



INCA/CLI for NTS interconnection charging

Explanatory Statement and Notification of a draft Direction
Issued by the Office of Communications.

Statement

Issue date: 8 July 2004

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Section 1

Summary

- S.1 This explanatory statement contains a notification of the Office of Communications ("Ofcom")'s draft Direction relating to the method used by BT to calculate its wholesale conveyance charges for Number Translation Services ("NTS") calls which originate on or transit the BT network for termination on NTS numbers of other Terminating Communications Providers ("TCPs"). Ofcom is publishing this statement following Oftel's consultation on this issue entitled .Options for NTS Interconnection Charging., which was published in December 2003 ("the December consultation").
- S.2 The December consultation set out four different options for how BT's NTS interconnection charges should be calculated. These were: (i) moving to an automated system using BT's Inter-Network Call Accounting ("INCA") billing system using Calling Line Identification ("CLI") (referred to in this document as "INCA/CLI"); (ii) retaining the existing manual Network Charge Differential ("NCD") methodology directed by Oftel in 1999; (iii) reliance on relevant significant market power ("SMP") conditions imposed on BT to provide NTS Call Origination on fair and reasonable terms; or (iv) implementing an alternative NTS interconnection billing methodology. The December consultation sought views on those options and also, how, if the use of INCA/CLI was imposed, the costs of doing so should be recovered.
- S.3 A total of 8 responses were received from BT and both Originating Communications Providers ("OCPs") and TCPs and these are available on Ofcom's website at:

http://www.ofcom.org.uk/consultations/past/nts_ic_condoc/nts_ic_resp/?a=87101.

The majority of these supported the proposal to move to INCA/CLI billing but there were differing views on whether and how BT's costs should be recovered. Some respondents also thought that additional costs incurred by TCPs in configuring their own billing systems to work with INCA/CLI should also be considered.

- S.4 Ofcom is aware that, since the December consultation, which closed at the end of January 2004, there have been (and continue to be) significant industry developments in relation to NTS. These developments and their impact on the options put forward for NTS interconnection billing and Ofcom's other work related to NTS are described in this statement.
- S.5 Ofcom considers that the industry developments and recent work initiated by Ofcom to re-examine the entire NTS framework do not detract from the need for an accurate billing system to calculate BT's wholesale conveyance charges. Whatever changes are made to the NTS framework will still require BT's conveyance charges to be as accurate as possible and the correct incentives to be in place for all Communications providers ("CPs") to be able to plan and design efficient interconnection arrangements with BT.
- S.6 Following consideration of the consultation responses, and mindful of recent industry developments, Ofcom is proposing in this document that BT should implement its INCA/CLI billing system by **30 September 2005** and that, after a further three months to enable CPs to become accustomed to the new system, the existing NCD methodology should be withdrawn from **31 December 2005**.

- S.7 In relation to BT's charge for recovery of its additional set-up and on-going costs in completing this work, Ofcom considers that these costs should be recovered from all NTS operators, including BT itself, and should take the form of a pence per minute ("ppm") surcharge to BT's existing NTS conveyance charges.

Consultation on the draft direction

- S.8 A notification of Ofcom's draft Direction is at Annex F, in accordance with section 49 of the Communications Act 2003 ("the Act"). The effect of and reasons for the draft Direction are contained in Section 6 of this Explanatory Statement. Ofcom is consulting on the draft Direction for one month. Ofcom considers this to be sufficient time given the previous consultation on the issue, and the fact that this issue is of interest to members of the Industry only rather than consumers. Responses are therefore required by **9 August 2004**.

Section 2

Introduction

Scope

- 2.1 This explanatory statement and notification of a draft Direction sets out Ofcom's draft decision to require BT to move to a more accurate system of calculating BT's Number Translation Services ("NTS") call origination and transit network charges. The system concerned uses the Element Based Charging ("EBC") matrix through BT's Inter-Network Call Accounting ("INCA") wholesale billing system using Calling Line Identification ("CLI"), and is already in use for most other call types. This new system is referred to in this document as INCA/CLI and, once introduced, the existing manual calculation method known as the Network Charge Differential ("NCD"), established by Oftel in 1999, should be withdrawn.
- 2.2 The INCA/CLI system was initially introduced by BT in late 2000 but its use has, until now, been rejected by other Communications Providers ("CPs") on two main grounds (and these are set out in greater detail in Annex C):
- i. its inability to identify transit calls from Indirect Access ("IA")/Carrier Pre-Selection ("CPS") providers or ported numbers at the point of handover; and
 - ii. the fact that calls may not always be charged according to least cost routing principles ie using the measurement of the shortest route between the point of origin of a call on the BT network and the point of handover to the Terminating Communication's Provider ("TCP") at the nominated point of connection ("POC") with the TCP's network.
- 2.3 One other issue for CPs was the practice by BT of only updating the EBC matrix to take account of new POCs every three months. CPs consider that this period is too long given that the length of time taken to order and install POCs could mean that over six months can elapse after new POCs are ordered before they are recognised for charging purposes by the EBC matrix. As part of the work to be undertaken by BT to address the INCA/CLI limitations, BT will move to monthly EBC updates to reduce the delay.

The Consultation

- 2.4 On 23 December 2003 Oftel published the December consultation, which should be read in conjunction with this explanatory statement. The December consultation sought views on four options for the future of BT's interconnection charging mechanism for NTS calls. These were: (i) moving to an automated system using BT's INCA billing system using CLI (referred to in this document as INCA/CLI); (ii) retaining the existing manual NCD methodology directed by Ofcom in 1999; (iii) reliance on relevant SMP conditions imposed on BT to provide NTS Call Origination on fair and reasonable terms; or (iv) implementing an alternative NTS interconnection billing methodology. The December consultation sought views on those options and also, how, if the use of INCA/CLI was imposed, the costs of doing so should be recovered.
- 2.5 The December consultation can be found via the Ofcom website at: http://www.ofcom.org.uk/consultations/past/nts_ic_condoc/nts_charging.pdf.

Chapter 1 of the December consultation contained a brief history of NTS and the evolution of NTS interconnection charging which is not repeated in this document.

- 2.6 Responses were received from eight CPs, including BT, and these are summarised in Section 4 of this statement.
- 2.7 On 29 December 2003 Oftel joined four other communications regulators to form the Office of Communications (Ofcom). Ofcom regulates the communications sector under the new framework established by the Communications Act 2003 ("the Act").
- 2.8 Ofcom is aware of wider industry and consumer concerns about the overall functioning of the NTS regime, and the impact of recent industry developments on the provision of NTS services. These are, for example: (i) the new NTS pricing initiatives; (ii) the position of non-dominant OCPs; (iii) wider consumer concerns about the proliferation of NTS numbers; and (iv) alternative NTS models. As a consequence Ofcom has announced its intention to conduct a re-examination of the framework surrounding NTS as a whole and will be consulting on this issue later this year.
- 2.9 Some CPs have expressed a view that any proposal to revise the methodology by which BT charges for NTS call conveyance should form part of the overall NTS framework re-examination. This would ensure that an agreed billing solution is consistent with any structural changes to the NTS framework that may ultimately be introduced.
- 2.10 As Ofcom has explained to the relevant industry group (the NTS Focus Group) Ofcom aims to address the wider NTS issues as part of Ofcom's NTS framework re-examination. Both this explanatory statement and the NTS framework re-examination (and the other NTS work with which Ofcom is engaged - see below) are part of Ofcom's NTS Policy Programme, which has been set up with the aim of ensuring that the NTS regime continues to meet Ofcom's mission of furthering the interests of the citizen-consumer where appropriate by encouraging competition.
- 2.11 Recent market developments and industry concerns have been noted in the preparation of this statement. However, Ofcom does not wish to delay further the introduction of a system which will ensure BT's charges more accurately represent its costs for conveying NTS calls and which has been outstanding a considerable length of time. In any event, the ability of BT to more accurately calculate its charges for NTS interconnection (or at the very least being able to more accurately record its per-call costs) is likely to be of significant benefit notwithstanding any structural changes to NTS that may result from Ofcom's NTS framework re-examination.
- 2.12 Therefore, following consideration of the consultation responses, and mindful of recent industry developments, Ofcom has decided that BT should implement its INCA/CLI billing system by **30 September 2005** and that, after a further three months to resolve any issues that may arise from the change, the existing NCD methodology should be withdrawn from **31 December 2005**.
- 2.13 In relation to BT's charge for recovery of its additional set-up and on-going costs in completing this work Ofcom considers that this should be recovered from all NTS operators, including BT itself, and should take the form of a pence per minute ("ppm") surcharge to BT's existing NTS conveyance charges.
- 2.14 In formulating its proposals Ofcom considered whether it would be appropriate to set the INCA/CLI surcharge itself, or set out a detailed methodology in the direction by which BT would set the charge. However, Ofcom does not consider that it would be

appropriate to set a charge at this time, taking into account the forthcoming review of the Network Charge Control (the current control is due to expire in September 2005), which will take into account BT's NTS conveyance charges including the additional charges incurred in implementing the requirements of the draft Direction at Annex F.

- 2.15 Ofcom considers that the work required to implement the INCA/CLI method should commence as soon as possible on publication of the final direction following this consultation.

The Legal Framework

- 2.16 On 25 July 2003 a new regulatory regime for electronic communications networks and services came into force which, inter alia, required the abolition of licences for telecommunications operators. The new regime also required that National Regulatory Authorities (NRAs) undertake reviews of communications markets to establish whether SMP exists in any market and, where it does, what regulatory obligations are considered necessary. Pending the outcome of those reviews certain licence conditions and directions made under the Telecommunications (Interconnection) Regulations 1997 ("the 1997 Regulations") were continued under Continuation Notices issued under the Act, so that they would continue to apply to relevant operators including BT. This included the Direction Concerning BT's NTS Conveyance ("the NTS Conveyance Direction") in November 1999 (<http://www.ofcom.org.uk/static/archive/oftel/publications/1999/consumer/nts1199.htm>). Following the Review of fixed wholesale narrowband access, origination, conveyance and transit markets published on 28 November 2003 ("the November Review"), BT was found to have SMP in the markets identified in that review, and certain SMP conditions were imposed on BT including Condition AA1(a) (Requirement to provide Network Access on reasonable request) and AA11 (Requirement to provide NTS Call Origination). Under Condition AA1(a).2 BT must provide Network Access as soon as reasonably practicable on fair and reasonable terms and on such terms, conditions and charges as Ofcom may from time to time direct. Under Condition AA11 BT must provide NTS Call Origination on fair and reasonable terms, and on such terms, conditions and charges as the Director may from time to time direct. Following the November Review continued licence conditions and interconnection directions, including the NTS Conveyance Direction, were discontinued by way of discontinuation notices issued under the Act and hence are no longer in force. However, the arrangements under the various NTS directions made under the 1997 regulations which were continued are still in place.
- 2.17 As referred to above Conditions AA1(a) and AA11 contain a direction-making power to set terms, conditions and charges for, in this case, NTS transit (which is a form of Network Access covered by Condition AA1(a), and NTS Call Origination. Under section 49 of the Act, directions made under an SMP condition, including under Conditions AA1(a) and AA11, must be objectively justified, non-discriminatory, proportionate and transparent. Section 49 also sets out the procedural requirements for making proposals for such directions i.e. there must be a notification setting out the proposal, its effect and the reasons for making it, etc. and there must be consultation on the proposal for at least one month.
- 2.18 In making a proposal for a direction Ofcom must also have regard to its duties under section 4 of the Act to take account of the six Community requirements. Ofcom must also consider its relevant duties under section 3 of the Act including furthering the interests of consumers in relevant markets, where appropriate, by promoting competition.

- 2.19 The obligation to introduce the INCA/CLI billing system rests entirely with BT, which will be subject to the direction under Conditions AA1(a) and AA11. However, in the absence of an alternative charging mechanism, non-dominant TCPs will need to configure their systems to inter-operate with INCA/CLI in order to be able to terminate NTS traffic.

