incentives for cost minimization and effective competition.

8.44. As regards additional conveyance, OFTEL said that if the cost were as large as BT suggested, the priority would be cost minimization by reducing additional conveyance at the earliest opportunity. Under the OFTEL proposal for allocating additional conveyance costs by reference to market share, BT would face strong incentives for cost minimization because BT (in the form of BT Retail) would bear the largest share of the costs. OFTEL said that its proposal also recognized the principles of symmetry, effective competition and the distribution of benefits. The effect on average residential bills would be extremely small (paragraph 8.39).

8.45. If, as OFTEL suggested, the additional conveyance costs were small, then the BT proposal of a specific charge for each additional conveyance minute, based on fully allocated cost or long-run incremental cost, would substantially overcharge operators serving customers who had changed from BT and ported their numbers. OFTEL thought there was a grave danger that the BT proposal on additional conveyance costs would artificially raise competitors' costs and thereby weaken the pressures for effective competition. OFTEL considered that this could only be avoided by ensuring that charges did not exceed the short-run incremental costs of additional conveyance, but added that robust estimates of this cost would require very detailed information which was not currently available. OFTEL told us that its proposal avoided these problems because the possibility of the extra costs being overstated did not arise and the solution was easy to implement.

Future procedure

8.46. The DGT indicated how he would propose to move ahead with NP in the event that we recommended a licence amendment. In the course of the required period of consultation he would distribute his draft modification and would obtain the input of all parties in a transparent manner. The DGT expected that in the first few years, given the importance of the level of costs and the fact that he would be dealing with a technical solution which no one else in the world had implemented, he would apply the process used for other regulatory determinations and work initially on prospective or estimated amounts. He would later recalculate the amounts in the light of actual experience. This was preferable to using the estimates that BT or others had made in putting forward their proposals. The DGT said that he had not so far used the full panoply of his powers to investigate whether the sums quoted by BT were reasonable, and he would only expect to do so in the course of an actual determination. It was possible to obtain detailed information from BT, but it could be difficult for the DGT to assess its accuracy. As the DGT was continually forced to make clear in public, BT's systems did not always allow the DGT to make proper investigations if he felt the need to do so.

8.47. In the event of proceeding to a licence modification the DGT told us that he would expose the basis of BT's cost calculations to the industry at large as it was only by way of dialogue that the appropriate methodology and the appropriate quantification of labour and plant inputs could be pursued in depth. The DGT mentioned specifically his intention to consult companies with experience overseas, such as AT&T, which might have more background experience than some of the cable companies. At present the DGT was unable to make any judgment as to whether BT's cost estimates were right or wrong, or whether they were likely to go up or down.