

INCA/CLI for NTS Interconnection charging

Explanatory Memorandum and final Direction

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Contents

Section		Page
1	Summary	- 1 -
2	Introduction	- 3 -
3	Links to other Ofcom work	- 8 -
4	Responses to the draft Direction	- 12 -
5	Analysis of policy options	- 18 -
6	Ofcom's final decision	- 23 -
Annex 1	Modifications and Enhancements to INCA/CLI	- 26 -
Annex 2	INCA/CLI Regulatory Impact Assessment	- 29 -
Annex 3	Ofcom's six principles of cost recovery – an analysis in relation to the recovery of costs incurred by BT for INCA/CLI	- 33 -
Annex 4	Final Direction	- 36 -
Annex 5	Glossary	- 39 -

Section 1

Summary

- S1 This explanatory memorandum accompanies the Office of Communications (“Ofcom”)’s final 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 direction following Ofcom's draft direction and explanatory statement on this issue entitled “INCA/CLI for NTS interconnection charging”, which was published for consultation in July 2004 (“the July statement”).
- S2 The July statement gave Ofcom’s initial proposal as to which of four different options, for the calculation of BT's NTS interconnection charges, should be adopted . 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 the Office of Telecommunications (“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 July statement sought views on Ofcom’s proposal that BT should implement INCA/CLI (option (i)) by 30 September 2005 and that the existing NCD billing methodology should be withdrawn by 31 December 2005. It also sought views on a proposal that BT’s costs of doing so should be recovered through a surcharge to BT’s regulated NTS call origination and transit charges. This would be set as part of Ofcom’s forthcoming review of the Network Charge Controls which, if replaced, are due to take effect in October 2005.

- S3 A total of 6 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/inca_cli_nts/responses/?a=87101

All supported the proposal to move to INCA/CLI billing but generally (BT apart) rejected the decision that BT's costs should be recovered from all NTS CPs. Some respondents considered that if this were to remain Ofcom's view then the additional costs incurred by TCPs in configuring their own billing systems to work with INCA/CLI should also be considered.

- S4 Since the July statement, and in parallel with the work on INCA/CLI billing, Ofcom has been undertaking a more fundamental re-examination of the framework underpinning NTS. Ofcom does not however consider that this work detracts from the need for a billing system that accurately records BT’s wholesale conveyance charges. The options set out in the July statement are therefore unaffected by this work.

- S5 Following consideration of the consultation responses, and from information subsequently provided by BT, Ofcom considers that BT should be able to implement its INCA/CLI billing system and withdraw the existing NCD methodology by **30 November 2005**. However, in order that the regulatory obligation imposed by this direction is reasonably achievable the requirement to implement INCA/CLI for NTS and withdraw NCD will be extended to at the latest **28 February 2006** to allow time for any unforeseen issues to be addressed. BT and the industry may, nevertheless, agree an earlier implementation date if required.
- S6 In relation to BT's charge for recovery of its additional set-up and on-going costs in completing this work, Ofcom has decided 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. The charge will be set as a result of the forthcoming NCC review.

Section 2

Introduction

Scope

- 2.1 This explanatory memorandum and final direction sets out the Office of Communications (“Ofcom”)’s 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 the Office of Telecommunications (“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:
- (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.
- 2.4 As a separate exercise to address issues with the management of EBC BT conducted a series of workshops, earlier in 2004, under the banner of EBC Evolution. One of the outcomes of this work is a universal move to refresh the EBC matrix on a monthly basis and this will take effect late in 2004. This change will also address the concerns of NTS CPs over the timeliness of including new exit POCs in EBC matrices.

The Consultation

- 2.5 On 23 December 2003 OfTel published a consultation document entitled “Options for Interconnection Charging” (the December consultation)
- http://www.ofcom.org.uk/consultations/past/nts_ic_condoc/nts_charging.pdf
- which 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 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.

- 2.6 Responses were received from eight CPs, including BT.
- 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”).

The Statement and notification of a draft direction

- 2.8 On 8 July 2004 Ofcom published a statement entitled “INCA/CLI for NTS interconnection charging”, (“the July statement”).

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

This should be read in conjunction with this explanatory memorandum. The July statement set out for consultation a notification of Ofcom’s draft direction that BT should introduce INCA/CLI and withdraw the NCD billing methodology in two stages ending on 31 December 2005. Ofcom proposed that the costs incurred by BT in implementing the new system should be recovered through a pence per minute (“ppm”) surcharge to BT’s NTS call origination charge payable by all NTS CPs including BT itself. The charge would be calculated from cost data supplied by BT and as part of Ofcom’s forthcoming review of BT’s Network Charge Controls, due to take effect from October 2005.