Consultation on the draft direction

- 2.20 A notification of Ofcom's draft Direction is at Annex F, in accordance with section 49 of the Act. The effect of, and reasons for the draft Direction are contained in Section 6 of this Explanatory Statement. Ofcom is consulting on the draft Direction for one month. Ofcom considers this to be sufficient time given the previous consultation on the issue, and the fact that the issue is only of interest to members of the Industry rather than consumers. Responses are therefore required by **9 August 2004**.
- 2.21 Ofcom is satisfied that its draft decision fulfils the relevant legal tests in the Act i.e. that is objectively justifiable, not unduly discriminatory, proportionate and transparent. Ofcom has considered and acted in accordance with its general duties in sections 3 and 4 of the Act. This is further explained in Section 6 of this explanatory statement.

Regulatory Impact Assessment

- 2.22 The analysis presented in Section 5 and Annex D, when read in conjunction with the rest of the document, represents a Regulatory Impact Assessment (RIA), as defined by section 7 of the Communications Act 2003. You should send any comments on this RIA to us by the closing date for this consultation. We will consider all comments before deciding whether to implement our proposals.
- 2.23 RIAs provide a valuable way of assessing different options for regulation and showing why the preferred option was chosen. They form part of best practice policy-making and are commonly used by other regulators. This is reflected in section 7 of the Act, which means that generally we have to carry out RIAs where our proposals would be likely to have a significant effect on businesses or the general public, or where there is a major change in Ofcom's activities. In accordance with section 7 of the Act, in producing the RIA in this document Ofcom has had regard to such general guidance as it considers appropriate, including related Cabinet Office guidance.

Section 3

Links to other Ofcom work

Introduction

- 3.1 Ofcom is undertaking a number of different NTS-related activities at the moment, of which this explanatory statement and draft Direction on NTS Interconnection Charging is only one. This statement has links to Ofcom's other NTS work at both a tactical and strategic level. In this section, the various strands of Ofcom's NTS work are set out for completeness. Dependencies if any between those strands and this explanatory statement are highlighted and Ofcom's approach to dealing with those dependencies is set out.

Ofcom's tactical work on NTS

a. Statement and further statutory consultation on Calls to 0845 and 0870 numbers: review of retail price and numbering arrangements

- 3.2 On 29 April 2004 Ofcom issued a statement setting out, amongst other things, Ofcom's decision that the current link on the BT network between BT's retail price for 0845 and 0870 calls and BT's standard (pre-discount and call package) retail price for geographic local and national calls respectively will remain in place. A copy of the statement can be found at:
<http://www.ofcom.org.uk/consultations/past/0845/?a=87101>.
- 3.3 Ofcom does not consider that there is any dependency between Ofcom's decision in relation to the retail pricing of calls to 0845 and 0870 numbers and this statement, since this statement relates to BT's wholesale charging arrangements for the conveyance of NTS calls.

b. Retail Uplift

- 3.4 In the November Review Oftel imposed Condition AA11, referred to in section 2, as a remedy to BT's SMP in the market identified in that review.
- 3.5 Condition AA11 places an obligation on BT to retail NTS calls on behalf of CPs (including TCPs) and to pass the retail revenue net of a retention for its wholesale charges to the TCP. The charges that BT can retain for the provision of wholesale NTS call origination comprise regulated charges for origination and conveyance of the NTS call, retailing the NTS call (retail uplift), and, for premium rate service ("PRS") calls, a PRS bad debt surcharge. The review also concluded that the retail uplift charge should be implemented as a charge control.
- 3.6 In preparation for the implementation of the NTS retail uplift charge control, Oftel commissioned independent consultants to undertake a study on the retail costs, such as billing and marketing, which it is appropriate for BT to include in the NTS retail uplift charge. Oftel published the consultants' reports on 19 December 2003 to allow the industry time to review them in advance of an Ofcom consultation process for setting the charge. A copy of the consultants' reports can be found at:
http://www.ofcom.org.uk/legacy_regulators/oftel/review_nts_retail_uplift/?a=8701
- 3.7 Ofcom has issued a consultation document entitled Number Translation Services Retail Uplift charge control and Premium Rate Services bad debt surcharge on its

proposals for the revised charge and the relevant charge control mechanism which is available from Ofcom's website. It is possible that the proposed charge control may result in a change in the retail uplift charges. This would result in a change to the termination payments (also known in the past as .POLOs.: payments to other licensed operators) available to TCPs for calls to all NTS and PRS numbers.

- 3.8 However, Ofcom considers that it is possible to come to a conclusion on whether to change the method used by BT to calculate its network charges for originating and conveying NTS and PRS calls regardless of the outcome of Ofcom's current work on the NTS retail uplift. This is because BT will still be entitled to retain the retail uplift to cover its retail costs for originating these calls due to the requirements of the BT NTS Call Origination Condition. The sum of these two separate charges forms BT's total retention for NTS call origination plus, in the case of PRS, the additional allowance for bad debts.

c. Open Cases

- (i) Ofcom .own initiative. investigation into suspected margin squeeze

- 3.9 In response to stakeholder concerns about BT's decision to reduce its standard retail prices for .local rate. and .national rate. calls at certain times of the day and week, Oftel opened an .own initiative. investigation in July 2003 into a suspected margin squeeze at the Internet Service Provider (ISP) level of the NTS value chain, amounting to a possible breach of the Competition Act 1998. Given BT's likely dominance in upstream markets, the significant reductions made in out-payments to ISPs and representations made by industry parties in response to BT's price changes, Ofcom has a reasonable suspicion that BT's actions in reducing out-payments to ISPs may have the effect of imposing a margin squeeze on its competitors in downstream markets.

- 3.10 At the time of writing, this investigation is still continuing. Ofcom does not consider that this statement in any way affects or pre-empt the outcome of the investigation.

- (ii) NTS termination payments

- 3.11 On 1 June 2003 BT changed its retail prices for 0845 and 0870 calls at certain times of the day and week. Subsequently BT sent a pricing letter to other CPs relating to decreased termination payments, which was revised by another pricing letter on 24 October 2003. This pricing letter had an effective date of 29 August 2003, being 56 days after the original written notification. A number of CPs refused to sign the letters, and on 23 December 2003 BT referred a dispute to Oftel for resolution. Ofcom accepted the dispute on 28 January 2004.

- 3.12 On 27 May 2004 Ofcom published its final determination in this dispute and this is available on Ofcom's web site at:

http://www.ofcom.org.uk/consultations/past/nts_dispute/bt_dispute/.

- 3.13 In summary, the final determination directs the parties to agree to the revised terminating payments with effect from 29 August 2003 (with an adjustment to take account of new data about the average length of short duration calls). Here again any decision in regard to BT's wholesale network charging methodology will have no impact with regard to the determination made following this dispute.

- (iii) Increased NTS discounts from 1 April 2004

- 3.14 On 28 January 2004, BT issued Operator Charge Change Notices (OCCNs) notifying parties purchasing NTS call origination from BT of changes to the discount rate, effective 1 April 2004. The changes have the effect of a reduction in the retail call revenue passed by BT to these parties. A number of CPs have failed to sign or have rejected the 28 January 2004 OCCNs, and on 7 April 2004 BT referred a dispute to Ofcom for resolution. One of the CPs that did not sign the OCCN has also brought a related dispute to Ofcom.
- 3.15 All of these disputes are examples of how the current application of retail pricing decisions, discounts and calling packages by BT to NTS number ranges can cause changes in the terminating revenues available for NTS calls that are undesirable from the TCPs' point of view, and that drive disputes to the regulator. However, none of these has any impact on the need to ensure that the network component of BT's regulated charge for originating NTS calls is more accurately calculated to better reflect underlying costs.

d. BT's increase in termination rates for BT-hosted NTS services

- 3.16 On 1 April 2004, BT issued Network Charge Change Notification (NCCN) 500, notifying the industry of its intention to increase the termination rates for various BT-hosted NTS services from 1 May 2004. Ofcom is aware that the increase notified in the NCCN will be unpopular amongst both OCPs and TCPs primarily because, as a result of its regulatory obligations, BT considers itself to be constrained from accepting similar requests for increases in termination rates for NTS services hosted by other TCPs. OCPs may consider that they are faced with having to increase their retail prices for NTS calls as a result of NCCN 500 in order to recover their own costs of originating calls to BT's services.
- 3.17 On 4 May 2004 Energis submitted a complaint to Ofcom on the grounds that BT's new charges for termination of NTS calls, as set out in NCCN 500, constitute an abuse of BT's dominant position in contravention of the Competition Act 1998 or Article 82 of the EC Treaty. In considering Energis' submission Ofcom concluded that the issues raised are likely to be addressed (directly or indirectly) as part of Ofcom's wider review of the NTS regulatory regime which is currently underway under the banner of the NTS framework re-examination (see below). This project will provide a broad framework within which to consider the range of NTS issues including those raised by NCCN 500. Ofcom therefore decided to concentrate its resources on taking the NTS framework re-examination forward to its conclusion rather than diverting resources to running parallel competition law investigations into this specific issue.

Ofcom's strategic work with a link to NTS

a. Ofcom NTS framework re-examination

- 3.18 The NTS framework re-examination project has been set up by Ofcom to review the current NTS framework at a fundamental level to ensure that it meets Ofcom's strategic objective of furthering the interests of citizenconsumers through a regulatory regime which, where appropriate, encourages competition. Ofcom has initiated this work in response to growing consumer and industry concerns which cut across the entire NTS landscape, and which are not therefore amenable to resolution in isolation from each other.
- 3.19 Consumers are concerned about the proliferation of NTS numbers (particularly where use of a geographic number would appear to be equally appropriate), lack of pricing transparency, and pricing in itself. Industry is concerned about instability in revenues

for terminating these services, technical limitations of billing systems and the apparent inability of non-dominant OCPs to negotiate directly with NTS TCPs.

- 3.20 The project will work within the basic framework established in the November Review. It will make a detailed study of the operation of NTS and will consider how best NTS can meet the needs of all stakeholders in the long term and whether any changes to the framework would deliver net benefits. Ofcom intends that the project will describe and evaluate alternative NTS models, developed from information gathered during international benchmarking and via consultations with stakeholders, before coming to a conclusion on what if any new arrangements are required for NTS.
- 3.21 A number of NTS CPs have expressed a view that any decision regarding the method used by BT to calculate its charges for originating and conveying NTS calls should be taken within the overall context of the NTS framework re-examination. This is because discussions on alternative means of sharing the retail revenues from NTS calls are already underway and these will feed into the framework re-examination. Ofcom, however, considers that whatever framework for NTS results from the overall review, the ability of BT to more accurately calculate its charges (or at least record its underlying per-call costs) for origination and conveyance of NTS calls is likely to be of significant benefit to both BT and the NTS Industry. Ofcom therefore believes that the decision in this statement is far more likely to support rather than conflict with the objectives of the NTS framework re-examination.

b. The Ofcom Strategic Review of Telecommunications

- 3.22 The aim of the Ofcom Strategic Review of Telecommunications (“the Strategic Review”) is to assess the options for enhancing value and choice in the UK telecommunications sector. It will have a particular focus on assessing the prospects for maintaining and developing effective competition in UK telecommunications markets, while having regard to investment and innovation. It is intended to give Ofcom’s future casework and policy development a clear strategic framework for the future. It will not however be looking at the detail of individual types of calls and services (for example, NTS call origination or NTS call transit). Ofcom therefore considers it appropriate for the Strategic Review to proceed in parallel with Ofcom’s tactical work on NTS issues and Ofcom’s strategic NTS framework re-examination. Ofcom will ensure that there is effective internal communication of the key issues raised by each of these pieces of work, and that the outcome of the NTS-specific work is consistent with the objectives (and does not pre-empt the outcome) of the Strategic Review.

