

Part II

Background and evidence

3 Background

Contents

	<i>Page</i>
Privatization of BT	51
The introduction of competition	53
The duopoly review	54
Developments since the duopoly review	54
Regulation	54
Customers	54
Interconnection	55
Apparatus supply	56
Portability	56
The NERA cost-benefit analysis	58
Work of the NICC	59
Efforts to introduce NP	59
Portability outside the UK	60
USA	60
Australia	61
Hong Kong	61
EC	61
France	61
Ireland	61
Other countries	62

Privatization of BT

3.1. Until 1981 nearly all telecommunication services in the UK were supplied by the Post Office, a statutory corporation converted from a government department by the Post Office Act 1969.¹ Under the British Telecommunications Act 1981 (the 1981 Act) telecommunication activities were separated from the Post Office and became British Telecommunications, a new public corporation. On 6 August 1984 the property, rights and liabilities of British Telecommunications were transferred to British Telecommunications plc under section 60 of the 1984 Act. The Government then floated 50.2 per cent of its shares in the company. The remainder of the Government's shares were sold to the public in two further tranches in 1991 and 1993. At 31 March 1995 BT had 2,545,189 shareholders including a Government shareholding of 0.5 per cent of the ordinary shares, retained to meet the requirements of a share bonus arrangement made under the offer for sale of shares in July 1993. The Government also owns one redeemable preference share with special rights. Certain matters, in particular the alteration of specified provisions of the company's Articles of Association, require the written consent of the holder of the special share. In addition the Government is entitled to appoint two non-executive directors to the Board of the company, although it no longer exercises this right.²

3.2. A new regulatory framework was established under the Act, abolishing the statutory exclusive right to operate telecommunication systems formerly held by BT and providing, in section 7 of the Act, for the

¹Only Kingston-upon-Hull retained a separate telephone company, now Kingston Communications (Hull) plc (Kingston Communications).

²This information is out of date. BT's Articles of Association were amended in July 1994, with the Government's agreement, to end this entitlement.

licensing of the running of telecommunication systems. Section 8 of the Act sets out the obligations of licence-holders which include requirements:

- (a) to provide such telecommunication services as are specified in the licence;
- (b) to connect or permit connection to the licensed system of such other systems or apparatus as are specified in the licence;
- (c) to permit the provision, by means of any telecommunication system to which the licence relates, of such services as are specified in the licence;
- (d) not to show undue preference to, or exercise undue discrimination against, particular persons of any class or description (including, in particular, persons in rural areas), whether in respect of charges or other terms or conditions; and
- (e) to publish, at times specified in the licence, a notice specifying, or specifying the method that is to be adopted for determining, the charges and other terms and conditions applicable to services provided.

3.3. The Act gave the principal regulatory responsibilities to a Director General of Telecommunications and the Secretary of State (at present the Secretary of State for Trade and Industry). The general duties of the Secretary of State and the DGT are set out in section 3(1) of the Act (see Appendix 3.1). Section 3(1) requires them to see that telecommunication services are provided throughout the UK (except where it is not reasonably practical). This includes the provision of emergency services, public call boxes, directory information services, maritime services and services in rural areas. They must also see that persons who should provide these services are able to finance their provision.

3.4. The DGT and the Secretary of State also have duties under section 3(2) which include the duty to promote the interests of consumers, purchasers and other users of telecommunication services and apparatus in the UK; and to promote effective competition between those engaged in commercial activities connected with telecommunications; and to promote efficiency and economy among such persons. In terms of the distribution of functions the Secretary of State takes primary responsibility for market-opening measures and in particular has the function of licensing new telecommunication operators. Between 1984 and October 1995 166 public telecommunication operator (PTO) licences have been granted by the Secretary of State under section 7 of the Act. These include 28 full national PTO licences (including six issued to mobile operators since the 1991 duopoly review). The rest have been issued to cable companies (see paragraphs 4.6 to 4.11).