- 2.9 Responses were received from six CPs, including BT, and these are summarised in Section 4 of this document together with Ofcom’s comments. The full responses can be found at:

http://www.ofcom.org.uk/consultations/past/inca_cli_nts/responses/?a=87101

- 2.10 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) recent NTS pricing initiatives; (ii) the position of non-dominant OCPs; (iii) wider consumer concerns about the costs of calling and the proliferation of NTS numbers; and (iv) an industry proposal for an alternative NTS model [NB: this proposal, known as the NTS Futures proposal has since been brought within the scope of the NTS Framework re-examination – see below]. As a consequence, earlier this year Ofcom announced its intention to conduct a re-examination of the framework surrounding NTS as a whole. This work is discussed in Section 3 of this document and Ofcom’s consultation on the NTS Framework Re-examination was published shortly before this final direction.
- 2.11 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.
- 2.12 As Ofcom has explained to the relevant industry group (the NTS Focus Group) Ofcom will address the wider NTS issues as part of Ofcom’s NTS Framework Re-examination. Both this final direction and the NTS Framework

Re-examination 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.

- 2.13 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 to be 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.
- 2.14 Therefore, following consideration of the responses to the draft direction, and mindful of Ofcom's parallel proposals for changes to the NTS Framework, Ofcom has decided that BT should implement its INCA/CLI billing system by **28 February 2006** and that the existing NCD methodology should also be withdrawn from that date. BT and the industry are, however, free to agree a shorter implementation/withdrawal timescale if this proves possible.
- 2.15 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.
- 2.16 In formulating its decision 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 do so at this time, given that the forthcoming review of the Network Charge Control (the current control is due to expire in September 2005) will take into account BT's NTS conveyance charges including the additional charges incurred in implementing the requirements of the final direction at Annex 4.
- 2.17 Ofcom considers that the work required to implement the INCA/CLI method should commence as soon as possible on publication of this final direction in order to meet the deadline in the direction.

The Legal Framework

- 2.18 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) to 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>

- 2.19 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.
- 2.20 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.
- 2.21 In making 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.
- 2.22 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 may need to configure their systems to inter-operate with INCA/CLI in order to be able to terminate NTS traffic.

The final direction

- 2.23 Ofcom’s final direction is at Annex 4, in accordance with section 49 of the Act. The effect of, and reasons for the final direction are contained in Section 6 of this Explanatory memorandum.
- 2.24 Ofcom is satisfied that its final 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

- 2.25 The analysis was presented in Section 5 and Annex D of the July Statement. For ease of reference this analysis is repeated in Section 5 and Annex 2 of this document. When read in conjunction with the rest of the document, this

represents a Regulatory Impact Assessment (RIA), as defined by section 7 of the Communications Act 2003.

- 2.26 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 repeated 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 has recently undertaken a number of different NTS-related activities of which this final direction on NTS Interconnection Charging is only one. This direction 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 strategic work with a link to NTS

The Ofcom Telecommunications Strategic Review

- 3.2 The aim of the Telecommunications Strategic Review ("the Telecoms 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 transit or the means by which BT's charges for these are calculated).
- 3.3 The Telecoms Review is looking several years in the future, at developments such as IP-based Next Generation Networks ("NGNs"). These are likely to drive convergence of voice and data technologies, possibly prompting a review of the need for voice-specific regulation. Regulation such as BT's NTS Call Origination Condition, that has arisen in the context of existing markets and technologies, will need to be reconsidered as the environment changes.
- 3.4 However, these possible future developments do not remove the need for effective regulation of the market as it exists today, and there is no doubt that the NTS regime is currently an important enabler of competition. Ofcom therefore considers it appropriate for the tactical work on NTS issues and Ofcom's strategic NTS Framework Re-examination to proceed in parallel with the Telecoms Review. 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 Telecoms Review.

Ofcom's re-examination of the NTS Framework

3.5 On 22 October 2004 Ofcom published a consultation "*Number translation Services: options for the future*":

http://www.ofcom.org.uk/consultations/current/nts_future/?a=87101

detailing its proposals and supporting analysis arising out of a re-examination of the NTS framework. This project was set up by Ofcom to review the current NTS regime at a fundamental level to ensure that it continues to meet Ofcom's strategic objective of furthering the interests of citizen-consumers through a regulatory regime which, where appropriate, encourages

competition. Ofcom 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.

- 3.6 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.
- 3.7 The project has made a detailed study of the operation of NTS and is consulting on how best NTS can meet the needs of all stakeholders in the long term and has proposed changes to the framework which Ofcom considers deliver net benefits. Prior to the consultation, Ofcom undertook extensive research including international benchmarking, commissioning specialist technical consultancy and meeting with more than 20 stakeholders from the Industry, business and consumer organisations. The project has described and evaluated a range of alternative pricing and interconnect models that could be applied to NTS ranging from maintaining the status quo to abandoning NTS as a means of regulation altogether.
- 3.8 Ofcom has expressed an initial view that changes should be made to the pricing and interconnect arrangements for NTS and that these should be implemented in conjunction with a package of consumer protection measures.
- 3.9 Under the changes to the pricing and interconnect arrangements that Ofcom proposes, BT's retail prices for 0845/0870 calls would no longer be related to BT's retail prices for geographic calls, and TCPs would be able to select retail prices for their services on the BT network.
- 3.10 The closing date for responses to the Consultation is 7 January 2005
- 3.11 A number of NTS CPs have previously expressed a view that any decision regarding the method used by BT to calculate its charges for originating and conveying NTS calls should have been taken within the overall context of the NTS Framework Re-examination. Ofcom's preferred option extends the retail pricing flexibility currently available in 0844/71 to 0845/70 numbers, otherwise the basic model of NTS remains the same.
- 3.12 Any of the options set out in the consultation, if introduced, could benefit from a more accurate system for calculating BT's charges (or at least recording its underlying per-call costs) for origination and conveyance of NTS calls and this requirement is likely to remain for the foreseeable future. Ofcom therefore believes that this separate work on implementing INCA/CLI complements rather than conflicts with the objectives of the NTS Framework Re-examination.