Section 4

Summary of responses to the consultation and Ofcom's comments

- 4.1 Copies of all the responses received to Ofcom's consultation document published on 23 December 2003 can be found on Ofcom's website at:
http://www.ofcom.org.uk/consultations/past/nts_ic_condoc/nts_ic_resp/?a=87101 The consultation document itself can also be found at:
http://www.ofcom.org.uk/consultations/past/nts_ic_condoc/nts_charging.pdf.
- 4.2 Responses were received from the following CPs:
- BT
 - Cable & Wireless
 - Easynet
 - Energis
 - Kingston
 - Ntl
 - Telewest
 - Thus
- 4.3 In the consultation document Ofcom presented four options for the methodology by which BT should calculate its charges for NTS call origination and conveyance, these were:
- i. to introduce INCA/CLI charging for NTS calls at a date to be agreed depending on when BT and CPs can complete the necessary enhancements to their systems. The NCD methodology would then be withdrawn such that the whole industry uses the same INCA/CLI charging methodology;
 - ii. to retain the NCD methodology for the foreseeable future and to continue allowing CPs to elect the method by which they wish BT's wholesale charges to be calculated. Ofcom would need to consider revising the NCD table setting out how the uplift is calculated in order to remove the provisions included by Ofcom in 1999 to mitigate the initial effect of de-averaging BT's charges on smaller CPs;
 - iii. for Ofcom not to issue any direction specifying how BT should charge for NTS call origination and transit, but to rely on the SMP obligation, Condition AA11, placed on BT as a result of the November Review, ie the obligation to provide NTS call origination on fair and reasonable terms;
 - iv. to implement an alternative methodology, as yet unknown, which may have emerged from the responses to the consultation.
- 4.4 Ofcom also asked a number of specific questions relating to the above options as well as inviting any general comments respondents wished to make. Many of the respondents' comments were the same. Therefore, rather than summarise each CP's

individual response, this chapter summarises the comments made to each of the questions asked:

Question 1: In relation to Ofcom's analysis of Costs and Benefits do BT and CPs agree that:

- i. the estimates of costs are reasonable;
- 4.5 No specific comments were made
- ii. the analysis of potential benefits is reasonable and achievable;
- 4.6 Most respondents agreed with Ofcom's summary of benefits and that these could be achieved
- iii. the benefits outweigh the costs:
- 4.7 Most respondents agreed that moving to INCA/CLI billing would bring substantial medium to long term benefits to both NTS CPs and consumers, the only proviso being that the benefits gained should not be undermined by inappropriate recovery of the costs involved.

Question 2: Do CPs agree that BT's costs should be shared equally by all NTS TCPs, including BT and that other TCPs should meet their own costs of inter-operating with INCA/CLI?

- 4.8 There were mixed views on how BT's costs should be shared. Some CPs believed BT should have anticipated the shortcomings when it first tried to introduce INCA/CLI in 2000. As such, these CPs considered that BT should bear its own costs for bringing the system up to an acceptable operational standard.
- 4.9 A number of CPs believed that if BT's costs were to be shared then CPs' costs for upgrading their own billing systems to work with INCA/CLI should also be taken into account. Other respondents asked that BT's cost estimates be subjected to independent scrutiny and that the resultant charge should be transparent and spread over a reasonable period and not take the form of a one-off levy.
- 4.10 One respondent argued that as an early adopter of INCA/CLI for BT-originated calls it has already incurred costs and that this should be considered by Ofcom in any apportionment of BT's system enhancement costs.

Ofcom's comments

- 4.11 Ofcom considers that for competitive neutrality to be maintained BT's INCA/CLI costs should be shared by all NTS CPs including BT itself.
- 4.12 In regard to CPs' own costs, all TCPs will benefit by being able to identify the call originator as a result of the new charging methodology. Given that none of the TCPs has any market power nor is obliged to be active in the NTS termination market (whereas BT is obliged to offer NTS call origination), the principles of cost causation, cost minimisation and distribution of benefits suggest that they should be liable for any costs that they incur.

- 4.13 Ofcom also disagrees with the view that BT should bear its own costs of enhancing INCA/CLI owing to its failure to implement a compliant system from the outset in 2000. BT designed its wholesale billing system to enable it to measure how much of its network was being used to convey or transit calls to TCPs. It was designed to provide summary information to enable TCPs to check the accuracy of BT's charges. This objective was met by the original system but the refinements sought by TCPs will have to be introduced at additional cost which should, in Ofcom's view, be met by all NTS providers as potential beneficiaries, including BT itself, to ensure competitive neutrality.
- 4.14 Ofcom disagrees that early adopters of INCA should not be required to bear the same costs as other CPs. All CPs will eventually incur additional costs as early adopters have already done. Early adopters also arguably took the decision to use INCA/CLI before other CPs in order to receive the benefits of using INCA/CLI sooner. The refinements now being introduced to INCA/CLI will potentially be of benefit to early adopters as well as other CPs. On all these grounds, Ofcom does not consider there is justification for charging early adopters any less than those who start to use the system later.

Question 3: How should BT's costs be recovered?

- i. Through an addition to BT's NTS call origination and transit charges
 - ii. Through an addition to PPP - BT's Product Management, Policy and Planning component of its general network charges (iii) As a one off payment levied against all NTS CPs
 - iv. Any other suggestions
- 4.15 BT proposed that its costs should be recovered through a per call levy on relevant call types only. By this it referred to transit calls originated by customers of IA and CPS CPs and from ported numbers.
- 4.16 There were mixed views from the other respondents. A small number of CPs suggested that BT's INCA/CLI enhancement costs could be recovered through the general network Product Management Policy and Planning ("PPP") charge and that no further surcharge was necessary. Others believed BT's costs were already catered for by the PPP charge. In general though the major concern was that if BT's costs were to be recovered then they should be subject to scrutiny and the resultant charge applied reasonably.

Ofcom's comments

- 4.17 Ofcom does not share BT's views on the means by which the costs of the oneoff enhancement work and ongoing operational management of INCA/CLI should be recovered. TCPs terminate transit calls because they choose to interconnect only with BT rather than directly with OCPs. There may be some TCPs, however, who happen to receive a larger proportion of non-BT originated traffic compared to other TCPs, perhaps because customers of a beyond the TCP.s control. A per-call surcharge on relevant transit calls may place a disproportionate cost burden on those TCPs who, through no fault of their own, happen to receive a high proportion of these calls.

- 4.18 In reference to whether BT's INCA/CLI enhancement costs are already being recovered in the PPP charge, Ofcom refers CPs to the consultation document entitled Review of BT's product management, policy and planning (PPP) charge published by Ofcom on 4 June 2004. This can be found on Ofcom's website at: http://www.ofcom.org.uk/consultations/current/rev_bt_pm/?a=87101
- 4.19 Paragraph 3.6 of Section 3 of that consultation document describes the activities Ofcom considers should be included in the PPP charge. These include "billing and finance" which is described as meaning:
- "collecting call detail records (CDRs), rating them using an element based charging matrix, issuing bills and call record summaries, invoicing, reconciling bills with the estimates produced by competing providers and dispute resolution"*
- 4.20 These activities refer to the ongoing billing process for all types of calls but do not include additional activities undertaken to enhance BT's billing systems for specific call types.
- 4.21 Having considered the responses, Ofcom considers that BT's costs for introducing INCA/CLI will be taken account of in the forthcoming NCC review due to take effect from October 2005.

Question 4: Which of the following options is preferred:

- i. to introduce INCA/CLI charging for NTS calls at a date to be agreed depending on when BT and CPs can complete the necessary enhancements to their systems. The NCD methodology would then be withdrawn such that the whole industry uses the same INCA/CLI charging methodology;
- ii. to retain the NCD methodology for the foreseeable future and to continue allowing CPs to elect the method by which they wish BT's wholesale charges to be calculated. Ofcom would need to consider revising the NCD table setting out how the uplift is obtained (see Annex A) in order to remove the provisions included by Oftel in 1999 to mitigate the initial effect of de-averaging BT's charges, on smaller CPs;
- iii. for Ofcom not to issue any direction specifying how BT should charge for NTS call origination and transit, but to rely on the SMP obligation, Condition AA11, placed on BT as a result of the November Review, ie the obligation to provide NTS call origination on fair and reasonable terms;
- iv. to implement an alternative methodology, as yet unknown, which may emerge from the responses to this consultation:

Question 5: Give reasons for this preference.

- 4.22 Most respondents favoured the introduction of INCA/CLI as a replacement for the NCD. Some, however, said that the NCD could be retained either in its present form or enhanced to be more CP specific.
- 4.23 One CP stated its view that there are other, more significant, issues facing the NTS community than conveyance charging. For Ofcom to require money and resource to be spent on upgrading BT's and TCPs. systems for INCA/CLI would be a costly

distraction when a CP-specific NCD which would provide equal incentives for CPs to optimise their networks could be established relatively quickly. The CP felt this to be especially relevant when the current INCA/CLI proposals failed (in their view) to properly address the transit problem at source. This CP had no wish to pay for a partial solution and felt the issue should be referred to NICC for a comprehensive long-term resolution.

Ofcom's comments

4.24 Ofcom disagrees that implementing the proposed INCA/CLI solution is money wasted. Any permanent, signalling-based solution to the transit CLI issue will have to be designed in conjunction with a number of other non-NTS related requirements and will take some years to design, develop and implement. In the meantime Ofcom considers there are obvious benefits to be gained by all NTS providers from the use of an accurate automated wholesale billing system which no manual alternative could hope to achieve. Adjustments to the NCD would only result in a solution which would continue to benefit some CPs at the expense of others. In Ofcom's view this would not support the aim of achieving competitive neutrality.

Question 6: *If Option (i) is preferred, over what timescale should the process of introducing INCA/CLI and withdrawing NCD take place?*

4.25 Most CPs believed INCA could be introduced within six months to one year. BT quoted a period of twelve months to complete the enhancement and testing work and a further month before the first reports were produced. Paramount was the view that the new system should be thoroughly tested before introduction.

Question 7: *Should INCA/CLI be introduced at the same time as NCD is withdrawn or should there be an overlap period to enable INCA/CLI to be tested while NCD remains in operation?*

4.26 BT said that the introduction of INCA/CLI and withdrawal of NCD should take place simultaneously. BT considered that the thirteen month total implementation period would allow sufficient time for the new system to be tested and for CPs systems to be adjusted as necessary. BT added that it would be too costly to run both the NCD and INCA/CLI in parallel for any period.

4.27 Most CPs regarded a period of parallel running of the two systems to be essential either within or as an addition to the period allowed for the systems enhancement work to be completed. One believed that the parallel running period should be continued until all parties were satisfied that INCA/CLI was working properly.

Ofcom's comments

4.28 Ofcom considers that the time required by BT to complete and test its own system enhancements provides adequate time for other CPs to complete their own necessary work. CPs can maintain close liaison with their BT commercial managers to ensure any system enhancements they may make are compatible with those being carried out by BT, and it will clearly be essential that during this period of time, BT provides adequate documentation of changes to BT's systems which will affect CPs. Ofcom's draft decision is that withdrawal of the NCD method should not take place immediately and a period of three months should be allowed, from the production of the first INCA/CLI monthly report, for CPs to trial the two systems (INCA/CLI and NCD) in

parallel and resolve any implementation issues. This will ensure billing continuity can be maintained.

- 4.29 Ofcom's key concern is to direct that INCA/CLI be introduced in a timescale which can be reasonably achieved by BT. As a result Ofcom has proposed in the draft direction that from 30 September 2005 INCA/CLI should be used for calculating BT's network charges for NTS calls originated by BT or which transit the BT network, and that invoicing using the NCD methodology should cease from 31 December 2005. BT may seek to introduce INCA/CLI in advance of these dates if this proves possible.

Question 8: *Given that BT and TCPs will need some time to complete the enhancements to their systems do you consider that those TCPs with sub-optimal interconnection arrangements should be allowed further time to optimise the number and location of their POCs?*

- 4.30 There was also general agreement that no additional time should be allowed for CPs who have not yet sought to optimise their interconnection arrangements with BT.

Question 9: *If Options (ii) or (iii) are preferred, do CPs believe the NCD Table of Uplift on Single Tandem against numbers of POCs should be revised to, more accurately, reflect actual conveyance charges?*

- 4.31 Only two respondents agreed that an enhancement to the NCD table would provide a sufficiently accurate billing solution.