3.5. By virtue of section 50 of the Act the DGT also has functions in relation to competition, exercisable concurrently with the Director General of Fair Trading:

- (a) under the Fair Trading Act 1973, in particular in relation to monopoly situations which exist or may exist in relation to commercial activities connected with telecommunications; and
- (b) under the Competition Act 1980 in relation to anti-competitive practices in connection with the production, supply or acquisition of telecommunication apparatus or the supply or securing of telecommunication service.

3.6. Section 12 of the Act allows for licence modifications by agreement between the DGT and the relevant licensee. The DGT also has the power under section 13 of the Act to make references to the MMC asking the MMC to determine whether any matter relating to the provision of telecommunication services or the supply of telecommunication apparatus by a licensee operates against the public interest and if so whether the adverse effects could be remedied or prevented by modifications of the operator's licence. This will normally happen when he and the licensee (say BT) cannot agree on a licence modification. A brief summary of the main provisions of BT's licence is at Appendix 3.2.

The introduction of competition

3.7. Since the early 1980s the DTI has used its licensing powers to promote competitive entry into the markets formerly served by the Post Office and subsequently BT. The timing, pace and nature of the resulting changes have differed from one market to another.

3.8. In the equipment market competition developed rapidly after liberalization, stimulated by the provision for independent approval of apparatus in the 1981 Act and the establishment of the British Approvals Board for Telecommunications, whose functions include the inspection and approval of telephone handsets and other equipment-such as answering machines-which users attach to operators' networks. In 1981 liberalization was also introduced in value-added services (such as voicemail and electronic data exchange), enabling firms to provide value-added services over lines leased from BT.

3.9. The Government decided in 1983 that only one network operator should be licensed to provide a fixed network to compete with BT (after 1984) for a period of seven years. It was thought that the investment needed was so great and the risk so large that no company would be prepared to enter the market with the prospect of competing with both BT and other new operators. The operator chosen was Mercury, formed originally as a consortium between British Petroleum plc and Cable & Wireless plc (Cable & Wireless), each of which held 40 per cent, and Barclays Merchant Bank Ltd which held the remaining 20 per cent. By August 1984 Mercury had become a subsidiary of Cable & Wireless; it began operating in 1986.

3.10. Mercury focused principally on the more profitable areas of telecommunication business including long-distance and international calls, and services to large corporate customers who generated a high volume of call traffic per line. Although not competing directly with BT in providing services to smaller customers, Mercury offered services to small users by means of *indirect* connections through BT's local network. Any user whose needs did not justify the expense of direct connection could, by using a code prefix or a special telephone (a 'blue button phone'), select Mercury for the trunk and/or international part of long-distance calls. Mercury was not given a USO (see paragraph 3.20) and could therefore be selective in choosing its markets.

3.11. In 1985 licences were granted to two companies to operate mobile cellular networks, namely Racal-Vodafone (subsequently Vodafone Limited) and Telecom Securicor Cellular Radio Ltd (Cellnet), Cellnet is a wholly-owned subsidiary of Cellnet Group Ltd, of which BT owns 60 per cent of the issued share capital. Both Racal-Vodafone and Cellnet began providing services in 1985. Three firms were licensed in 1991 to provide new mobile services using digital technology, operating Personal Communications Networks (PCNs), but a subsequent merger reduced these to two, Mercury One-2-One and Orange Personal Communications Services Ltd (Orange, a wholly-owned subsidiary of Hutchison Telecom (UK) Ltd). There are now over 3.5 million subscribers to these four mobile networks.

3.12. During the period when only BT and Mercury were licensed as national network operators (known as the duopoly period) companies were licensed under the Cable and Broadcasting Act 1984 to provide broadband cable TV services in specific geographical areas. Some of these companies (the cable companies) represented a potential source of competition to BT as they were also capable of providing telephony services on their networks, but they were only permitted to do so as agents for BT or Mercury and very few such opportunities were taken up. The cable companies were in turn given some protection in that the licences granted to BT and Mercury (and Kingston Communications) prevented these operators from using their networks to convey broadcast entertainment services to the home. However, these operators were free to own local cable franchises and to provide broadcast entertainment and information services to any non-residential premises including businesses, schools, universities and hospitals. BT holds a licence for the operation of a cable franchise in the Westminster area.