The NTS call termination market review

- 3.13 On 1 April 2004, BT issued Network Charge Change Notice (NCCN) 500, notifying the industry of its intention to increase the termination rates for various BT-hosted NTS services from 1 May 2004. This introduced a new feature into the NTS markets, namely that BT now charges other OCPs more than it charges itself for access to its own services. Previously, in all cases where BT acted as either an originating, transit, or terminating CP, the amount BT paid for NTS call termination to any TCP, including itself, was the same. This payment was a function of the retail price for the call on the BT network and the interconnection arrangements Oftel (Ofcom's predecessor)

had put in place in response to BT's Significant Market Power (SMP) in wholesale call origination.

- 3.14 NCCN 500 gave rise to concerns that BT might have SMP in the market for NTS call termination (a market which had not previously been reviewed by Ofcom) and that the current wholesale call origination and interconnect arrangements might be a contributory factor. Ofcom therefore reviewed the market for NTS call termination as part of its wider re-examination of the NTS framework.
- 3.15 On 22 October 2004 Ofcom published a consultation *NTS Call Termination Market Review* containing its analysis of the NTS call termination market in the UK and its initial conclusions.
- 3.16 Ofcom proposes to identify the NTS call termination market in accordance with competition law principles, for the purpose of ensuring that regulatory obligations are proportionate and objectively justifiable. Having analysed the operation of the market Ofcom reached the initial conclusion that BT has SMP. Ofcom proposes to impose two SMP service conditions on BT – an obligation to provide Network Access and an obligation not to discriminate.
- 3.17 The closing date for responses to the NTS Call Termination Market Review Consultation is 7 January 2005.

Ofcom's tactical work on NTS

Retail Uplift

- 3.18 In the November Review Ofcom imposed Condition AA11, referred to in Section 2, as a remedy to BT's SMP in the market identified in that review.
- 3.19 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.
- 3.20 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.
http://www.ofcom.org.uk/consultations/current/nts_retail_uplift/?a=87101
- 3.21 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.
- 3.22 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.

PRS Review

- 3.23 On 3 August 2004, Ofcom announced that, at the request of the Department of Trade and Industry, it was carrying out a review of the way in which PRS is regulated with a view to improving measures to protect consumers from fraudulent and unscrupulous activity. The PRS review will look, amongst other things, at ways to strengthen the powers of ICSTIS – the body responsible for regulating the content and promotion of PRS.
- 3.24 The PRS review will look in more detail at some of the practical aspects of how the content and promotion of PRS in particular are regulated and is required to be completed by November 2004. Despite the fact that PRS calls are a subset of NTS, this work has no impact on Ofcom’s final decision in regard to the implementation of INCA/CLI for NTS.

PRS – Review of Numbering Arrangements

- 3.25 On 26 August 2004 Ofcom published its “*review of numbering arrangements for Premium Rate Services*”.

<http://www.ofcom.org.uk/consultations/past/prs/statement/>

Ofcom's proposals in that document were to remove the content/ non-content 090/091 distinction in the National Telephone Numbering Plan, bring the designation of the 090 and 091 ranges in the Plan into line with the designation of 08 numbers and re-designate them as ‘Special Services at a Premium Rate’, additionally removing the current designation of 092 to 099 numbers in the Plan as ‘Broadband Services’. Ofcom also announced its intention to retain the existing cost and content sub-structure of 090 and to roll this into 091 as and when further number ranges are required. These proposals have no impact on the outcome of Ofcom’s final decision in regard to the implementation of INCA/CLI for NTS.

Next Generation Networks

- 3.26 Ofcom has started to examine the impact on interconnection arrangements and wholesale markets of the future in light of the introduction by BT and other CPs of NGNs. As described above in relation to the Telecoms Review these may have an impact on the future form of regulation (amongst other things) of NTS. They may also have an impact on the interconnection arrangements CPs have put in place in response to Oftel’s and Ofcom’s NTS policy decisions and to developments in the NTS market in reaction to NTS policy decisions, including this direction. Given that it is likely to be some years before existing PSTN based interconnection is completely replaced by NGNs, the requirement for INCA/CLI as the most accurate billing methodology currently available for NTS will remain for some time to come.

Network Charge Controls

- 3.27 Ofcom has already embarked on its review of the Network Charge Controls (“the NCC”) of BT’s wholesale charges. The current NCC ends on 30 September 2005, and any proposed new controls would take effect from 1 October 2005. Because of this timing Ofcom considers the NCC to be the most suitable vehicle for calculating and applying future controls to the surcharge to be applied to BT’s call origination and transit charges for NTS, to recover BT’s INCA/CLI implementation costs.