Question 10: *If CPs have suggestions for an alternative charging method that has not already been considered, please supply full details in the response to this document. Please ensure that any description is not marked Confidential so that it can be made available to all other NTS CPs, via the Ofcom website and the NTS Focus Group, for consideration.*

- 4.32 No alternatives were suggested.

Question 11: *Do stakeholders consider that moving to billing by INCA/CLI is likely, ultimately, to bring benefits, which further the interests of consumers (as required by Section 3 of the Act), over and above those achieved by the SMP obligation placed on BT by Condition AA11?*

- 4.33 Most respondents agreed that moving to INCA/CLI billing would bring substantial medium to long term benefits to both NTS CPs and consumers, the only proviso being that the benefits gained should not be undermined by inappropriate recovery of the costs involved.

Ofcom's comments

- 4.34 Ofcom understands that, in the short term at least, savings achieved through moving to INCA/CLI billing may be too small to translate into retail price reductions for consumers. However, its view is that the use of an accurate automated billing system would drive sensible investment decisions leading to optimal interconnection relationships which, in turn, would drive down call conveyance costs. Ofcom considers that the resultant savings would be more likely to be seen through improved service quality and additional features.

- 4.35 In the longer term, however, savings achieved through improved interconnection efficiency should enable NTS providers to better withstand any general downward pressure on terminating payments, for example due to the current link between 0845/0870 retail prices and standard local/national geographic retail call prices on the BT network.

Other comments received

Use of INCA/CLI by BT

- 4.36 Easynet expressed concern that BT should use an equivalent billing system to other TCPs to ensure everyone is charged on the same basis. Under the NCD BT, as both originator and terminator faces lower bills than other TCPs because many TCPs, despite achieving single tandem routing through careful management of their interconnect, are being overcharged by the NCD methodology. For example single tandem routing can be achieved with 30 POCs but the CP is charged at 21% above single tandem rates.

Ofcom's comments

- 4.37 Ofcom agrees with Easynet that all TCPs should be charged on the same basis to ensure competitive neutrality and that the NCD does not adequately reflect TCPs ability to achieve single tandem interconnection. These are key reasons for moving to INC/CLI billing.

OCP Specific Charging

- 4.38 Telewest's ("TW") endorsement of the move to INCA/CLI billing was predicated on a number of concerns being addressed. These are:
- the provision of an element of flexibility, such that the solution is capable of being adapted at minimal resource/cost to cater for anticipated changes to the NTS regime;
 - the accommodation, from the outset, of OCP-specific origination charges;
 - the consideration by Ofcom of the issue of OCP-specific retentions and how they might be implemented. This should include the consideration of a fair and proportionate approach to the issue of OCP retentions prior to any specific origination regime being implemented;
 - the capability to charge on a theoretical least cost basis, with a suitable regime for the implementation of new POCs;
 - a fair and proportionate cost recovery mechanism, taking into account the differing burdens on TCPs.
- 4.39 TW pointed out that it is a substantial net originator of NTS traffic which it believed was largely unrecognised by the NTS community. TW reminded Ofcom that it was one of the first OCPs to use INCA/CLI for BT originated traffic and that TW supports the enhancements which enable the source of all non-BT originated calls to be identified. However, TW stressed how any system enhancements must be capable of encompassing future billing developments, in particular, OCP-specific billing. In other words INCA should be capable of being further upgraded to allow payment of differential terminating payments to TCPs which take account of OCPs' individual charges for call origination.

Ofcom's comments

- 4.40 Ofcom does not agree with TW.s view that all of its concerns should be addressed as part of the INCA/CLI enhancement programme. Ofcom concurs that the proposed INCA/CLI system must not rule out the possibility of further enhancements to incorporate future billing requirements such as OCP-specific charging. However Ofcom considers that agreement will need to be reached, if such enhancements were to be implemented, on how any further additional costs incurred by BT should be met.
- 4.41 OCP-specific charging would involve BT, where it acts as the transit provider, being able to pay differential terminating payments to large numbers of TCPs which take account of a wide range of originating charges which are specific to each individual OCP. This would, in Ofcom's view, require extensive further development to BT's billing systems.
- 4.42 There is no indication as yet that, if BT were to develop such a billing product, it would actually be put to use, as it would require TCPs to come to agreements with OCPs to accept differential payments. This is however an issue that Ofcom will consider further as part of its NTS framework re-examination. In the meantime, Ofcom does not consider it reasonable to insist that this further billing enhancement be accommodated at this stage as part of the move from NCD to INCA/CLI billing.

Section 5

Analysis of policy options

5.1 This section explains how Ofcom assessed each of the policy options considered. The options were set out in the December consultation. In assessing the options, Ofcom has been mindful of new developments in the industry since the close of the consultation period. This section also summarises Ofcom's conclusions in relation to each option. The detail of Ofcom's appraisal of each option is included at Annex D.

Criteria for evaluating options

- 5.2 In the December consultation, the key criteria for assessing the relative merits of the different policy options were set out.
- 5.3 Oftel asked CPs to comment on its view that any method of calculating NTS conveyance charges which measures actual traffic and charges would be preferable to a system based on sampling techniques and adjusted to soften the impact of the move from single tandem to fully de-averaged charges.
- 5.4 Oftel also invited the NTS CP community to state whether they believed the perceived benefits would outweigh the likely costs and, where possible, to provide evidence in support of their view. Oftel also invited respondents to give their preference from the options set out in the December consultation.
- 5.5 Oftel asked for comments about the proposed criteria in the December consultation. Where specific comments were made the respondents were broadly in agreement with the criteria for assessing the available options proposed in the consultation document.

Cost-benefit analysis

5.6 In the December consultation, comments were sought on the identified costs and benefits of implementing the various options identified for wholesale interconnection charging in order to facilitate a full cost-benefit analysis (CBA) of the options. Since the likely benefits to stakeholders of the different options are difficult to quantify specifically, Ofcom has considered the likely costs and benefits to all stakeholders in qualitative terms in order to identify the appropriate policy option to adopt. The details of Ofcom's assessment can be found in Annex D, which seeks to qualitatively identify the costs and benefits of the different policy options available.

New developments since the close of the consultation period

- 5.7 Since the end of the consultation period in January 2004, there have been a number of new developments which are relevant to the issue of retail pricing of NTS calls on the BT network. Only one of these however, has any real relevance to wholesale interconnection charging.
- 5.8 In March 2004 BT and a group of other CPs ("the NTS Futures Sub-group") presented a proposal ("the NTS Futures Proposal") to Ofcom and the NTS industry for a new pricing model designed to protect terminating payments from future changes in BT's retail prices and discount packages. The key elements of this proposal are:
- the link between geographic and non-geographic call prices for 0845 and 0870 calls on the BT network would be broken;

- 0845 calls would continue to be tariffed at one headline rate (as would 0870 calls) and would not be broken up into different pricing steps within the 0845 or 0870 range;
 - BT and TCPs would agree the termination payment bilaterally, but it would be likely to be the same gross termination payment for all TCPs, varying for each TCP only depending on how far each TCP has built out to the BT network; and
 - BT would then set the retail price for 0845 and 0870 calls on its network by adding a retail margin.
- 5.9 This is a relatively recent development, and only a high level framework has been mapped out by the NTS Futures Sub-group at the time of writing. The actual level of the termination payment, and the consequential impact on the retail prices that consumers could expect to pay for 0845 and 0870 calls on the BT network, has yet to be proposed. Ofcom considers it likely that the proposal would result in an initial increase in retail prices for these calls, without any clear mechanism for future reductions in these prices. However, the inclusion of a voluntary price control is, Ofcom understands, being considered. As full details are not yet available, Ofcom has been unable to consider this proposal in detail in the context of this document.
- 5.10 Some members of the NTS Futures Sub-group have, however, questioned the need to proceed with the move to INCA/CLI billing until it is clear how BT's retention and other CPs. terminating payments will be calculated under the NTS Futures Proposal. Ofcom considers, however, that whatever framework for NTS results from Ofcom's NTS framework re-examination (into which the NTS Futures Proposal is being fed), the ability of BT to more accurately calculate its charges (or at least record its underlying per-call costs) for origination and conveyance of NTS calls is likely to be of significant benefit to both BT and the NTS Industry.

Assessment of options

- 5.11 Ofcom has considered the likely advantages and disadvantages of the various options and concluded that Option (i) is the most appropriate solution. This is based on a number of factors which are summarised below. The detail of Ofcom's appraisal of each option is set out at Annex D. For the purposes of the following summary, a number of headings are used for clarity. These headings are not intended to represent additional or alternative criteria, but are intended to reflect various aspects of the key criteria set out in the December consultation.

Impact on competition

- 5.12 Option (i) ensures competitive neutrality in the manner in which BT's charges for originating NTS calls to TCPs are calculated. Each call is charged according to the routing across the BT network to the TCP.s nominated exit POC thereby taking account of the provider.s connectivity. This provides TCPs with the correct incentives to build their networks for optimum routing efficiency. The information provided by the monthly report will enable timely invoicing for terminating payments and provide TCPs with sufficient information to validate BT's subsequent transit invoices including calls from indirect access and CPS providers and ported numbers. Finally BT's EBC matrix will take account of new and adjusted POCs on a monthly rather than quarterly cycle. All of these benefits could eventually feed through to lower call termination costs leaving scope for price competition leading, possibly, to cheaper and/or enhanced services for consumers.

- 5.13 Option (ii) is essentially retaining the status quo but with the opportunity of refining the existing NCD sliding scale. This would require some means of adjustment to the NCD to align each CP's POC count with an uplift on the single tandem charge which more closely represents the average CLI routing of its calls taking into account the efficiency of its interconnection arrangements with BT. Ofcom has attempted this previously as have other CPs but a workable solution has proved elusive. Consequently it is likely that the inconsistencies within the NCD that reward some CPs for retaining small and/or inefficient networks whilst penalising others who have optimised their interconnect to achieve single tandem charging with fewer than 69 POCs, will remain to a greater or lesser extent. Ofcom considers that this is not in the interests of effective competition, and does not create the correct incentives for efficient network build by CPs nor ensure the most efficient use of BT's network in carrying other CPs' calls.
- 5.14 Option (iii) places the onus on BT to ensure it is providing NTS call origination on fair and reasonable terms. This could be open to different interpretations by BT and CPs which could ultimately lead to disputes if BT's interpretation differed from the rest of the NTS industry. BT has stated its belief to Ofcom that moving to INCA/CLI billing would be revenue neutral for BT. In other words the total revenue it has received via the NCD method approximates to that it would have received using INCA. At the same time those CPs who are currently benefiting from the NCD system are unlikely to voluntarily contribute to BT's costs of moving them to a billing system which will result in an increase to their charges. BT, therefore, would have little incentive to try to encourage TCPs to move to INCA/CLI billing on a voluntary basis and in the process incur additional costs it may not be able to recover. As a consequence it is likely that the NCD (in either its existing or some modified form) would continue to be used with the same effects on competition and efficient network use as with option (ii). That is unless, in the event of any subsequent dispute, Ofcom were to direct otherwise.
- 5.15 No CP, including BT, was able to suggest an alternative methodology and so option (iv) must be discounted. It is possible that Ofcom's NTS framework re-examination may lead to a different charging model for NTS which inter alia is not reliant on either the NCD or INCA/CLI to account for BT's NTS network retention, which would of course be subject to consultation. As Ofcom has noted at paragraph 5.10 above however, whatever the outcome of Ofcom's NTS framework re-examination, the INCA/CLI developments will still be important in that they will allow BT to record its underlying per-call costs for origination and conveyance of NTS calls more accurately.

Regulatory involvement

- 5.16 Options (ii) and (iii) are arguably the least intrusive regulatory mechanisms but are not consistent with achieving its policy objectives, and arguably Option (iii) is less intrusive than Option (ii), since it imposes a lower regulatory burden on BT in that BT can decide, at least initially, how to meet its SMP obligations rather than having been directed by Ofcom. However, Ofcom considers that a move to INCA/CLI achieves the best means of discharging the relevant BT SMP obligations namely Condition AA3 which requires that:

“Unless the Director directs otherwise from time to time, the Dominant Provider shall secure and shall be able to demonstrate to the satisfaction of the Director, that each and every charge offered, payable or proposed for Network Access covered by Condition AA1(a) is reasonably derived from the costs of provision based on a forward looking long-run incremental cost approach and allowing an appropriate mark up for the recovery of common costs including an appropriate return on capital employed.”

