Addressing the local call disadvantage

A CPS Local Calls Option

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Section 1

Summary

Background

1.1 Carrier Pre-Selection (CPS) is a mechanism that allows end-users to select, in advance, alternative Communications Providers to carry their calls without having to dial a prefix or install any special equipment at their premises. The end-user subscribes to the services of one or more CPS operators (CPSOs) and chooses the type of calls (e.g. all national calls) to be carried by them. The end-user may have a direct retail relationship with the CPSO, or may purchase the service via a CPS Reseller. The end-user is billed for these calls by the CPSO or CPS Reseller.

1.2 Since the introduction of the 'all calls' CPS option in December 2001, usage of CPS has grown rapidly. As of 30 April 2004, there were 3,276,233 CPS lines in the UK. This means that approximately 11.4% of BT lines have CPS on them. In 2003, BT carried 68.3% of all calls, with 10% of all calls carried over some form of indirect access (Ofcom does not have separate figures for indirect access and CPS). Cable represents 13.4% of lines in the UK (4.7m lines) and 11.6% of all calls. This means that although slightly smaller CPS is comparable to cable as a source of retail competition to BT.

1.3 On 24 March 2004, BT announced plans to withdraw its standard residential line rental and its standard PSTN call prices and migrate existing customers paying standard rates to BT Together Option 1. In addition and at the same time BT announced changes to both the fixed line rental element and the call prices of the BT Together residential payment plans.

Local call disadvantage

1.4 For certain types of calls, i.e. calls that are originated and terminated on the same BT local exchange (DLE) or adjacent BT DLEs which have a direct link between them, CPSOs experience a routing inefficiency known as 'tromboning'. The impact of tromboning is that CPSOs suffer a cost disadvantage in handling local calls when compared to BT (the "local call disadvantage").

1.5 The CPS Functional Specification requires all CPS calls to be routed via a CPSO network. However, most fixed calls originate and terminate on BT's network. When a BT customer makes an own-DLE call it is routed in this way:

- the call is originated and carried to the BT DLE – this is called Local Exchange Call Origination (LECO); and
- the DLE routes the call to the correct local destination – this is a form of Local Exchange Call Termination (LECT), but as the call has already been switched as part of LECO, this form of LECT does not need to include a further switching stage. This form of LECT is referred to as the LECT 'stick'.

1.6 When a CPS customer makes a local call it is routed in this way:

- the call is originated and carried to the DLE as above;
- the DLE then routes the call to the appropriate CPSO's nearest tandem switch – this is called Local to Tandem Conveyance (LTC);
Addressing the local call disadvantage

1. Addressing the local call disadvantage
   - the CPSO's tandem switch routes the call back to the same DLE using the LTC Stick; and
   - the call is then routed to the correct destination by LECT.

1.7 A similar inefficiency exists for adjacent DLE calls where there is a direct link between the DLEs.

1.8 The tromboning effect described above means that it costs CPSOs more to carry a local call than BT. This additional cost comprises:
   - outpayments by the CPSO to BT for the use of their network, i.e. the PPP charges and charges for LECO and LECT; and
   - additional costs incurred by the CPSO within their own network due to the routing inefficiency, i.e. the cost to the CPSO of routing the call from the DLE to its own tandem exchange and back to the DLE.

1.9 Ofcom has quantified the local call disadvantage as the CPSO paying:
   - 0.354 pence per minute (ppm) more than BT for an own local exchange call; and
   - 0.204 ppm more than BT for an adjacent local exchange call.

1.10 The cost to BT of carrying an own-DLE call is 0.346 ppm; compared to 0.7 ppm for a CPSO, i.e. the network costs faced by CPSOs are double those faced by BT.

1.11 As can be seen from the above there is a significant cost disadvantage to CPSOs in carrying own local exchange and adjacent local exchange calls, and this disadvantage is the result of an intrinsic characteristic of the interconnection model.

1.12 Ultimately, as BT's retail call charges continue to move towards cost, CPSOs will be unable to compete in the local calls market, or even the national calls market. The likely outcome of this would be a niche residential market for CPSOs selling into the more profitable but much smaller international calls market. International calls make up only 1.5% of total calls by volume and only 3.9% of total call revenues. This would mean that there would be no competition by means of CPS for the majority of the residential market.

Proposals for addressing the local call disadvantage

1.13 Ofcom has considered a range of options to address this issue:
   - option 1 – do nothing;
   - option 2 – cost-based wholesale end-to-end calls; and
   - option 3 – CPS Local Calls Option.

1.14 Regarding Option 1, Ofcom's initial view is that it would be failing its obligations to encourage competition in relevant markets if it took no action.