Open Cases

- 3.28 At the time of writing there are no open cases relating to NTS.

Section 4

Responses to the draft Direction

Background

4.1 Ofcom's initial proposal in relation to the introduction of INCA/CLI, cost recovery and timescales was given in the July statement. Responses to the consultation were received from:

- BT
- UKCTA
- Easynet
- Energis
- ntl
- Telewest

All of the responses supported option (1) – the introduction of INCA/CLI but some comments were made about the detail behind the proposal. The full non-confidential responses can be found on Ofcom's website at:

http://www.ofcom.org.uk/consultations/past/inca_cli_nts/responses/?a=87101

The comments can be summarised into the following categories:

- Recovery of BT's implementation costs for INCA/CLI
- Recovery of TCPs' costs in enhancing their own billing systems
- Implementation processes
 - Monthly EBC update
 - Least cost routing
 - Parallel running of INCA/CLI and NCD
- Date of implementation
- OCP specific call origination

Recovery of BT's implementation costs

4.2 There was a general view, which repeated that given in some of the responses to the initial consultation, that BT was not entitled to recover any costs it will incur in implementing enhancements to INCA/CLI and associated processes. The respondents believed that the enhancements were only necessary because BT had failed to implement INCA/CLI properly at its initial launch in late 2000 and that BT was merely making up for its own shortcomings. Furthermore views were held that because BT was already implementing monthly updating of the EBC matrix, as part of its separate EBC Evolution project, its costs incurred in doing this for NTS would already have been absorbed.

Ofcom's response

4.3 In regard to recovery of BT's costs CPs should recall that the narrowband market review published by Ofcom on 28 November 2003 found that BT was dominant in NTS call origination.

http://www.ofcom.org.uk/legacy_regulators/oftel/narrowband_mkt_rvw/fixednarrowbandstatement.pdf

The resultant SMP condition imposed on BT, by virtue of this dominance, requires it to provide NTS call origination and that its charges for so doing must be cost oriented. Ofcom considers that in using the NCD methodology BT was meeting this obligation. However, as discussed in paragraphs A2.4 to A2.9 in annex 2 Ofcom considers that the benefits of moving to INCA/CLI billing address many of the shortcomings inherent within the NCD. As such INCA/CLI billing is more cost reflective and creates the correct incentives for efficient network build.

- 4.4 The existing regulatory obligation placed on BT, as a result of the first INCA direction made in December 2001,

<http://www.ofcom.org.uk/static/archive/oftel/publications/pricing/inca1201.htm>

requires BT to enable TCPs to choose whether to use the NCD methodology or INCA/CLI in its existing form to invoice BT for their terminating POLOs. Ofcom is now imposing a new regulatory obligation requiring BT to make necessary changes to INCA/CLI and to implement it as the sole billing system for NTS, in a reasonable timescale. If this obligation were not imposed, BT would have no need to make any changes since it has no revenue incentive to do so. This is because BT considers that its total wholesale revenues received through either INCA/CLI or NCD billing would be similar.

- 4.5 In meeting this new regulatory obligation BT will incur additional costs, which it is entitled to recover from all the beneficiaries of the change. All the respondents to the July statement and statutory consultation agreed that the move from NCD to INCA/CLI will be beneficial. Consequently Ofcom considers that BT's relevant costs for enhancing INCA/CLI should be shared by all NTS CPs including BT itself. Ofcom's initial calculations indicate that the additional charge, recovered over a five year period, would approximate to a pence per minute figure of less than 0.002ppm. This is an initial estimate provided only to give an indication of the likely charge. The charge will be set as a result of the forthcoming NCC review and will apply to NTS calls only.

Recovery of CPs costs in enhancing their own billing systems

- 4.6 A number of TCPs considered that if BT's costs in implementing INCA/CLI are to be shared by all NTS CPs then TCPs should be able to recover their similar costs for configuring their own billing systems to work with INCA/CLI.

Ofcom's response

- 4.7 As previously stated Ofcom is placing a regulatory obligation on BT to implement INCA CLI. Other NTS CPs are under no such obligation and any work they may undertake on their own billings systems is entirely discretionary. Some will want to achieve maximum functionality in order to be able to compare INCA/CLI output with their own records in some detail. Others will be content with lower levels of functionality. In addition individual systems will vary in levels of complexity with some being extremely simple.
- 4.8 It does not follow from the fact that BT's system set-up costs are to be recovered from all CPs (including BT) that the same should apply to any other particular category of costs. The judgement regarding recovery of BT's system set-up costs reflects an application of the six principles to those costs and it cannot be assumed that, if applied to a different set of costs, the six principles would lead to the same conclusions regarding cost recovery. For example, as Annex 3 makes clear, the conclusions are different in relation to BT's system set-up and per operator costs

Implementation processes

Monthly updating of EBC

- 4.9 A number of respondents remarked that, through its separate EBC Evolution project known as the EBC Review (details are available via the BT Wholesale website at www.btwholesale.com) BT is moving to monthly updating of the EBC matrix for all call types. As a consequence its cost in doing so for NTS will be met by itself through that exercise and should not be included in the costs attributed to INCA/CLI.
- 4.10 Another consequence could be that those TCPs who have built out their networks to most or every BT tandem switch in order to gain single tandem charges under NCD will start to reduce POCs after INCA/CLI is implemented. This will be because single tandem interconnection is achievable with less than half the maximum (69) POC count enabling TCPs to use 'fatter', more efficient interconnection routes to carry their traffic.
- 4.11 Monthly EBC updating is of benefit only when numbers of POCs is increasing as it enables new routes to be counted more quickly and for the charging benefits to be realised sooner. This will benefit smaller TCPs who have yet to adjust their networks for maximum efficiency under INCA/CLI. However, as larger TCPs reduce their numbers of POCs to the INCA/CLI optimum, the effect will be reversed and these TCPs will stand to lose out from this 'enhancement'.