- 5.17 As discussed previously, the continuance of the NCD charging regime could result in excessive charges for some TCPs which could, in turn, lead to losses to consumers and constrain investment by the providers. Conversely, for other providers the NCD could result in charges which are too low and which create perverse investment incentives leading to inefficient network usage.
- 5.18 Option (i) is not prescriptive in relation to BT's conveyance charges which are already subject to charge controls. Ofcom's draft decision would merely remove the existing option of allowing TCPs to choose the billing system BT uses to charge for NTS origination and conveyance. This option was only created to enable BT to introduce INCA/CLI in a form which enables TCPs to identify the origin of all the calls they terminate. Oftel had never intended the NCD to be a permanent billing solution and Ofcom now agrees that it should be withdrawn when INCA/CLI is introduced.

Costs to Communications Providers

- 5.19 In its response to the December consultation BT provided outline costs for the enhancements to its Genius billing engine which supports INCA/CLI, and for the move to monthly refreshment of the EBC matrix and end-to-end integration testing. Subsequently, in response to a formal request by Ofcom, BT provided detail of the cost elements for each work item. These described how BT's costs are almost entirely attributed to labour costs involved in systems design and development, implementation testing and the ongoing production of the ongoing additional monthly reports. Ofcom's considers that BT's cost estimates appear reasonable and we would not expect the final costs used by BT to calculate the actual charge to differ significantly from the figures provided to Ofcom.
- 5.20 Ofcom considers that, despite the fact that the enhancement was initiated to address the problem of non-availability of the CLI on third party transit calls, the fact that the other two issues of least cost routing and monthly EBC updates are also addressed means that most TCPs will benefit to a significant extent and all should share BT's costs. The exceptions to this will be those CPs who are currently paying too little for BT's services under the NCD. However, Ofcom considers that these providers have probably been aware of the impending possibility of a move to CLI based billing and have had ample opportunity to adjust their networks to minimise the impact.
- 5.21 BT has estimated that the move to CLI based billing would result in a fixed cost of £1.13m and an ongoing annual cost of £330k. In line with Oftel's policy on the recovery of system set-up costs for the introduction of CPS (as set out in *Oftel's Final Determination of surcharges for the provision by BT of carrier preselection facilities* www.ofcom.org.uk/static/archive/oftel/publications/carrier/2002/cps0202.htm), Ofcom is of the view that BT's set-up costs for INCA/CLI should be recovered over a period of five years. Ofcom is also of the view that ongoing costs should be recovered annually. Charges for both categories of cost should be calculated on the basis of a pence per minute surcharge to BT's NTS interconnection charges, recovered from all operators, including BT itself.
- 5.22 BT has indicated that it would take 12 months for it to implement Ofcom's Direction. Ofcom is therefore proposing that that the charge should be effective from 30 September, 2005. BT can review this charge annually; however, in doing so, BT must note that it is obliged through its SMP conditions to set its charges on a cost oriented basis, and that it will be able to demonstrate to Ofcom's satisfaction that it is fulfilling this obligation. In addition, Ofcom notes that the current Network Charge Control period expires on 30 September 2005. Ofcom's forthcoming review of the Network

Charge Control will review BT's NTS conveyance charges including the additional charges incurred in implementing the requirements of the draft Direction at Annex F.

Section 6

Ofcom's draft decision

Consideration of the four options

6.1 In relation to the four options presented for consultation, Ofcom's view is:

- Option (i) supports the fulfilment of BT's cost-orientation obligation in Condition AA3 and has the benefit of creating correct incentives for network investment and places all NTS TCPs in an equal competitive position. It may ultimately lead to significant increases in network efficiencies leading to lower costs and possible consumer gain. For these reasons Ofcom has decided that this option should be implemented as described in Section 6.
- Option (ii) perpetuates the shortcomings inherent in the NCD system which Oftel initially directed only as a short term expedient to enable BT to, more accurately, recover its network costs until a workable, automatic billing system was available.
- In the absence of BT's ability to recover its costs for introducing INCA/CLI on a voluntary basis, option (iii) is likely to lead to continuing use of the NCD with the same drawbacks as in option (ii).
- There having been no suggestions for alternative billing solutions therefore option (iv) is discounted.

Ofcom's draft decision

6.2 Ofcom therefore considers that INCA/CLI should be used as the means by which BT's charges for originating and conveying NTS calls are calculated. Ofcom notes that in order to comply with its obligations under the draft Direction, if it is finalised, BT would have to, from the date of the final Direction, commence the necessary work on its INCA/CLI wholesale billing system to achieve the enhancements set out in the list below. Ofcom notes that BT would have to do the following to comply with its obligations in the Direction:

- provide a monthly summary report which contains the CLI of calls that originate from IA and CPS providers and from ported numbers;
- ensure that calls that originate on and transit BT's network are charged according to least cost routing principles as measured from the point of origin on the BT network to the relevant exit POC as nominated by the TCP in the routing plans provided to BT;
- introduce monthly updates of the EBC matrix, the data source for INCA/CLI billing, to take account of adjustments and additions to TCPs' points of connection.

6.3 One month after the completion of this work BT will provide the first enhanced monthly summary report which will provide the information necessary to enable TCPs to invoice BT for their terminating payments.

6.4 The existing NCD billing system will continue to run in parallel with INCA/CLI for a period sufficient to enable TCPs to become familiar with the new reports and to resolve any problems that may arise. The draft direction accompanying this explanatory statement proposes a period of three months from 30 September 2005 to 31

December 2005 after which time the NCD methodology will no longer be used by BT to calculate terminating payments or by TCPs for the purpose of compiling terminating payment invoices.

- 6.5 The obligation to implement INCA/CLI billing will, if adopted, rest entirely with BT, which will be subject to a direction under Conditions AA1(a) and AA11, a draft of which is attached for statutory consultation at Annex F. In the absence of an alternative charging mechanism to INCA/CLI, non-dominant TCPs will need to configure their systems to inter-operate with INCA/CLI in order to be able to terminate NTS traffic.
- 6.6 Ofcom notes the significant initiatives that are taking place in regard to NTS, in particular the work of the NTS Futures Sub-Group and Ofcom's own NTS framework re-examination. Ofcom considers, however, that regardless of any changes to the NTS regime that may result from these activities, the INCA/CLI developments are still likely to be important in that they will allow BT to record its underlying per-call costs for origination and conveyance of NTS calls more accurately.

The Draft Direction

Legal Tests

- 6.7 In directing BT to introduce INCA/CLI Ofcom has considered its duties under sections 3 and 4 of the Act, in particular to further the interests of consumers in relevant markets, and the promotion of competition. Ofcom considers that the draft Direction fulfils these aims, in that it has the benefit of creating correct incentives for network investment and places all NTS TCPs in an equal competitive position. It may ultimately lead to significant increases in network efficiencies leading to lower costs and possible consumer gain. Ofcom has also considered the tests in section 49(2) of the Act in that the Direction must be objectively justifiable, not unduly discriminatory, proportionate and transparent.
- 6.8 The direction is objectively justified in that it relates to the need to ensure that BT's charges are cost-oriented and that the correct incentives for network investment exist.
- 6.9 The direction is not unduly discriminatory in that, although it applies only to BT, it addresses issues arising from BT's holding of SMP in the relevant markets and hence it is objectively justified for the direction to apply only to BT.
- 6.10 Ofcom considers that the direction is proportionate, as it allows BT to set its surcharge for the set-up and ongoing costs of implementing INCA/CLI and is the cost effective means of achieving the benefits for both industry and consumers as identified in the regulatory options appraisal.
- 6.11 Ofcom considers that the draft Direction is transparent, as it is set out in Annex F to this explanatory statement and its effects and the reasons for the draft Direction are also set out in this document.

Section 7

Responding to the consultation

How to respond

- 7.1 Ofcom is publishing this consultation document so that interested parties may comment on the issues it addresses. The closing date for submitting comments is: **5pm on 9 August 2004**
- 7.2 Ofcom strongly prefers to receive responses as e-mail attachments, in Microsoft Word format, as this helps us to process the responses quickly and efficiently. We would also be grateful if you could assist us by completing a response cover sheet (see Annex B) to indicate whether or not there are confidentiality issues. The cover sheet can be downloaded from the .Consultations. section of our website.
- 7.3 Please can you send your response to: geoff.brighton@ofcom.org.uk.
- 7.4 Responses may alternatively be posted or faxed to the address below, marked with the title of the consultation.

Geoff Brighton
Competition and Markets
4th floor
Ofcom
Riverside House
2A Southwark Bridge Road
London SE1 9HA
Fax: 020 7783 4109

- 7.5 Note that we do not need a hard copy in addition to an electronic version. Also note that Ofcom will not routinely acknowledge receipt of responses.
- 7.6 It would be helpful if your response could include direct answers to the question asked in this document. It would also help if you can explain why you hold your views, and how Ofcom's proposals would impact on you.

Further information

- 7.7 If you have any questions about the issues raised in this consultation, or need advice on the appropriate form of response, please contact Geoff Brighton on 020 7783 4175.

Copies of this document

- 7.8 This document can be viewed in the consultation section of Ofcom's website at: <http://www.ofcom.org.uk/consultations/?a=87101>

Confidentiality

- 7.9 Ofcom thinks it is important for everyone interested in an issue to see the views expressed by consultation respondents. We will therefore usually publish all responses on our website, www.ofcom.org.uk, as soon as possible after the consultation period has ended.

- 7.10 All comments will be treated as non-confidential unless respondents specify that part or all of the response is confidential and should not be disclosed. Please place any confidential parts of a response in a separate annex, so that non-confidential parts may be published along with the respondent's identity.
- 7.11 Please also note that copyright in responses will be assumed to be relinquished unless specifically retained.

Next steps

- 7.12 Following the end of the consultation period, and subject to consideration of the responses received, Ofcom intends to publish its decisions in the following manner:
- a Direction and accompanying statement on the detail and timescales for implementing INCA/CLI and withdrawing the NCD.

Ofcom's consultation process

- 7.13 Ofcom is aware of the effect of its actions on all NTS CPs and strongly believes that consultation has a vital role to play in its decision making process, allowing those who may be affected by or concerned about a particular issue to have their views taken into account. It is, therefore, important that Ofcom's consultation process is effective and to this end, it has devised seven principles which it will follow for each written consultation (see Annex A). With respect to this consultation, Ofcom is satisfied that it has met the principles in the following manner:
- 7.14 Discussions with stakeholders: Oftel and Ofcom have facilitated and/or attended discussions between BT and NTS CPs relating to the introduction of INCA/CLI as a replacement for the expedient method known as NCD, over a number of years. Ofcom's view, that INCA/CLI should be the preferred charging method, is well known and is supported by the majority of the NTS community.
- 7.15 Extent of consultation: this consultation is aimed particularly at NTS TCPs and BT. This is because it relates to the means by which TCPs are able to invoice BT for their terminating payments. CPs who only originate NTS calls are less affected except where they are required to pay charges to BT for transit of calls to 0844 and 0871 numbers. This proposal has no direct impact on consumers. However, it is a public consultation and responses from all interested parties are welcome.
- 7.16 Consultation details: The consultation seeks comments from stakeholders on the detailed implementation of INCA/CLI and the withdrawal of the NCD method including the expected timescales. Comments are not sought on the principle of whether INCA/CLI should be introduced as this decision has been taken following the December consultation. The Executive Summary provides a précis of the document's main points and proposals under consultation.
- 7.17 Timetable for responses: The consultation will run for the statutory one month consultation period. Ofcom considers that it is appropriate to consult for a shorter period than the standard ten weeks because this consultation only relates to a draft Direction required to implement Ofcom's policy decision as a result of Oftel's previous consultation in December 2003, and is of interest to the Industry only. Once the deadline for receipt has passed, Ofcom will take all submissions into account in its decision, ensuring it remains accountable to its stakeholders.