3.13. During the duopoly period Mercury made significant inroads into the market for long-distance and international services, especially in the City of London where many large corporate users switched to Mercury for services such as outgoing calls, international private circuits and data services. However, BT retained a high share of the provision of services over the country as a whole.

The duopoly review

3.14. In 1990/91 the Government reviewed the duopoly policy and in the White Paper *Competition and Choice: Telecommunications Policy for the 1990s* (Cm 1461, March 1991) outlined proposals to end the duopoly within the UK (the duopoly in international licences remains) and sought to ensure the growth of competition in all telecommunication markets with a presumption in favour of additional licences being granted. Applications for licences would be considered from any company wishing to establish fixed telecommunication networks in competition with BT and Mercury. In addition cable companies were permitted to provide voice telephony services. The White Paper said that the restriction preventing BT, Mercury and Kingston Communications from conveying broadcast entertainment services in their own right to domestic premises would not be removed until the year 2001, although the Government would reconsider this position in 1998 if the DGT advised that removing the restrictions would be likely to promote more effective competition in telecommunications. In addition national network operators would not be allowed to provide entertainment services nationally in their own right-as opposed to conveying them on behalf of other providers-and this policy would not be reviewed until at least 2001.

3.15. In a statement issued on 5 March 1991 to coincide with the publication of the White Paper, the DGT mentioned portability (among many other topics). He said:

I now want to recognise in the regulations the general objective of bringing about number portability at least to the extent that a customer can change networks without changing the telephone number. I am seeking power to require this, subject to further assessment of its costs and benefits, although the precise details of its application will have to await further analysis of the level and the variability of costs.

Developments since the duopoly review

3.16. Since the duopoly review (see paragraph 3.14) the DTI has issued 62 telecommunication licences to companies wishing to operate fixed networks and other applications are pending. The figure includes 14 PTO licences for new companies intending to compete with BT and Mercury in the provision of fixed networks and services (see Chapter 4 for details of these companies and their market share).

3.17. Since 1991 cable companies have been active in installing their own equipment, in seeking competitive long-distance conveyance services from long-distance operators and in signing up customers for telephony services. The potential for realizing economies of scope by providing both TV and telephony services over their networks is generating a large increase in network construction activity (see paragraphs 4.7 to 4.11).

Regulation

3.18. BT is regulated under its licence in a number of ways. These affect its relationship with:

- (a) its retail customers;
- (b) other telecommunication operators;
- (c) other suppliers of telecommunication equipment; and
- (d) companies which provide value-added services in competition with BT.

Customers

3.19. BT's licence includes a range of controls, including specific restrictions on BT's prices, which are intended to protect the interests of consumers and prevent anti-competitive behaviour by BT. In 1984 an overall price cap of RPI-3 per cent was set, covering a basket of products and services which included exchange line rentals, local calls and national calls. The control factor was subsequently increased when the

price cap was reviewed in 1989, and again in 1993, and over time other products and services have been included in the basket. The current price cap of RPI-7.5 per cent expires on 31 July 1997. It covers exchange line rentals, connections and the take-over of lines; local, national and international call charges; directory enquiry and operator service call charges; and freephone and 0345¹ charges. Together these products generate about 60 per cent of BT's total revenue. The current price cap does not allow any single price to increase by more than the RPI, except for exchange line rentals which can be raised by up to RPI+ 2 per cent. The DGT has recently announced² proposals for the abolition of the restriction on exchange line rentals.

3.20. BT has an obligation to provide telecommunication services to every person who requests it in any place in the UK (other than Kingston-upon-Hull³), except to the extent that the DGT is satisfied that any reasonable demand is, or is to be, met by other means. This is the basis of what is known as the USO, which is generally taken to mean the requirement to provide customers with direct access to a switched telephone network, and with the ability to make and receive voice calls, at a reasonable price.