Ofcom's response

- 4.12 Having sought information in relation to this work item from BT Ofcom notes that the EBC Evolution will be completed before development work starts for INCA/CLI billing for NTS. As such the additional work BT has identified that is required to introduce monthly EBC updating for INCA/CLI could not have been undertaken as part of the EBC Evolution project as this will already have been completed. The EBC Evolution project was undertaken by BT on its own initiative (and cost) and the EBC changes are not limited to NTS but affect all types of call which use EBC matrices as the pricing tool.
- 4.13 EBC Evolution will have provided functionality (charging according to routing plans) which is also required for INCA/CLI. If this work had not been separately undertaken it would have had to be factored into the INCA/CLI development costs resulting in an even higher charge.
- 4.14 Ofcom assumes that larger TCPs in seeking to reduce their POC counts will do so with the intention of maintaining single tandem charging whilst improving traffic carrying efficiency on their interconnect routes. It is hard to see therefore how monthly EBC updates will result in any disbenefit if larger TCPs' charges remain at single tandem throughout the process.

Least cost routing

- 4.15 Some respondents commented that least cost routing was a fundamental requirement for INCA/CLI yet BT had designed the original INCA system to reflect actual rather than shortest possible routing of calls across the BT to network to TCPs POCs. In moving to least cost routing principles with INCA/CLI BT was merely correcting its omissions from the initial system and CPs should not be expected to pay for this.

Ofcom's response

- 4.16 Ofcom refers to BT's own response to the statement in relation to least cost routing. In this BT said:

“BT would like to point out that for transit traffic BT currently uses the cheapest route between the entry POC and any of the TCP’s exit POCs regardless as to whether these can actually handover NTS traffic. BT, therefore, always charges CPs for the cheapest theoretical route possible, independent of the traffic type, and regardless of the actual cost of routing to the TCP’s NTS POC. For BT originated traffic BT applies the cheapest route between the originating DLE and the POC at which the call was actually handed over to the TCP although this may not necessarily be the nominated exit POC due to network congestion etc.”

- 4.17 Ofcom also notes that as part of the EBC Evolution project BT has moved to ‘charging according to routing plans’. This means that calls are now charged according to the shortest route to the TCPs’ nominated exit POC, under the agreed routing plan, even if the call has to be routed sub-optimally as a result of network congestion. None of the costs incurred in implementing this change have been allocated to INCA/CLI enhancement for NTS. In other words BT will not recover any costs associated with least cost routing from within the INCA/CLI ppm surcharge.

Parallel running of INCA/CLI and NCD

- 4.18 In the INCA/CLI statement Ofcom proposed a three month parallel running period from the time the first INCA/CLI enhanced reports were produced until NCD billing was to be withdrawn. In its response BT expressed its concerns at this proposal on the grounds of the additional costs and manpower that would be involved in running two active billing systems in parallel. BT argued that it would be able to address CPs’ concerns and that:

“BT is willing to work with CPs by making available, well in advance, the data/files to be used in the new solution. This would include input from BT’s own system testing, but use live input data and should provide ample opportunity to become conversant with the new system and check that it gives the expected results.”

- 4.19 CPs, on the other hand, generally welcomed the proposal in light of BT’s previous attempt to introduce an INCA system that turned out not to be fit for purpose, in their view.
- 4.20 This matter was subsequently discussed at the NTS Focus Group in the light of these conflicting views and to see if BT’s proposal to share information prior to implementation could prove acceptable to the industry. In the event there was general agreement that if BT were able to make INCA output available at a suitably early stage of the development and testing processes and maintain close liaison with TCPs over the necessary changes they would need to make to their own systems, then a formal parallel running period would not be necessary. As a consequence Ofcom has decided not to require a parallel running period with INCA/CLI and NCD and that the changeover from one system to the other will take place simultaneously.

Date of implementation

- 4.21 BT will not commence any enhancement work on INCA/CLI until the final direction has been published. This is so that Ofcom’s decision on how BT’s costs will be recovered will be confirmed at the point it starts work.
- 4.22 BT has confirmed that all the necessary implementation and testing work can be completed within thirteen months from the date of the final direction and that its Commercial Managers are ready to work closely with all NTS CPs in ensuring a smooth changeover takes place. As a consequence BT should be able to both introduce INCA/CLI billing and withdraw NCD billing by 30

November 2005. However, Ofcom is conscious that in making a direction, which contains a date by which the work must be completed, it is placing a regulatory obligation on BT with which BT must comply. In the event that BT encounters a problem which delays implementation beyond the stated date BT could face being in breach of the direction.