- 7.18 If you have any comments or suggestions on how Ofcom conducts its consultations, please call our consultation helpdesk on 020 7981 3003 or email us at consult@ofcom.org.uk. We would particularly welcome thoughts on how Ofcom could more effectively seek the views of those groups or individuals, such as small businesses or particular types of residential consumers, whose views are less likely to be obtained in a formal consultation.
- 7.19 If you would like to discuss these issues, or Ofcom's consultation processes more generally, you can alternatively contact Philip Rutnam, Partner, Competition and Strategic Resources, who is Ofcom's consultation champion:

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Ofcom
Riverside House
2A Southwark Bridge Road
London SE1 9HA
Tel: 020 7981 3585
Fax: 020 7981 3333
E-mail: philip.rutnam@ofcom.org.uk

Annex A

Ofcom's consultation principles

Ofcom has published the following seven principles that it will follow for each public written consultation:

Before the consultation

- A.2 Where possible, we will hold informal talks with people and organisations before announcing a big consultation to find out whether we are thinking in the right direction. If we do not have enough time to do this, we will hold an open meeting to explain our proposals shortly after announcing the consultation.

During the consultation

- A.3 We will be clear about who we are consulting, why, on what questions and for how long.
- A.4 We will make the consultation document as short and simple as possible with a summary of no more than two pages. We will try to make it as easy as possible to give us a written response. If the consultation is complicated, we may provide a shortened version for smaller organisations or individuals who would otherwise not be able to spare the time to share their views.
- A.5 We will normally allow ten weeks for responses to consultations on issues of general interest.
- A.6 There will be a person within Ofcom who will be in charge of making sure we follow our own guidelines and reach out to the largest number of people and organisations interested in the outcome of our decisions. This individual (who we call the consultation champion) will also be the main person to contact with views on the way we run our consultations.
- A.7 If we are not able to follow one of these principles, we will explain why. This may be because a particular issue is urgent. If we need to reduce the amount of time we have set aside for a consultation, we will let those concerned know beforehand that this is a 'red flag consultation' which needs their urgent attention.

After the consultation

- A.8 We will look at each response carefully and with an open mind. We will give reasons for our decisions and will give an account of how the views of those concerned helped shape those decisions.

Annex B

Consultation response cover sheet

- B.1 In the interests of transparency, we will publish all consultation responses in full on our website, www.ofcom.org.uk, unless a respondent specifies that all or part of their response is confidential. We will also refer to the contents of a response when explaining our decision, without disclosing the specific information that you wish to remain confidential.
- B.2 We have produced a cover sheet for responses (see below) and would be very grateful if you could send one with your response. This will speed up our processing of responses, and help to maintain confidentiality by allowing you to state very clearly what you don't want to be published. We will keep your completed cover sheets confidential.
- B.3 We strongly prefer to receive responses in the form of a Microsoft Word attachment to an email. Our website therefore includes an electronic copy of this cover sheet, which you can download from the 'Consultations' section of our website.
- B.4 Please put any confidential parts of your response in a separate annex to your response, so that they are clearly identified. This can include information such as your personal background and experience. If you want your name, address, other contact details, or job title to remain confidential, please provide them in your cover sheet only so that we don't have to edit your response.

Cover sheet for response to an Ofcom consultation

BASIC DETAILS

Consultation title: INCA/CLI for NTS interconnection charging

To (Ofcom contact):

Name of respondent:

Representing (self or organisation/s):

Address (if not received by email):

CONFIDENTIALITY

What do you want Ofcom to keep confidential?

Nothing	<input type="checkbox"/>	Name/contact details/job title	<input type="checkbox"/>
Whole response	<input type="checkbox"/>	Organisation	<input type="checkbox"/>
Part of the response	<input type="checkbox"/>	If there is no separate annex, which parts?	

If you want part of your response, your name or your organisation to be confidential, can Ofcom still publish a reference to the contents of your response (including, for any confidential parts, a general summary that does not disclose the specific information or enable you to be identified)?

DECLARATION

I confirm that the correspondence supplied with this cover sheet is a formal consultation response. It can be published in full on Ofcom's website, unless otherwise specified on this cover sheet, and I authorise Ofcom to make use of the information in this response to meet its legal requirements. If I have sent my response by email, Ofcom can disregard any standard e-mail text about not disclosing email contents and attachments.

Ofcom seeks to publish responses on receipt. If your response is non-confidential (in whole or in part), and you would prefer us to publish your response only once the consultation has ended, please tick here.

Name

Signed (if hard copy)

Annex C

Modifications and Enhancements to INCA/CLI

- C.1 NTS CPs have, until now, generally rejected the use of INCA/CLI for NTS charging on two main grounds:
- i. its inability to identify transit calls from IA/CPS providers or ported numbers at the point of handover; and
 - ii. the fact that calls may not always be charged according to least cost routing principles.

Transit

- C.2 INCA/CLI is currently unable to provide timely CLI information for TCPs for some call types that originate from other OCPs' networks. This information is required to enable TCPs to anticipate and verify BT's invoices for providing transit services. Calls that originate on the network of a non-dominant OCP, such as a cable provider, and which transit the BT network for termination on a TCP's network, will present the correct CLI, unless the number of the calling customer has been ported from one OCP to another. In this case the calls will continue to present the CLI of the .donor. OCP and not that of the new .recipient. OCP.
- C.3 Moreover, calls from fixed OCPs' networks but where the customer uses an IA or CPS supplier, present the CLI associated with the fixed CP. This means that, in the case of a BT fixed line customer, TCPs will assume calls to have originated from the BT switch associated with the geographic location of the number. In actual fact, the call will have left BT's network and may have reentered via a completely different handover POC as chosen by the IA or CPS supplier. The TCP will therefore incur unexpected transit charges which may bear no relation to the geographic location of the caller.
- C.4 The current charging process for transit differs according to whether calls are made to 0844/0871 numbers or to all other NTS/PRS number ranges. With the former the OCP pays for transit charges given that the TCP, in theory, sets their required terminating payment and the retail price is the sum of the terminating payment plus the OCP.s retention and any transit charge. The retail price set by the OCP should therefore be sufficient to cover its retention, BT's transit charge and the TCP.s terminating payment. The as yet unresolved issue of non-dominant OCP-specific retentions will be considered in the context of Ofcom's NTS framework re-examination.
- C.5 For all other NTS/PRS calls BT will submit its invoice for transit charges to the TCP after it has paid the TCP.s terminating payment invoice. In other words BT pays the TCP the total terminating payment for all the calls (BT originated and transit) BT has handed over to the TCP and later asks the TCP for its transit charge to be repaid. Because of the issues described in paragraphs C2 and C3 the problem for TCPs is that they have no means of verifying the number of calls BT claims to have transited from any particular OCP, and in many cases, the identity of the OCP or the point of origin on BT's network. They cannot, therefore, estimate the number of transit calls for which they need to accrue payments in any given period or whether these transit calls were correctly charged according to the distance travelled across BT's network.

- C.6 Both the current INCA/CLI functionality and the NCD methodology share this failing. However, where TCPs may be expected to incur costs for upgrading to the new INCA/CLI methodology and to contribute towards BT's set-up costs for making these changes, it is only reasonable to expect improved functionality.

Least cost routing

- C.7 Following the establishment of the NCD methodology in the NTS Conveyance Direction in late 1999 a number of TCPs sought to optimise their interconnection arrangements with BT. This was in order to minimise BT's call origination charges both under NCD and when INCA/CLI charging commenced. These TCPs have established numbers of new POCs with the aim of reducing BT's average charge to as near to single tandem as possible. With the prospect of a move to INCA/CLI based charging, TCPs want to be sure that the larger numbers of POCs now in place (and for which they are paying) continue to result in minimised charges. In other words BT's network should be capable of routing calls by the shortest route from the point of origin to the exit POC with the TCP's network and charging accordingly.
- C.8 In the event of equipment faults, route failure or congestion between BT tandem switches, it may not be possible for BT to route calls directly to an exit POC. BT may then (at its discretion) re-route calls over longer distances or via additional switching stages or overflow calls to another more distant POC. One of the key requirements of any automated charging system is that in this event the system should be capable of raising charges which reflect the theoretical use of the least cost route, since BT is re-routing at its own discretion and for its own purposes, and OCPs and TCPs should not have to bear the additional cost to BT of this re-routing.
- C.9 As it is currently designed INCA/CLI measures the routing of calls backwards from the exit POC over the actual route taken which may not be the shortest route. For least cost routing to be guaranteed INCA/CLI needs to identify both the point of origin on or entry to BT's network and the nearest possible exit POC and charge accordingly. Where the TCP has nominated specific exit POCs, INCA/CLI must again identify the point of origin and the shortest route to the exit POC and charge accordingly.

Resolving INCA/CLI's shortcomings

- C.10 It is not possible to enhance INCA/CLI to include full details of non-BT originated calls at the point of handover. To do this would require a significant modification of the current signalling arrangements which would also affect other facilities not related to wholesale billing. As a consequence the NICC may be asked by the industry to look at the problem with a view to devising a solution that can be universally applied by the industry as a whole. This will necessarily take some years to design, test and implement.
- C.11 As a result of the direction proposed in this document, BT will implement option 2 of its partial solution proposed to the NTS Focus Group. This involves enhancement of the Call Data Records ("CDRs") provided by INCA at the end of each month to include the identity of the OCP for IA/CPS calls and ported numbers.

Transit CLI

This issue surrounds the absence of any identification of the OCP for transit calls in the monthly 09A report that BT provides to TCPs each month (or the new statement to be provided by BT). BT initially proposed two options for the data content of the statement. The following text is an extract taken from information supplied to Ofcom by BT, explaining its

proposals, in July 2003. Option 1, proposed by BT itself consisted of data for incoming NTS transit traffic with CLIs from within BT's range only. The data in each report would include:

- *Destination number type / number range (which of these to be determined at the design phase)*
- *Time period*
- *LCFA / PRS Clawback flag as appropriate*
- *Number of calls*
- *Number of minutes*

Option 2, which is that proposed by Oftel in the December consultation and agreed by the majority of respondents, will provide data for all incoming NTS transit traffic. In this case the data in each report will include:

- Sending OCP
- Entry POC
- CLI in BT range indicator
 - Destination number type / number range (which of these to be determined at the design phase)
- Time period
- LCFA / PRS Clawback flag as appropriate
- Number of calls
- Number of minutes.
- Inclusion of new exit POCs

TCPs raised the concern during discussions at the NTS Focus Group that by bringing NTS into EBC through INCA/CLI, they would lose the advantage they have of new exit POCs being taken into account in BT's charges from the date of ordering rather than when traffic actually uses the POC. In contrast, the EBC update mechanism (network snapshot) currently operates on a three monthly cycle and only includes new POCs at the end of the period during which they become operational. This means that several months can elapse following an order for a new POC being placed and the new POC being counted for INCA/CLI charging purposes. Discussions at the NTS Focus Group and BT's more general EBC Review workshops have led BT to design an enhancement which addresses much of this delay.

C.12 The EBC matrix is an extremely complex database and one that requires some time to update to take account of the numbers of changes to the interconnection arrangements between BT and the large number of NTS CPs. Nevertheless, BT has designed some modifications which when implemented will enable BT to 'refresh' the EBC matrix monthly so that new or adjusted POCs will be more quickly taken account of for charging purposes.

Least Cost Routing

C.13 Following agreement having been reached on the principles behind the INCA/CLI methodology, BT made a further proposal in relation to the choice of exit POC for which calls are charged. This requires NTS CPs to nominate required exit POCs in the

routing plans they agree with BT. Calls will then be routed by BT to the nominated POCs and charged according to the cheapest logical route across the BT network from the point of origin or ingress from another OCP.

Annex D

INCA/CLI Regulatory impact Assessment

Overview

D.1 One of the questions that Ofcom must consider is whether the benefits of introducing a more accurate charging system, which measures actual as opposed to approximate network usage, outweigh the costs that the industry may incur in contributing to BT's costs of addressing INCA/CLI's shortcomings and in adapting their billing systems to use it. This is part of the question of whether a direction to impose INCA/CLI is proportionate and objectively justified, as required by section 49(2) of the Act. It is also required, as part of Ofcom's duty, to carry out a Regulatory Impact Assessment, as discussed in paragraphs 2.22 to 2.23 above.