3.21. Condition 17 of BT's licence prohibits 'undue preference' and 'undue discrimination' by BT in respect of telecommunication services it provides. This constrains BT's ability to charge different customers different prices, eg in different parts of the country. Condition 17A, however, permits a certain degree of differential pricing and provides for the DGT to issue guidelines to BT that specify the levels above or below which BT can set charges without infringing the prohibition on undue preference or undue discrimination. Condition 16 of BT's licence requires BT to publish terms and conditions, including charges, for those services which BT provides in accordance with an obligation placed on it by its licence and to adhere to those terms and conditions.

Interconnection

3.22. BT currently possesses a large and more importantly the only comprehensive-network infrastructure within the UK. As a result most calls have, at least at some stage, to make use of BT's facilities. New entrants can therefore only operate by interconnection with BT's network. In consequence much regulatory attention has focused on terms and conditions for such interconnection.

3.23. Condition 13 of BT's licence requires BT to enter into agreements with other operators to interconnect their systems with the BT network. This obligation embraces not only operators authorized by individual licences to construct their own networks, such as Mercury and the cable companies, but also operators which resell the facilities of network providers such as BT and do not construct their own networks.

3.24. Substantial growth in interconnection began in 1991 with the Government's decision to end the duopoly which had existed in favour of BT and Mercury. At that time changes were introduced into BT's licence to permit the future introduction of NP and equal access⁴ (subject in each case to the outcome of a cost-benefit analysis). The licence amendments also allowed for BT to raise Access Deficit Contributions (ADCs) from other operators, ie contributions towards covering BT's deficit on its local access network, equivalent to those implicitly paid by BT through its retail call prices. (The deficit arose because exchange line rentals had been held down for social reasons.)

3.25. Following consultation with the industry BT subsequently agreed that the DGT should have power to waive ADC contributions from other operators, in whole or in part, in recognition of the obstacles to entering the market. In practice only Mercury has so far been required to pay any ADCs and these only in

¹0345 calls are charged as local calls although not actually local.

²*Effective Competition: Framework for Action*, July 1995, paragraph 3.25.

³Kingston Communications carries similar obligations in the Hull area.

⁴'Equal access' means a facility provided by BT to another operator whereby a customer of BT may choose to use the other operator for national and international calls, either by pre-selection or on a call-by-call basis.

respect of a proportion of its international traffic. In July 1995 the DGT expressed his intention¹ to abolish ADCs, alongside the removal of the RPI+ 2 price cap on exchange line rentals.

3.26. Condition 13 provides that where BT and other parties are unable to agree certain terms and conditions of interconnection, the DGT may determine them, including the charges payable. The condition also provides that interconnection charges should enable BT to recover its costs, including the fully allocated costs attributable to the services to be provided and taking into account relevant overheads and a reasonable rate of return on attributable assets. Since March 1993 BT has been required to publish all new interconnect agreements and all amendments to existing agreements.

3.27. With the licensing of a large number of operators, all of whom required interconnection with BT, it became apparent that the former practice of individual negotiation, to be followed by DGT determination where the parties could not agree, created a number of problems. The DGT issued a statement (*Interconnection and Accounting Separation-The Next Steps*) in March 1994. The purpose was to seek the views of the telecommunication industry on how the interconnect regime could best be adapted to meet the needs of the developing multi-operator environment. Following consultations five new conditions were added to BT's licence on 1 April 1995. Known as Interconnection and Accounting Separation (ICAS), these conditions are intended to improve transparency and non-discrimination in relation to interconnection. They cover:

- (a) separate accounts and prevention of unfair subsidy/cross-subsidization (Condition 20B);
- (b) standard interconnection services and prices (Condition 16B);
- (c) non-discrimination in quality of service, and the specification of quality of service targets (Conditions 17B and 17C); and
- (d) the relationship between BT's retail prices and interconnection charges (Condition 24F).

In addition changes were made to Condition 13 to ensure that prices paid by other operators are based on up-to-date cost information.