- 4.23 One solution would be for BT to ask Ofcom to re-make the direction with a later implementation date but this is an unwieldy process and would require a further consultation. Following further discussions at the NTS Focus Group, Ofcom has decided to allow a further three months from 30 November 2005 by which time the requirements of the direction must be met. BT must, therefore introduce INCA/CLI billing and withdraw NCD by 28 February 2006. In the event that no unforeseen problems arise BT may complete the work at any time before 28 February 2006 with the agreement of the industry as represented by the NTS Focus Group.

OCP specific call origination

- 4.24 OCPs (most prominently Telewest), whilst acknowledging the benefits INCA/CLI will bring to billing for NTS call termination, have expressed concerns that in developing INCA/CLI for NTS BT has made no provision for OCP specific call origination charges. TCPs termination payments need to be capable of reflecting the different costs faced by non-dominant OCPs in originating calls which transit BT's network. To date direct interconnection between non-dominant OCPs and TCPs is rare and then not generally used for NTS traffic. TCPs are mostly content to use BT's transit product for their NTS calls because it ensures both BT originated and transit traffic is terminated via larger, more efficient routes, not possible where OCPs and TCPs interconnect on an individual basis. Another reason is that BT transit guarantees a consistent level of payment for all calls based on BT's regulated retail prices and wholesale origination charges.
- 4.25 Despite efforts at negotiation there has also been little interest from TCPs in concluding separate payment agreements with OCPs with whom they have no contractual relationship.
- 4.26 All of this leaves OCPs, who consider their call origination costs are higher than BT's but who do not want to increase their retail prices above those of BT, having to originate NTS calls at below cost. If INCA/CLI were to be able to offer OCP-specific billing capabilities the opportunity for OCPs and TCPs to conclude commercial payment arrangements would be made much easier.

Ofcom's response

- 4.27 In establishing the principles for the introduction of INCA/CLI Ofcom stated that OCP-specific billing should be capable of being incorporated into INCA/CLI at some future stage, in other words it should not be excluded as a possibility at this time. However, in recent research carried out in support of the NTS Framework Re-examination Ofcom's independent technical consultants noted that the CLI and/or incoming trunk group are currently the only ways for BT to identify the origin of a call when calculating termination payments and that the CLI provides an incorrect indication of where the call originated when IA or CPS are used or if the originating telephone number has been ported. The consultants concluded that this limitation currently prevents originator specific termination charges from being implemented and that it could only be overcome if all CPs implemented a signalling enhancement to their networks. This would involve the addition of an originator specific signalling code to each call as part of the signalling setup message to identify the OCP. BT and the NTS CPs interviewed by the

consultants were unable to identify an alternative approach that would obviate the need for this signalling enhancement.

- 4.28 In the time available for the research it was not possible to estimate the likely cost and timescale for implementing the necessary signalling enhancement to support originator specific termination payments.. As a consequence of these findings Ofcom considers that the subject of OCP specific charging must now be regarded as outside the scope of this direction
- 4.29 However, Ofcom does hope that the lessons learned from the discussions held with NTS CPs over the various options for the future of NTS within the NTS Framework Re-examination will instil a greater willingness amongst NTS CPs to address outstanding issues commercially and with a greater air of co-operation between players. The facility does exist for OCPs and TCPs to agree separate payment arrangements alongside BT's transit billing or to make use of BT's 'TWIX only' billing product where OCPs and TCPs can negotiate their own payments, paying only transit charges to BT. Another option would be to re-consider interconnecting directly thereby saving BT's transit charge which could then be shared between OCPs and TCPs resulting in higher payments for both parties.

Section 5

Analysis of policy options

5.1 This section explains how Ofcom assessed each of the policy options that were originally set out in the December consultation. It was originally contained in the July Statement and is repeated here for ease of reference. In assessing the options, Ofcom has been mindful of new developments in NTS being discussed as part of the NTS Framework re-examination. This section also summarises Ofcom's conclusions in relation to each option. The detail of Ofcom's appraisal of each option was given in Annex D of the July Statement and is again repeated in this document at Annex 2.

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 2, which seeks qualitatively to identify the costs and benefits of the different policy options available.

Assessment of options

- 5.7 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 2. 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

- 5.8 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.
- 5.9 Option (ii) would have essentially retained the status quo but with an opportunity to refine the existing NCD sliding scale. This would have required 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's predecessor Oftel had attempted this previously as have other CPs but a workable solution 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, would have remained to a greater or lesser extent. Ofcom considered that this was not in the interests of effective competition, and did 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.
- 5.10 Option (iii) placed the onus on BT to ensure it is providing NTS call origination on fair and reasonable terms. This could have been open to different interpretations by BT and CPs which could ultimately have led to disputes if BT's interpretation had differed from the rest of the NTS industry. BT had previously 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 has approximated to that it would have received using INCA. At the same time those CPs who currently benefit from the NCD system would be 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 had 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 have been able to recover. As a consequence Ofcom considered it likely that the NCD (in either its existing or some modified form) would have continued 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 have directed otherwise.
- 5.11 No CP, including BT, was able to suggest an alternative methodology and so option (iv) was discounted. It now appears unlikely that Ofcom's NTS framework re-examination will 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. Ofcom considers, however, that 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

- 5.12 Options (ii) and (iii) were arguably the least intrusive regulatory mechanisms but are not consistent with achieving Ofcom's 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”*
- 5.13 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.
- 5.14 Option (i) is not prescriptive in relation to BT's conveyance charges which are already subject to charge controls. Ofcom's decision merely removes 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 considers that it should be withdrawn when INCA/CLI is introduced.