Costs

BT will incur development and ongoing costs which would (under Ofcom's and now Ofcom's proposals) be distributed across all NTS TCPs as discussed above. BT has estimated that the development costs would be £1.13m and the ongoing costs would be £330k per annum.

D.2 TCPs will incur costs in adjusting their billing systems to work with INCA/CLI data output. These costs have been estimated by TCPs at between £100k and £250k per CP. This may differ for TCPs who have contracted out their billing function and will depend on the costs of switch suppliers in applying the requisite software modifications.

Benefits . optimisation of interconnect arrangements

The key benefit associated with element-based charging is that it provides an incentive to all TCPs to optimise their interconnect with BT. The current NCD-based system is sub-optimal in two respects:

- it provides an incentive to TCPs to establish more points of interconnection (POCs) with BT than is actually required for the efficient conveyance of traffic; and
- it provides no incentive to TCPs to optimise the geographic locations of these POCs.

The current NCD relationship requires a TCP to establish 68 POCs in order to benefit from single tandem call origination charges. However it is possible in principle to obtain full single tandem connectivity with between 25 and 30 POCs, assuming that the locations of those POCs are optimised (see Annex D). Indeed, it should be possible to obtain single tandem connectivity for around 90% of traffic with only 15 POCs. There are a number of TCPs that have established well in excess of 30 POCs, and this results in costs being incurred unnecessarily. There are two ways in which reducing the number of POCs can deliver benefits:

- reducing the number of POCs directly reduces the level of fixed costs (i.e. those costs that are not capacity dependent) associated with interconnect links. These fixed costs may well be significant, especially for ISI links, where TCPs will have had to lay fibre in order to establish a POC. If, for, example, each TCP were to reduce their POC count to a maximum of 30, then the total number of POCs

between BT and TCPs would be reduced by about 400. Estimating the annual fixed cost for each POC at £5k, then this corresponds to an annual cost saving of around £2 million; and

- reducing the number of POCs also reduce the level of variable (i.e. capacity dependent costs), since increased trunking efficiency reduces the amount of interconnect capacity that is required. Consider for example a TCP that currently has a number of POCs, each with 2 * 2 Mbit/s interconnect links. Halving the number of POCs, and doubling the number of interconnect links per POC, makes it possible to increase the link utilisation by 13% (this assumes a target grade of service of 99.9%, implying a maximum utilisation of a 2-link POC of 68%, and a maximum utilisation of a 4-link POC of 77%), allowing a corresponding reduction in the amount of interconnect link capacity that is required. It seems reasonable to suggest that eliminating unnecessary POCs, and consolidating traffic onto those that remain, might deliver efficiency savings in relation to variable costs of between 5% and 10%, at least for the larger TCPs.

- D.3 The current NCD relationship does not require a TCP to consider where it is most appropriate to establish POCs in order to maximise single-tandem connectivity. A TCP that establishes 30 POCs within a single region of the UK will pay the same call origination charges to BT as another TCP that establishes 30 POCs located optimally across the UK. The result is that there are a number of TCPs, with POC counts in the range 30-40, that ought to be able to get single tandem connectivity for most calls, but who in practice are only achieving this for around 50% of their calls. This estimate is based on data provided by BT in 2002. The data also showed that around 18% of NTS calls include inter-tandem conveyance, ie route at double tandem, implying that 12 billion OLO-terminated NTS call minutes per year include inter-tandem conveyance.
- D.4 Assuming that increased optimisation of interconnect arrangements reduced the percentage of TCP-terminated NTS calls using inter-tandem conveyance from 18% to 10%, this would correspond to a reduction of 5.3 billion call minutes per year, or an annual saving of around £8.5 million (using the current 24 hour average charge for Inter-Tandem Short routing of 0.16 ppm).

Other Benefits

- D.5 The ability for INCA/CLI to include the CLI of the OCP on transit calls creates the potential for OCPs and TCPs to conclude separate payment agreements as has been seen with DQ118 services. In addition to BT paying the standard terminating payment to TCPs, additional payments or refunds could be made between OCPs and TCPs as agreed commercially between themselves (without involving BT). This would enable OCPs to achieve OCP-specific call origination charges instead of being forced to accept the BT equivalent payments as a proxy.
- D.6 The perverse incentives created by NCD to put in as many POCs as possible to reduce conveyance/transit costs will be removed. TCPs will be able to design networks which relate to the sources and volumes of calls to the services they host. Redundant or little used capacity in small routes put in place simply to reduce NCD charges can be eliminated.

Cost Recovery

- D.7 As has already been stated any direction made by Ofcom in relation to this issue must be objectively justified and proportionate i.e. it must be the least onerous method of achieving its aim. Oftel is conscious that any move to introduce a new wholesale

charging system for NTS using INCA/CLI will incur costs for both BT and the community of NTS CPs. One of the reasons for the change is because the NCD methodology does not, in Ofcom's view, create the correct incentives for efficient interconnection. The new methodology is likely to result in greater efficiency. This in turn will result in cost savings for some TCPs who have hitherto been paying too much for conveyance across BT's network due to the estimation technique used in the NCD methodology. For other TCPs, costs will increase, because under the NCD they have been charged at levels that are not cost-reflective due to the same NCD estimation methodology.

- D.8 However, the existing NCD method, though intended to be loosely cost based, does not accurately reflect the usage made of BT's network by each call that terminates on a TCP's network. In setting the NCD sliding scale in 1999 Oftel deliberately depressed the level of uplift that applied to smaller TCPs in order to give them time to optimise their networks in advance of INCA/CLI. It was also assumed then that 100% single tandem charges could not be achieved with less than 69 POCs whereas it is now recognised that with careful planning, TCPs can achieve virtually 100% single tandem charges with something around 25 to 30 POCs. As a consequence the current charging system may penalise TCPs with more than 25 POCs by applying an unjustified uplift on single tandem charges for calls that they terminate. At the same time it undercharges TCPs with less than 10 or so POCs, some of whom should be receiving almost 100% double tandem charges.
- D.9 Furthermore, under the NCD methodology, the relatively low level of uplift on the single tandem charge for TCPs with very few POCs creates insufficient incentives for them to optimise the efficiency of their interconnection arrangements by increasing their numbers of POCs. At the same time the NCD methodology artificially encourages larger TCPs to install more POCs than they might otherwise need in order to achieve single tandem interconnection.
- D.10 BT has stated its belief that the overall effect of any change may be revenue neutral for BT. Any move to INCA/CLI is unlikely to change significantly the total amount it pays out in terminating payments for any given volume of calls across all TCPs. What will change is the amounts paid to individual TCPs who have either done nothing to prepare for INCA/CLI or, at the other extreme, have carefully adjusted their interconnection arrangements to obtain single tandem charges with the minimum number of POCs.
- D.11 This section concentrates primarily on the set-up costs incurred by BT as the main originator of NTS calls and how these should be recovered. Interconnection cost savings for TCPs are also discussed.
- D.12 An indirect benefit of implementing the regime that Ofcom is considering is the fact that, as a result of enhancements to the INCA/CLI regime, TCPs will have better information regarding on which networks their calls originate. Up until now, TCPs have not been able to accurately distinguish traffic that is BT originated from traffic that is transited by BT from other originators. This lack of information has hampered efforts by TCPs to negotiate different commercial arrangements with other (non-SMP) originators. This information would assist them in opening these negotiations which in turn has the potential to create more competition, with associated benefits for consumers.

Cost recovery . Option Appraisal

D.13 In order to reach a view, it is necessary to consider Ofcom's six principles of cost recovery. Ofcom's analysis of these principles in relation to the recovery of costs incurred by BT for INCA/CLI are set out in Annex E.

ANNEX E

Ofcom's six principles of cost recovery- an analysis in relation to the recovery of costs incurred by BT for INCA/CLI

The principles are namely:

- **cost causation:** costs should be recovered from those whose actions cause the costs to be incurred at the margin;
- **cost minimisation:** the mechanism for cost recovery should ensure that there are strong incentives to minimise costs;
- **distribution of benefits:** costs should be recovered from the beneficiaries especially where there are externalities;
- **effective competition:** the mechanism for cost recovery should not undermine or weaken the pressures for effective competition;
- **reciprocity:** where services are provided reciprocally, charges should also be reciprocal; and
- **practicability:** the mechanism for cost recovery needs to be practicable and relatively easy to implement.

E.2 These principles derive from the six principles of cost recovery that the Monopolies and Mergers Commission (the "MMC") (now the Competition Commission) adopted in its 1995 enquiry; see the MMC's report entitled Telephone number portability: a report on a reference under section 13 of the Telecommunications Act 1984.

When applying the principles, it is generally sound to start with cost causation on the grounds that economic efficiency is enhanced by requiring parties to pay for costs which they directly cause to be incurred. The other principles are then considered, to see the extent to which this starting point may require modification. BT's set up costs and BT's per CP costs are considered separately with respect to each cost recovery principle.

Cost causation

E.3 This principle can be given two possible interpretations in the case of system set up (development) costs. On the one hand, it is arguable that BT incurs the costs arising from system set up only if TCPs demand the product. On this argument, it is the TCPs that cause the cost to be incurred, and hence, under the cost causation principle, it is these CPs that should bear these costs.

E.4 It is worth considering the case of cost recovery for CPS system set up costs, as this raised similar issues. In that case, it was argued that the primary causal factor was a regulatory obligation following from BT's market power, rather than the demands of CPS CPs. Oftel noted that both arguments had some validity and neither provided a compelling basis for attributing set up costs. On balance, Oftel concluded that the method of cost recovery should reflect current practice for apportioning costs

associated with other regulations imposed for SMP CPs. This meant that all CPs including BT should bear a proportion of costs.

- E.5 Any obligation for a particular charging method for NTS call conveyance would be a regulatory obligation imposed by Ofcom, which could only be imposed following a finding that BT had market power in the relevant market. Therefore, it is arguable that the requirement to implement a new method for charging is directly attributable to an obligation resulting from BT's market power. This implies that, under cost causality grounds and contrary to the argument in the previous paragraph there is equally some merit to the argument that BT alone should bear the set-up costs.

However there are strong arguments on cost causation grounds that per CP costs incurred by BT should be recovered from the CPs. This would also be consistent with CPS, where there was broad agreement that BT's per CP and per line costs should be met by CPS CPs, largely on the grounds of cost causation.

Distribution of benefits

- E.6 There is a direct benefit to consumers of NTS calls if the NCD is superseded by a more efficient charging basis. This is that callers making NTS calls may benefit from lower retail prices (assuming cost savings are passed on downstream, as would be expected in a competitive market). This assumes that TCPs will migrate to different price points on the NTS ladder, which is not always possible given the problems associated with this. However, service providers may gain from the price reductions (for TCPs that see their costs reduced rather than increased) through greater revenue share, and they can use the additional funds to innovate. Therefore, all TCPs and hence callers making NTS calls should contribute equally towards the system set up costs, and any additional costs BT incurs in maintaining a replacement charging system on an ongoing basis.

Cost minimisation

Whichever party has the ability to control the costs should contribute to them according to this principle. Presumably, BT determines all the system set up costs and per CP and per call costs that are incurred by BT, hence, according to this principle, BT should contribute towards them to provide incentives for cost minimisation. In addition, requiring other CPs to contribute towards the costs also creates an incentive on them to minimise costs as well.

Effective competition

- E.7 In accordance with the Director's duties under section 3 and section 4 of the Act, including the six Community requirements the first of which is to promote competition, the charging method should ensure competitive neutrality between BT-hosted NTS service providers and TCP-hosted NTS service providers. This condition is satisfied if the set up costs are borne by BT as an OCP. However, the principle of effective competition might count against the idea of BT bearing the set-up costs as an OCP, because this might distort competition between BT and other OCPs. The competitive neutrality condition is also satisfied if the costs are allocated to all TCPs (including BT, to the extent that BT acts as a TCP). This principle would also suggest that set-up costs and the ongoing costs should also be allocated to TCPs.
- E.8 The method of allocation depends on whether the costs are equally spread across TCPs, or spread in a weighted average form. So, for example, for the latter method, a TCP with a large number of calls would be allocated relatively more costs than one

which had a smaller number of calls in a pro rata fashion. This method could be argued to be more conducive to effective competition compared to a method which spread costs equally across TCPs, regardless of size, number of calls etc.