1.15 Regarding Option 2, Ofcom considers that cost-based wholesale end-to-end calls would address the local call disadvantage as Communications Providers would essentially be reselling the same wholesale service that is available to BT Retail. However, Ofcom's initial view is that Option 2 would not be an appropriate remedy as:
it would require Ofcom to impose a formal obligation on BT to set cost-based charges across a wide range of call types, including those where no problem has been identified;  
it would be a major new regulatory intervention by Ofcom at a point in time when there was little evidence that the existing remedy, i.e. CPS, had failed;  
several CPSOs have invested in network infrastructure in order to interconnect with BT's DLEs. Cost based wholesale end-to-end calls would penalise these operators and provide a major disincentive to future network infrastructure investment; and  
wholesale end-to-end calls provide little potential for service innovation.

1.16 Ofcom considers that Option 3 – a CPS Local Calls Option – is the most appropriate remedy to the local call disadvantage. A wholesale CPS Local Calls Option would provide a new routing option for all calls that BT does not route to the tandem layer. A CPSO would be able to buy call origination in relation to these calls, but instead of being routed via the CPSO's network, BT would terminate the calls, and charge the CPSO for a service bundle comprising local exchange call origination and local exchange call termination. That is, BT would make available to CPSOs the same 'stick' services available to BT Retail.

1.17 This product would only be available to CPSOs for those calls that originate on those DLEs to which they interconnect. It would not be available on those DLEs to which the CPSO was not interconnected. It would also not be available to CPSOs that interconnected only at the DMSU level.

1.18 Ofcom considers that the CPS Local Calls Option will enable larger DLE-interconnected CPSOs, i.e. those that have invested in reach and scale, to compete with BT in the provision of local calls. Ofcom also considers that smaller CPSOs would be able to benefit from the CPS Local Calls Option, but indirectly and on a commercial basis, by purchasing wholesale services from those CPSOs who do interconnect with BT's DLEs. The diagram below sets out an example of the type of supply chain that Ofcom envisages being established.

**Figure 1 – Value chain for local calls CPS option**

```
BT Wholesale

CPS 'all calls', except local (regulated, cost-based)

DLE-Interconnected CPSO

Local calls (commercially negotiated)

Smaller CPSO

All calls

End-user

CPS Local Calls option (regulated, cost-based)
```
Implementation

1.19 There are a number of implementation issues that need to be resolved in order to establish a CPS Local Calls Option as described above.

1.20 Ofcom is proposing to modify the CPS Functional Specification in two ways:

- to add two new CPS options, i.e. Option 4 – all calls except local calls and Option 5 – local calls; and
- define the routing of calls under the local calls CPS option.

1.21 Ofcom considers that CPSOs treat indirect access (IA) and CPS interchangeably, and therefore that there is a reasonable case that the CPS Local Calls Option should also apply to IA. Ofcom is aware that there may be technical difficulties in extending the product to cover IA. However, in the absence of an efficient, industry-agreed IA to CPS migration process, Ofcom considers it difficult to ignore IA at this stage.

1.22 The ongoing price of the CPS Local Calls Option should be the same as the cost-based transfer charge made to BT Retail for such calls. Additionally, in the interim between 1 July 2004 and the launch of the CPS Local Calls Option, Ofcom considers that BT should adjust the amount DLE-interconnected CPSOs are charged to address the local call disadvantage as if the CPS Local Calls Option were in place. Therefore, DLE-interconnected CPSOs would in effect be compensated for both the difference in outpayments and the costs that they incurred on their own networks due to the tromboning inefficiency until such time as BT introduces the CPS Local Calls Option.

Next steps

1.23 Consultation on the proposals in this document closes on 5 July 2004. When Ofcom has considered the representations made in response to the proposals set out in this document, it will publish a statement and further Notification in July 2004 that will give effect to its proposals.
Section 2

Background

History of CPS

2.1 Carrier Pre-Selection (CPS) is a mechanism that allows end-users to select, in advance, alternative Communications Providers to carry their calls without having to dial a prefix or install special equipment at their premises. The end-user subscribes to the services of one or more CPS operators (CPSOs) and chooses the type of calls (e.g. all national calls) to be carried by them. The end-user may have a direct retail relationship with the CPSO, or may purchase the service via a CPS Reseller. The end-user is billed for these calls by the CPSO or CPS Reseller.