Apparatus supply

3.28. Regulatory policy in the field of apparatus supply is intended to ensure that BT does not use its position as a provider of network services to gain an unfair advantage over companies which simply offer apparatus. BT is prohibited from tying the sale of network services to the supply of apparatus and from offering services more cheaply if they are bundled with apparatus. It must also identify charges for apparatus separately from charges for network services. In addition to these specific rules BT's apparatus supply business is required to account for its business activities separately from the rest of BT. These separate accounts are then used by OFTEL as a basis of monitoring any potential cross-subsidization of BT's apparatus supply business.

Portability

3.29. At present large blocks of numbers are allocated to each network operator; these numbers are exclusively for the use of that operator although sharing and suballocation of number blocks is allowable under OFTEL numbering conventions and does take place. NP is a facility which enables customers to retain their telephone numbers when changing network operators. There are several variations of NP currently under discussion:

- (a) *Portability of geographic numbers.* Geographic numbers are 'ordinary' telephone numbers which are located in a particular geographical area of an operator's network. Local area portability refers to the ability of a user to retain a telephone number when moving residence within the area served by the

¹ *Effective Competition: Framework for Action*, July 1995, paragraph 1.7.

local telephone exchange. This can be done, and is done now, within the BT network, by altering exchange connections within the local exchange. BT offers the service to customers at a one-off charge (in August 1995) of £30.50 (plus VAT). Portability of geographic numbers between suppliers refers to the retention by a customer of his or her existing number when changing operator while remaining at the same address, or moving within the same exchange area. *Out of area* portability refers to the ability of a user to retain a telephone number when moving outside the area normally served by the current local exchange. BT provides this service but there is an ongoing charge for it-£50+ VAT initial charge and £55.31+ VAT per quarter for those on digital exchanges; £134.60+ VAT initial charge and the same charge per quarter for those on analogue exchanges. *Number block portability* refers to the situation where a block of numbers ranging from 2 to 10,000 used by a single customer (normally a business) is transferred to another operator.

- (b) *Portability of non-geographic numbers* refers to portability between operators of numbers which are not related to a geographic area. Examples are freephone numbers in the 0500 (Mercury) and 0800 (BT) ranges, premium rate numbers such as 0891, numbers for mobile telephones, and numbers referred to as 'personal numbers'-that is those allocated to an individual rather than a fixed telephone instrument.

3.30. The terms of reference of the present inquiry (Appendix 1.1) are concerned with portability when a customer changes from one operator to another. They cover the portability of:

- (a) geographic numbers, including blocks of geographic numbers (as in paragraph 3.29(a)); and
- (b) certain categories of non-geographic numbers such as those for freephone and local rate (eg 0345) services.

They do not cover the portability of numbers for mobile telephones because this service falls outside the definition in the reference where portability is defined as 'a facility provided by one Operator to another which enables a person to whom Directly Provided Telecommunication Services are provided by one Operator by reference to a telephone number to retain that telephone number if Directly Provided Telecommunication Services are instead provided to that person by another Operator'. In the same paragraph 'Directly Provided Telecommunication Services' are described as being obtained by connecting a person's telecommunication apparatus (eg a telephone) to any termination point of the operator's system. This clearly excludes mobile services which are not physically linked to the operator's system.

3.31. In July 1989 the DGT issued a consultative document entitled *Numbering for Telephony Services into the 21st Century*, which presented the preliminary findings of research to establish the features which users, both residential and business, required from a numbering scheme and to examine the experience of other telecommunication administrations throughout the world.

3.32. Following the duopoly review (see paragraph 3.14) BT agreed to a licence modification addressing numbering in general and NP in particular. The modification, Condition 34B paragraphs 11 to 18, was inserted into BT's licence on 24 September 1991. Under this condition provision was made for the DGT to take over from BT the function of allocating telephone numbers, in accordance with certain conventions which the DGT would publish. The numbering conventions were finally issued in June 1994, although the DGT had before that date set up a Numbering Unit within OFTEL and the allocation of numbers to operators had commenced before then. Groups of numbers are assigned to various different operators, including BT, and those numbers are available for the operators to allocate them, in their turn, to their customers.