Practicality

E.9 It is arguable that the simplest approach would probably be for BT to recover the set up costs. In the CPS case, Ofcom ruled out on practicability grounds a proposal for system set up costs to be borne up-front by CPS CPs. This is because CPS set up costs were high, and it would have created a disincentive to enter the market initially if CPS CPs had had to bear this cost at that time. However, the situation is different here because the market is mature, entry is not an issue and the costs are not as high as in the case of CPS, so this may also suggest that set up costs, in addition to per CP/call costs should be recovered from TCPs on practicability grounds. This is likely to be relatively easy; BT already has established billing relationships with TCPs, so it would not present major practicability issues for BT if BT has to bill TCPs to recover these costs. Ofcom notes that if BT were (for example) to introduce a surcharge on its NTS retention to cover these costs, then the terminating payments to TCPs would be reduced, and TCPs would be very reluctant to migrate to different retail price points to restore their terminating payments (because, under the most used current arrangements, this would require them to change their numbers).

Reciprocity

E.10 Reciprocity is not a relevant principle here, because the service is not provided reciprocally.

Conclusions

E.11 Ofcom's view is that the move to an INCA/CLI based system of charging for NTS calls benefits all consumers since it allows for more efficient charging and efficient routing of NTS calls. Further, in order to promote effective competition in NTS traffic, it is necessary that providers incur the same wholesale costs as BT, and only compete on the basis of their own operations. Ofcom believes that in order to ensure that competition is promoted in NTS, it is important to place more weight on the .distribution of benefits. and the .effective competition. principles.

Therefore the costs should be recovered across all end-users of NTS calls. In practical terms, this means that costs should be recovered on a per minute basis. BT's costs should be shared across all TCPs (including BT itself) through an addition to BT's ppm retention charge.

Annex F

Notification and Draft Direction

Notification of proposals under section 49 of the Communications Act 2003 (the “Act”)

Proposals for giving a direction under Conditions AA1(a).2 and AA11.2 as set out in Schedule 1 to the Notification published by the Director General of Telecommunications (the “Director”) on 28 November 2003 pursuant to sections 48(1) and 79 of the Act under which the Director imposed those conditions on British Telecommunications plc (“BT”) as a result of the market power determination made by the Director that BT has significant market power in each of the markets for call origination on fixed public narrowband networks, local-tandem conveyance and transit on fixed public narrowband networks, inter-tandem conveyance and transit on fixed public narrowband networks and single transit on fixed public narrowband networks in the United Kingdom excluding the Hull Area

- F.1 On 28 November 2003 the Director General of Telecommunications (the “Director”) published a notification (the “Notification”) under sections 48(1) and 79 of the Communications Act 2003 (c.21) (the “Act”) setting out his decision that British Telecommunications plc (“BT”) has significant market in each of the markets for call origination on fixed public narrowband networks, local-tandem conveyance and transit on fixed public narrowband networks, inter-tandem conveyance and transit on fixed public narrowband networks and single transit on fixed public narrowband networks in the UK excluding the Hull Area.
- F.2 The SMP services conditions contained in Schedule 1 to the Notification imposed on BT included Condition AA1(a) (Requirement to provide Network Access on reasonable request), which under Condition AA1(a).1 obliges BT, where a Third Party reasonably requests in writing Network Access, to provide that Network Access. Under Condition AA1(a).2 the provision of Network Access in accordance with paragraph AA1(a).1 shall occur as soon as it is reasonably practicable and shall be provided on fair and reasonable terms, conditions and charges and on such terms, conditions and charges as the Director may from time to time direct.
- F.3 The SMP services conditions contained in Schedule 1 to the Notification also included Condition AA11 (Requirement to provide NTS Call Origination), which requires BT, under paragraph AA11.2 and without prejudice to paragraphs AA11.3 and AA11.4 and where a request is covered by paragraph AA11.1, to provide NTS Call Origination on fair and reasonable terms, conditions and charges and on such terms, conditions and charges as the Director may from time to time direct.
- F.4 On 29 December 2003, the Office of Communications (“Ofcom”) took over the responsibilities and assumed the powers of the five former regulators it has replaced, including the Director. In particular, by virtue of section 408(5) of the Act, anything done by or in relation to the Director during the period beginning on 25th July 2003 and ending on 29th December 2003 for the purposes of, or in connection with, the carrying out of networks and services functions is to have effect as if it had been done by or in relation to Ofcom.
- F.5 Ofcom hereby make, in accordance with section 49 of the Act, the following proposal for a direction to be given under Condition AA1(a).2 and Condition AA11 as set out in Schedule 1 to the Notification.

- F.6 The draft Direction is set out in the Schedule to this notification.
- F.7 The effect of the draft Direction, and the reasons for making the proposals, are set out in Section 6 of the accompanying explanatory statement hereto.
- F.8 Representations may be made to Ofcom about the proposed draft Direction by **9 August 2004**. Representations shall be addressed to the person named in, and otherwise made in the manner set out in, Section 7 of the accompanying explanatory statement hereto.
- F.9 In accordance with section 50 of the Act, copies of this notification have been sent to the Secretary of State, the European Commission and to the regulatory authorities of every other member State.

For the purposes of this notification:

- i. "**Act**" means the Communications Act 2003 (c.21);
- ii. "**BT**" means British Telecommunications plc whose registered company number is 1800000, and of its subsidiaries or holding companies, or any subsidiary of such holding companies, all as defined by section 736 of the Companies Act 1985, as amended by the Companies Act 1989;
- iii. "**Director**" means the Director General of Telecommunications as appointed under section 1 of the Telecommunications Act 1984;
- iv. "**Notification**" means the Notification referred to in paragraph 1 above; and
- v. "**Ofcom**" means the Office of Communications.

Except insofar as the context otherwise requires, words or expressions used in this notification shall have the meaning ascribed to them in paragraph 10 above and otherwise any word or expression shall have the same meaning as it has in the Notification or, if the context so permits, in Schedule 1 thereto, as appropriate.

- F.10 Except as otherwise defined in this notification, words or expressions used shall have the meaning ascribed to them in the Act.

Caroline Wallace
Competition Policy Director

A person duly authorised on behalf of Ofcom in accordance with paragraph 18 of the Schedule to the Office of Communications Act 2002

8 July 2004

Schedule

Draft Direction under Conditions AA1(a).2 and AA11.2 as set out in Schedule 1 to the Notification published by the Director on 28 November 2003 pursuant to sections 48(1) and 79 of the Act under which the Director imposed those conditions on BT as a result of the market power determination made by the Director that BT has significant market power in each of the markets for call origination on fixed public narrowband networks, local-tandem conveyance and transit on fixed public narrowband networks, inter-tandem conveyance and transit on fixed public narrowband networks and single transit on fixed public narrowband networks in the United Kingdom excluding the Hull Area

WHEREAS:

- A. on 28 November 2003 the Director published a notification (the "Notification") under sections 48(1) and 79 of the Act setting out his decision that BT has significant market power in each of the markets for call origination on fixed public narrowband networks, local-tandem conveyance and transit on fixed public narrowband networks, inter-tandem conveyance and transit on fixed public narrowband networks and single transit on fixed public narrowband networks in the UK excluding the Hull Area;
- B. the SMP services conditions contained in Schedule 1 to the Notification imposed on BT included Condition AA1(a) (Requirement to provide Network Access on reasonable request), which under Condition AA1(a).1 obliges BT, where a Third Party reasonably requests in writing Network Access, to provide that Network Access. Under Condition AA1(a).2 the provision of Network Access in accordance with paragraph AA1(a).1 shall occur as soon as it is reasonably practicable and shall be provided on fair and reasonable terms, conditions and charges and on such terms, conditions and charges as the Director may from time to time direct;
- C. the SMP services conditions contained in Schedule 1 to the Notification also included Condition AA11 (Requirement to provide NTS Call Origination), which requires BT, under paragraph AA11.2 and without prejudice to paragraphs AA11.3 and AA11.4 and where a request is covered by paragraph AA11.1, to provide NTS Call Origination on fair and reasonable terms, conditions and charges and on such terms, conditions and charges as the Director may from time to time direct;
- D. the Director was able to exercise powers under the Act pursuant to section 408 of the Act and Article 3(1) of the Communications Act 2003 (Commencement No. 1) Order 2003 until Ofcom assumed those powers on 29 December 2003;
- E. for the reasons set out in the explanatory statement accompanying this Direction, Ofcom are satisfied that, in accordance with section 49(2) of the Act, this Direction is:
 - i. objectively justifiable in relation to the networks, services, facilities, apparatus or directories to which it relates;
 - ii. not such as to discriminate unduly against particular persons or against a particular description of persons;
 - iii. proportionate to what it is intended to achieve; and
 - iv. in relation to what it is intended to achieve, transparent;

- F. for the reasons set out in the explanatory statement accompanying this Direction, Ofcom have considered and acted in accordance with their general duties in section 3 of the Act and the six Community requirements in section 4 of the Act;
- G. on 8 July 2004, Ofcom published a notification of the proposed Direction in accordance with section 49 of the Act;
- H. Ofcom have considered every representation about the proposed Direction duly made to them; and

NOW, therefore, pursuant to Condition AA1(a).2 and Condition AA11.2 in Schedule 1 to the Notification, Ofcom hereby directs that:

1. Subject to paragraph 2 below, from 30 September 2005 BT's pence per minute charge for NTS Calls originated by BT or which transit BT's Public Telephone Network ("Relevant Calls") shall be calculated using only BT's Inter-Network Call Accounting system which uses the Calling Line Identification.
2. From 1 October 2005 to 31 December 2005 in addition to the system referred to in paragraph 1 above BT shall also use a network charge differential billing methodology to calculate its pence per minute charge for any Relevant Calls but shall cease to use any such methodology after 31 December 2005.
3. BT shall recover its set-up and on-going costs incurred in complying with paragraphs 1 and 2 above from all those Communications Providers (including BT itself) to whom BT provides-
 - a. NTS Call Origination; and
 - b. Local-tandem Conveyance Services, Inter-tandem Conveyance and Transit Services and Single Transit Services for the purposes of the conveyance and transit of NTS Calls, via a pence per minute charge on each minute of Relevant Calls provided.
4. For the purpose of interpreting this Direction (including its recitals above), the following definitions shall apply:
 - a. "**Act**" means the Communications Act 2003 (c. 21);
 - b. "**BT**" means British Telecommunications plc whose registered company number is 1800000, and of its subsidiaries or holding companies, or any subsidiary of such holding companies, all as defined by section 736 of the Companies Act 1985, as amended by the Companies Act 1989;
 - c. "**Calling Line Identification**" means a facility that enables identification of the number from which a call is being made or to which a return call could be made.
 - d. "**Director**" means the Director General of Telecommunications as appointed under section 1 of the Telecommunications Act 1984;

- e. "**Notification**" means the Notification referred to in recital (A) of this Direction above; and
 - f. "**Ofcom**" means the Office of Communications.
5. Except insofar as the context otherwise requires, words or expressions used in this Direction (including its recitals above) shall have the meaning ascribed to them in paragraph 4 above and otherwise any word or expression shall have the same meaning as it has in the Notification or, if the context so permits, in Schedule 1 thereto, as appropriate.
 6. For the purpose of interpreting this Direction:
 7. headings and titles shall be disregarded; and
 8. the Interpretation Act 1978 (c. 30) shall apply as if this direction were an Act of Parliament.
 9. This Direction shall take effect on the day it is published.

CAROLINE WALLACE
COMPETITION POLICY DIRECTOR

A person duly authorised on behalf of Ofcom in accordance with paragraph 18 of the

F.11 Schedule to the Office of Communications Act 2002

8 JULY 2004