Costs to Communications Providers

- 5.15 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.
- 5.16 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.
- 5.17 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 pre-selection 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.

- 5.18 BT has indicated that it would take 13 months for it to implement Ofcom's direction. However, in light of Ofcom's decision to grant an additional three months to allow for unforeseen issues to be resolved the charge will be effective from the end of the month in which INCA/CLI is introduced and NCD withdrawn but no later than 28 February 2006.
- 5.19 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 final direction at Annex 4.

Section 6

Ofcom's final decision

Consideration of the four options

- 6.1 Section 5 and Annex 2 repeat Ofcom's analysis of the four policy options presented in the July Statement and the reasons supporting Ofcom's decision to implement Option (i). This is that BT is required to introduce INCA/CLI for NTS and to withdraw the NCD methodology according to the given timescale.
- 6.2 In summary, in relation to the four options presented, Ofcom considers that:
- 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.
 - Option (ii), retention of the NCD methodology, would have perpetuated the shortcomings inherent in the NCD system.
 - In the absence of BT's ability to recover its costs for introducing INCA/CLI on a voluntary basis, option (iii), i.e. no specific regulatory requirement, would have been likely to lead to continued use of the NCD with the same drawbacks as in option (ii).
 - There having been no suggestions for alternative billing solutions and the likelihood that the NTS Framework re-examination will not require any alternative billing solutions in the short term, option (iv), has been discounted.

Ofcom's final decision

- 6.3 Ofcom therefore now directs 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 direction, BT should commence, as soon as possible, the necessary work on its INCA/CLI wholesale billing system to achieve the enhancements set out in the list below. Ofcom notes that BT will 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.
- 6.4 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.
- 6.5 In the July Statement Ofcom proposed that INCA/CLI and NCD should continue to run in parallel for a three month period to allow for any emerging issues to be resolved before NCD is withdrawn. This proposal was supported

by some respondents but rejected by BT as it would require additional manpower to run two separate billing systems in parallel. Subsequent discussions at the NTS Focus Group have resulted in BT and TCPs agreeing to work closely together during the INCA/CLI development process to identify and resolve issues as they arise.

- 6.6 BT has indicated it will require thirteen months from the date of the final direction to produce the first INCA/CLI enhanced statement for TCPs to use for NTS invoicing. This indicates that INCA/CLI introduction and NCD withdrawal could take place on 30 November 2005. However, Ofcom is conscious that in making the final direction it is placing a regulatory obligation on BT to comply with the obligation by the dates stated in the direction. If, during the development phase, BT identifies any problems which made it unable to complete the work by 30 November 2005 BT faces, potentially, being in breach of the requirements of the direction.
- 6.7 BT could then request Ofcom to revise the direction to allow further time but this is an unwieldy process and would require a further consultation. As a safeguard, therefore, Ofcom has allowed a margin of three further months (to the end of February 2006) for BT to comply with the direction. This is an 'end date' by when the work must be completed but does not constrain BT and the NTS industry from achieving an earlier implementation/withdrawal timescale if all the parties are in agreement.
- 6.8 The obligation to implement INCA/CLI billing rests entirely with BT, which is subject to a direction under Conditions AA1(a) and AA11, and which is contained at Annex 4. 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.
- 6.9 Ofcom notes the significant initiatives that are taking place in regard to NTS, as a consequence of the NTS framework re-examination. Ofcom considers, however, that regardless of any changes to the NTS regime that may result from this work, the INCA/CLI developments are still important in that they will allow BT to record its underlying per-call costs for origination and conveyance of NTS calls more accurately.

The Final Direction

Legal Tests

- 6.10 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 final 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.
- 6.11 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.
- 6.12 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.

- 6.13 Ofcom considers the direction is proportionate, as it allows BT to set its surcharge for the set-up and ongoing costs of implementing INCA/CLI within the confines of the 2005 Network Charge Controls. It is also the most cost effective means of achieving the benefits for both industry and consumers as identified in the regulatory options appraisal contained in the July Statement and repeated in this Statement.
- 6.14 Ofcom considers that the direction is transparent, as it is set out in Annex 4 to this explanatory document and its effects and the reasons for the direction are also set out in this document.

Annex 1

Modifications and Enhancements to INCA/CLI

The Issues

- A1.1 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

- A1.2 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.
- A1.3 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 re-entered 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.
- A1.4 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.
- A1.5 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 A1.2 and A1.3 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.