3.33. Paragraphs 11 to 15 of Condition 34B (see Appendix 3.3) are concerned with NP, and paragraph 7 also refers to it. The concept of portability is narrowly defined in the licence, in that it applies only to the ability of a person provided by an operator with an exchange line at a fixed address to retain the same telephone number if he or she arranges for another operator to provide the line instead. This definition excludes the portability of non-geographic numbers.

3.34. Paragraph 34B.13 sets out three pre-conditions before the DGT can direct BT to provide portability to another operator. These are that:

- (a) it is technically feasible for portability to be provided by BT throughout the specified geographical area;
- (b) the DGT must have carried out a cost-benefit analysis indicating that in the geographical areas where portability is expected to be provided the benefits outweigh the likely costs; and
- (c) any public telecommunication operator to whom BT is directed to provide portability is willing to enter into an agreement with BT to provide reciprocal portability, and does so.

3.35. Paragraph 34B.13 states that 'a direction or determination under this Licence will not determine how the costs of portability are to be borne and a direction under paragraph 34B.11 will not be made in respect of a geographical area unless these conditions are met' (the conditions in paragraph 3.34 above). This implied limitation of the powers of the DGT accords with the Government's view as set out in a letter from the Secretary of State for Trade and Industry to the Chairman of BT in February 1991 summarizing the agreements reached in the duopoly review. The relevant passage reads:

BT to agree to modification of numbering Licence Condition to allow OfTel to administer numbering plan. Without prejudice to other call-forwarding services, Licence Condition is to provide for the introduction [of]¹ limited numbering portability, to allow customers to change network without changing numbers at the same address, where technically feasible and where justified on cost benefit grounds. The condition will not empower the Director General to determine how the costs of portability are to be borne.

3.36. Paragraph 34B.14 provides that the DGT may specify the geographical areas and dates on which portability is to be introduced and states that any agreement or determination under Condition 13 (relating to the interconnection of BT's system with that of another operator) may lay down the methods by which calls are to be routed between BT's system and the system of another operator for the purpose of providing portability.

3.37. Paragraph 34B.15 entitles BT to require other operators to bear all the reasonable costs associated with routing calls to the operators' systems. In the case of a dispute as to those costs the DGT may determine them and BT cannot be obliged to allocate numbers and route calls unless the other operator agrees to bear the costs determined by the DGT.

The NERA cost-benefit analysis

3.38. In December 1992 OFTEL commissioned NERA to carry out, for the UK as a whole, the cost-benefit analysis required by Condition 34B of BT's licence as a pre-condition to the introduction of NP. In August 1993 OFTEL circulated a draft report by NERA for consultation within the industry. NERA had investigated the costs and benefits of a number of different technical methods of delivering NP:

- (a) a transitional option using the remote call forwarding facility already available and in use on the BT system;
- (b) call redirection with local exchange interconnection;
- (c) call redirection with trunk exchange interconnection;
- (d) call rerouting using the signalling network to access data held in the terminating local exchange (the call drop-back solution);
- (e) call rerouting using IN based data; and
- (f) a total IN solution in which all calls undergo IN interrogation.

An explanation of the various options as now perceived is set out in Chapter 5.

¹Word omitted from letter.

3.39. The NERA report identified three categories of benefits associated with NP:

- (a) *Type 1 benefits* accrue to the customers who port their numbers. Their benefits include savings from not having to change their number; from switching to lower cost operators; and from the convenience of dealing with only one operator (at present some customers use BT lines for incoming calls, in order to avoid the costs associated with number change, and another operator for outgoing calls).
- (b) *Type 2 benefits* accrue to all UK telecommunication customers. They arise from efficiency improvements and associated price reductions which result from increased competition in the telephony market due to the availability of NP.
- (c) *Type 3 benefits* are other savings which accrue generally-but mainly to calling subscribers-as a result of there being fewer number changes. These include fewer misdialled calls and fewer calls to directory enquiries.