2.2 The terms CPSO, CPS Reseller, CPS Provider, WLR Provider and Communications Provider are used throughout this document. In the context of this document, a “CPSO” is a provider of a public Electronic Communications Network that interconnects with BT’s network, and that has put in place the necessary functionality on its own network, and has arranged to have the necessary functionality put in place on the BT network, to allow BT customers to subscribe to CPS services provided by means of that operator’s network. The CPSO may sell CPS services directly to BT customers. Alternatively, a “CPS Reseller” may have a commercial agreement with a CPSO that allows the CPS Reseller to sell CPS services to BT customers, with the CPS call traffic being carried on the CPSO’s network. Where appropriate, CPSOs and CPS Resellers are for the purpose of this document collectively referred to as “CPS Providers”. A "WLR Provider" is a provider of wholesale line rental (WLR) services to end-users. A "Communications Provider“ is a provider of electronic communications networks and/or services, and therefore is a generic term to capture all types of provider, including CPSOs, CPS Resellers, CPS Providers and WLR Providers.

2.3 On 3 October 1998 EC Directive 98/61/EC ("the Amending Interconnection Directive") came into force. This directive required CPS to be made available throughout the European Union from 1 January 2000. In December 1999, the European Commission granted the UK a deferment of three months on the 1 January deadline.

2.4 In the UK, interim CPS was introduced in April 2000. Interim CPS used auto-diallers to route calls for end-users as BT’s switches could not be upgraded to enable switch-based CPS within the EC’s deadline of 1 April 2000. Permanent CPS (i.e. switch-based CPS) was introduced in two phases. CPS for international and national calls was introduced on 12 December 2000. CPS for international, national, international and national, or ‘all calls’ (see explanation at paragraph 2.10) was introduced on 12 December 2001.

2.5 A new regulatory framework for electronic communications networks and services entered into force on 25 July 2003; which in effect replaced the previous CPS legal framework. The basis for the new regulatory framework is five new EU Communications Directives. Four of these Directives have been implemented in the UK via the new Communications Act 2003 (the “Act”). The fifth Directive was implemented by Regulation which came into force on 11 December 2003. The new Directives require National Regulatory Authorities (NRAs) such as the Office
of Communications (Ofcom) and previously the Director General of Telecommunications (referred to in this document as the Director or Oftel) to carry out reviews of competition in communications markets to ensure that regulation remains appropriate in the light of changing market conditions.

2.6 Although the new regulatory framework entered into force on 25 July 2003, Ofcom did not assume full functions under the Act until 29 December 2003. Accordingly, transitional arrangements were put in place to enable the Director to carry out certain functions. Therefore, references in this document to Ofcom are to be read as references to Director where he exercised his powers under the Act prior to the 29 December 2003.

2.7 Consequently, the Director carried out (among other market reviews) a “Review of the fixed narrowband wholesale exchange line, call origination, conveyance and transit markets”. The Director published his conclusions to this market review on 28 November 2003, which included the findings that BT has SMP in the fixed call origination market. As a consequence of the market review, an SMP service condition was imposed on BT requiring it specifically to provide CPS, in addition to its obligation to provide Network Access. Specifically, SMP service condition AA8.1 states that BT shall provide CPS as soon as it is reasonably practicable on reasonable terms in accordance with the Carrier Pre-selection Functional Specification to any of its Subscribers upon request.

2.8 Since its introduction, usage of CPS has grown rapidly. As of 30 April 2004, there were 3,276,233 CPS lines in the UK. This means that approximately 11.4% of BT lines have CPS on them. In 2003, BT carried 68.3% of all calls, with 10% of all calls carried over some form of indirect access (Ofcom does not have separate figures for indirect access and CPS). Cable represents 13.4% of lines in the UK (4.7m lines) and 11.6% of all calls. This means that although slightly smaller CPS is comparable to cable as a source of retail competition to BT.

Figure 2 – Growth of CPS

![Figure 2 – Growth of CPS](image-url)
How CPS works

2.9 End-users can have a contract either with a CPSO or a CPS Reseller. From the end-user's point of view the process works the same way regardless of whether their contract is with a CPSO or a CPS Reseller. However, if the end-user's contract is with a CPS Reseller the calls will still be carried by a CPSO with whom the CPS Reseller has a commercial agreement.

2.10 There are currently three different call options for CPS, i.e. the types of calls an end-user can opt to take from a CPSO or CPS Reseller. These are:

- option 1: international calls;
- option 2: national calls, i.e. geographic domestic calls outside local calling areas;
- option 3: all calls (including international, national, local, mobile, non-geographic (e.g. freephone, local rate, national rate), premium rate, personal, paging and 118XXX codes for Directory Enquiry Facilities).

2.11 An end-user can choose any one of the three options on a particular line. An end-user can also choose option 1 and option 2 on the same line. If he or she chooses option 1 and option 2 on the same line, the end-user can choose different CPSOs for each option or one CPSO for both options. As option 3 is for all calls it cannot be combined with either of the other two options. (NB CPSOs and CPS Resellers are not obliged to offer all three options).