- A1.6 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

- A1.7 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.
- A1.8 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.
- A1.9 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

- A1.10 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.
- A1.11 As a result of the direction in this document, BT will provide a new file of data showing aggregate call volumes. This will be in addition to the current 9A report and provided in a more machine-readable format.

Transit CLI

A1.12 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. As a result of the consultation from the July Statement, the more comprehensive of the two options was preferred. The exact format and contents of the data file will be agreed between BT and TCPs during the development process but the data to be provided could 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/seconds*

Inclusion of new exit POCs

A1.13 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. This issue was addressed within the separate EBC Evolution project undertaken by BT and TCPs earlier in 2004. As a result of this, from late 2004, exit POCs will be included if they have been asked for at least one month prior to the EBC effective date with an agreed in service date prior to the effective date itself. Additionally, in order to further minimise any delay in including exit POCs in an EBC matrix, EBC will be run monthly. This means that the charging data will also be updated on a monthly basis.

Least Cost Routing

A1.14 A further change to the EBC process arising from BT's EBC Evolution project will be that, within routing plans, each TCP will nominate an exit POC for a specific point of origin of calls on BT's network. BT will provide new EBC data files to allow TCPs to charge according to this new methodology according to the shortest route to the nominated exit POC.

A1.15 Any costs attributed to the changes in the EBC process arising from BT's EBC Evolution project are not specific to NTS and will not be included in BT's charge for enhancing INCA/CLI for NTS.

Annex 2

INCA/CLI Regulatory impact Assessment

Overview

A2.1 One of the questions that Ofcom has considered 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

A2.2 BT will incur development and ongoing costs which will be distributed across all NTS TCPs, including BT itself, as discussed above. BT has estimated that the development costs would be £1.13m and the ongoing costs would be £330k per annum.

A2.3 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

A2.4 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.

A2.5 The current NCD relationship requires a TCP to establish 69 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. 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 reduces 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 x 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.

A2.6 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.

A2.7 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 to TCPs of around £8.5 million (using the current 24 hour average charge for Inter-Tandem Short routing of 0.17 ppm).

Other Benefits

A2.8 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.

A2.9 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

- A2.10 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.
- A2.11 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.
- A2.12 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.
- A2.13 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.
- A2.14 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.
- A2.15 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

A2.16 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 3.

Annex 3

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

A3.1 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.

A3.2 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”.

A3.3 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

A3.4 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.

A3.5 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. Ofcom noted that both arguments had some validity and neither provided a compelling basis for attributing set up costs. On balance, Ofcom 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.

- A3.6 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.
- A3.7 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

- A3.8 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

- A3.9 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

- A3.10 In accordance with Ofcom'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.
- A3.11 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

- A3.12 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.
- A3.13 BT's billing relationships for TCPs who offer NTS calls is based on a charge per minute. Hence a per minute charge might be a practical method of recovering the costs of the set up costs across all TCPs. 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

- A3.14 Reciprocity is not a relevant principle here, because the service is not provided reciprocally.

Conclusions

- A3.15 Ofcom considers 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.
- A3.16 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 pence per minute retention charge.

Annex 4

Final Direction

Schedule

Final 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 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 has 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. By at the latest 28 February 2006 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. BT shall recover its set-up and on-going costs incurred in complying with paragraph 1 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.

3. 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.
4. 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.
 5. For the purpose of interpreting this Direction:
 - (a) headings and titles shall be disregarded; and
 - (b) the Interpretation Act 1978 (c. 30) shall apply as if this direction were an Act of Parliament.
 6. This Direction shall take effect on the day it is published.

STEVE UNGER
DIRECTOR OF TELECOMMUNICATIONS TECHNOLOGY

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

28 OCTOBER 2004

Annex 5

Glossary

CLI: Calling Line Identification, the signal which identifies the location of the telephone line from which the call is made.

CP: Communications Provider, a person who provides an Electronic Communications Network or provides an Electronic Communications Service.

EBC: Element Based Charging, An EBC file contains the charging bands against which interconnect usage is charged to CPs, based on the amount of BT's network resources used ie switches, distance, capacity etc.

INCA: BT's Inter-Network Call Accounting wholesale billing system.

NCCN: Network Charge Change Notice, a document Issued by BT to notify the industry of changes to BT's charges to the industry.

NCD: Network Charge Differential, the name given to Oftel's methodology which enabled BT to de-average its NTS wholesale charges following a direction in November 1999.

NTS: Number Translation Services. Telephone services using Special Service numbers (including freephone, special local rate, special national rate and at a Premium Rate (the 09 range)). Within these ranges calls to 0844 04 numbers for Surftime internet access services and calls to 0808 99 for FRIACO (Flat Rate Internet Access Call Origination) are excluded.

OCP: Originating Communications Provider, the Communications Provider on whose network a call originates.

POC: Point of Connection, the interconnection point between BT's network and that of a Communications Provider.

RIA: Regulatory Impact Assessment, an assessment of the impact of regulatory options as defined by section 7 of the Communications Act.

SMP: Significant Market Power as defined in the new EU Communications Directives.

TCP: Terminating Communications Provider, the Communications Provider on whose network a call terminates.

TWIX: BT's charge for transiting calls across its network from another OCP to a TCP's network.