3.40. The NERA report and responses to it are detailed in Chapter 7.

Work of the NICC

3.41. In a press release of 13 January 1994 the DGT announced that, in the light of the NERA cost-benefit analysis, he intended to use his powers under the BT licence to bring about the early introduction of NP. The Network Interfaces Co-ordination Committee, later renamed the Network Interoperability Consultative Committee, an industry body charged with producing standards for technical interfaces, was asked to produce an interface which would enable operators to pass ported numbers to each other. The NICC completed this task in August 1994.

3.42. As well as defining a standard for the interconnection of ported calls, the NICC also addressed the means by which portability was to be supported within the networks and made recommendations as to the solution which it considered the most efficient for individual operators. The technical problems and methods involved are described in Chapter 5.

Efforts to introduce NP

3.43. In his January 1994 press release the DGT also stated that it would be equitable for the costs of portability to be borne by operators roughly in proportion to market share. He added that he was considering ways of simplifying the formal procedures for the introduction of portability. He wrote to BT saying that he had begun work on the necessary directions to require BT to provide portability to certain operators who had said that they were willing to use call forwarding techniques to provide reciprocal NP.

3.44. In June 1994 OFTEL wrote to BT enclosing draft directions requiring BT to provide NP in certain cable areas by 7 October 1994. BT responded that it could only meet this time-scale using its existing 'remote call forwarding' (RCF) retail product. In August the cable company Videotron confirmed that it would proceed using RCF, but declined to accept the standard retail charges for the service.

3.45. Following the failure of negotiations between BT and Videotron the DGT, in exercise of his powers under Condition 34B.11 of BT's licence, formally directed BT on 22 August 1994 to provide NP to Videotron in six of its seven franchise areas by 7 October 1994. By 7 October 1994 the network arrangements were in place for BT to port numbers to Videotron. However, the parties were unable to reach agreement on the financial terms on which portability would be provided.

3.46. On 25 November 1994 the DGT wrote to BT expressing concern that BT and Videotron had failed to agree terms and proposing a modification to Condition 34B of BT's licence that would in particular give him a residual power to determine the commercial terms of agreement if the parties could not agree. The text of the draft modification established the key principles on the basis of which such a determination should be made, including a provision that each operator should bear the costs which it incurred in making the

modifications necessary for implementing portability in its own system and that additional conveyance costs should be shared between BT and other operators 'as appropriate'. Among other matters the proposed modification expanded the scope of the licence condition so as to cover categories of non-geographic numbers associated with particular telecommunication services, such as 0800 and 0345 services.

3.47. Following a period of informal consultation the DGT sent BT a revised proposal on 24 January 1995. The costs of portability were analysed as comprising:

- (a) system set-up costs;
- (b) per line set-up costs; and
- (c) additional conveyance costs.

It was the DGT's view that each operator ought to pay its own system set-up costs (that is any network and system modifications). As regards per line set-up costs (the costs incurred in adjusting switches and administrative records each time a customer ported a number), the DGT likewise considered it equitable for each operator to bear its own costs. Additional conveyance costs, resulting from the extra routing required within an operator's network in order to identify a ported number and pass it to the operator to which the customer had transferred, should not be charged to the receiving operator. Instead it should form part of the costs used in calculating all standard charges and thus fall on all customers and not just those who ported.

3.48. Both informal and formal consultations took place between OFTEL and BT following the DGT's revised proposal of 24 January. On 22 February the DGT issued a draft modification to BT's licence for public consultation (see Appendix 3.4). On 24 March 1995 the DGT again wrote to BT, stating his view that the company should bear the greatest share of its own additional conveyance cost, although suggesting that BT might recover its per line set-up costs. BT remained unable to agree the principles suggested, although it did offer, in a letter dated 6 April 1995, to base its charges for additional conveyance costs on long-run incremental costs (which would include some overheads) rather than fully allocated costs.

3.49. As a result of being unable to reach agreement with BT, the DGT on 27 April 1995 made a reference to the MMC, initiating the present inquiry. The text of the reference is at Appendix 1.1 and a chronology of events is at Appendix 3.5.

3.50. From May 1995 BT entered into portability trials with TeleWest, Videotron and NYNEX to develop technical and operational standards and the necessary processes to support NP. BT offered NP to all fixed wire operators on 2 October 1995, but said that the speed of its introduction would depend on the rate of operator take-up and the completion of feasibility studies.

Portability outside the UK

3.51. The following paragraphs give a brief overview of the countries where portability is known to be on the regulatory agenda.

USA

3.52. NP for '800' freephone services has been available in the USA since 1993. The Number Administration and Service Centre (NASC), which manages an advanced intelligent network (AIN) technology, has been centralized and 800 providers interrogate an independent database to find out which long-distance carrier to pass an 800 call to. Costs of the shared system are distributed between 800 service providers and are recovered through a fixed fee and a charge for every 'dip' into the database. Every 800 call necessitates such a 'dip'.

3.53. The 800 services apart, the issue of NP is still a minor one in most parts of the USA but is gaining prominence. The Industry Numbering Committee is addressing the implementation and deployment of a database method that would make geographic telephone numbers portable. In two states, New York and Washington, operator and regulatory decision-makers are said to be focusing on NP as an important area for

innovation. In the general absence of competition in the local networks, NP is seen by the regulatory authorities as a means of easing entry and as a precursor to local competition.

3.54. States are developing their own solutions which differ quite markedly. The Federal Communications Commission is actively investigating the issue. In July 1995 it issued a Notice of Proposed Rulemaking on the subject of NP for comment by 12 September 1995. The notice discussed the porting of both geographic and non-geographic numbers and both interim and longer-term solutions. The conclusion of the notice states:

Number portability is an increasingly important issue that has direct impact on the provision of interstate telecommunications services. By this Notice we seek to draw upon the industry and state efforts with respect to number portability as we develop a record on the public interest benefits of number portability and how best to implement specific solutions to number portability problems.

Australia

3.55. The provision of portability is being investigated by the regulator, Austel, whose representatives visited both the UK and the USA in May 1995 along with representatives of the two carriers. Austel's investigations range across all services, including local calls, freephone, premium rate and mobile services. The present duopoly ends in 1997 and the broad principles relating to the post-duopoly regulatory regime are still under discussion.

3.56. Following a study which showed a positive cost-benefit result, Austel has proposed that NP should be implemented on the telephone network from early 1996, followed by freephone in late 1996 and mobile services in mid-1997. It is thought likely that a variant on the UK data decode solution will be used initially, while IN may be used for the later services.

Hong Kong

3.57. Hong Kong Telephone Company, in which Cable & Wireless has a stake, held a monopoly until 30 June 1995. Three new operators have now been granted licences to provide domestic voice telephony services and NP has been implemented for basic telephony using call forwarding techniques. In practice, however, very few numbers have been ported. The regulator, OFTA, has established priorities for implementing NP for basic telephony and for personal numbering services. It is also envisaged that NP will be available for freephone and mobile services in the future.

EC

3.58. The European Commission issued a Communication on 3 May 1995 following a Green Paper consultation on infrastructure liberalization. This confirmed support for the principle of the rapid introduction within member states of NP to allow customers at a specific location to retain their numbers when switching between operators or service providers. A longer-term aim is to provide NP for customers between locations within a member state.

France

3.59. NP is one of the major subjects discussed at the *Commission Consultative à la Numérotation*. The regulator, Direction Générale des Postes et des Télécommunications, has set up a commission. No concrete proposals have yet been presented.

Ireland

3.60. There is no local competition and no regime for NP at present. The regulator has recently taken over numbering responsibilities and a new plan is about to be agreed with regard to the numbering of mobile services. The regulator has stated that the regime for mobile services will include as a basic principle full NP with implementation as soon as possible. However, the actual date for its introduction has not yet been decided, nor how costs will be allocated.

Other countries

3.61. Several other countries including Denmark, Germany, the Netherlands, New Zealand and Singapore are now evaluating various forms of NP, and Finland and Sweden plan to introduce local NP.