2.12 An end-user can over-ride the CPS service at any time, and use a different Indirect Access (IA) provider, by dialling a four- or five-digit IA prefix before the number they wish to dial, as long as they have an agreement with the IA provider to whom the prefix code belongs. Additionally, the end-user can override CPS and use BT to make calls by using the prefix 1280 on a call-by-call basis.

2.13 In order to carry calls CPSOs interconnect with BT at various points of connection. They pick up calls originating on BT's network and pay a cost-based charge for this service – called call origination. The CPSOs may either terminate the call themselves (if the CPSO has any directly connected customers) or may hand the call over to a Terminating Communications Provider (TCP) for termination and pay an appropriate termination charge to the TCP. As the CPSOs own the retail relationship with the end-user they can set retail prices as they wish. As BT's retail prices for calls have been historically well above cost, CPSOs and CPS Resellers have been able to undercut BT's retail prices substantially, and still make a positive margin on most call types.

Relationship of CPS to WLR

2.14 Wholesale line rental (WLR) is a product that BT is obliged to provide to other Communications Providers. It enables other Communications Providers to offer both line rental and calls to end-users over BT's local network. This usually means that the end-user no longer has a contractual relationship with BT and is billed solely by the WLR Provider.

2.15 In August 2002, the Director modified BT's licence to make provision of WLR a regulatory obligation. The Director confirmed BT's obligations to provide WLR in the Review of the fixed narrowband wholesale exchange line, call origination,

2.16 WLR is relevant to this discussion as BT is placing increased emphasis on retail service bundles such as BT Together, which bundle calls and access (see paragraphs 2.18 to 2.22 below). WLR providers are able to respond to this in a manner that ‘pure’ CPSOs cannot, by providing competing service bundles. They can do so either by purchasing line rental and calls from BT, or purchasing line rental from BT and calls from a CPSO. The WLR provider may also be a CPSO and therefore purchase line rental from BT and route calls over its own network. WLR providers are likely to have an increasing role in determining how calls are routed at the wholesale level, and this will be an important driver of CPS.

2.17 There are currently 200 service providers offering WLR in the UK. As of 30 April 2004, the total number of WLR lines was 309,859. Additionally, Ofcom understands that the current industry forecast order volume for the period 1 April 2004 to 30 June 2004 is estimated at approximately 280,000 additional WLR lines.

**BT’s response to increasing retail competition**

2.18 On 24 March BT announced plans to withdraw its standard residential retail line rental and its standard PSTN call prices and migrate existing residential customers paying standard rates to BT Together Option 1. In addition and at the same time BT announced changes to both the fixed line rental element and the call prices of the BT Together residential payment plans. The new pricing on BT Together Option 1, and the migration of customers paying standard rates, is due to be introduced on 1 July 2004. The new pricing on BT Together Options 2 and 3 was introduced on 1 April 2004.

2.19 BT stated in its press release of 24 March 2004 announcing the price changes that: "These changes demonstrate our intention to meet head-on the twin challenges of carrier pre-selection and wholesale line rental, and overcome them."

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<th>Table 1 – Summary of BT’s retail price changes</th>
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<td><strong>BT Together Option 1</strong> (the hour plan)+</td>
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<td>£10.50 per month (previously £11.50)</td>
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<tr>
<td>Evenings and Weekends 5.5p for up to an hour 1p/minute thereafter</td>
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<tr>
<td>Daytime 3p/minute 5p minimum call charge applies</td>
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* Charges are based on payment of bill by direct debit or monthly payment plan.

2.20 The increase in the line rental and effective reduction in the cost of calls to the end-user represents a rebalancing of the tariff. Historically line rental has been
subsidised by call charges, and rebalancing removes this cross subsidy, bringing charges more in line with costs. As a matter of general principle, cost-reflective charges are beneficial, and so rebalancing would normally be welcomed.

2.21 A particular benefit of rebalancing is that it should improve the ability of Communications Providers to use WLR to compete in the retail market for narrowband access. Historically WLR was not an attractive residential retail proposition, as the cost-based charge to the WLR provider for line rental is £10.86 pcm (including VAT) compared to BT's retail price for standard line rental of £9.49 pcm (including VAT). As BT's minimum line rental is now BT Together Option 1 at £10.50 pcm (including VAT), this partial rebalancing will make WLR providers' proposition more viable.

2.22 It was clear from BT's press announcement of 24 March 2003 that these price changes were a direct reaction to increasing competition to BT in the retail lines and calls markets. Ofcom does not consider that there is anything wrong with intensified retail competition, as long as it is fair. Indeed, increased competition is beneficial for consumers, as long as it is sustainable. The concern in this area was that competition might not be sustainable, at least for particular call types. That is, international calls are very profitable but limited to a niche market. Local and national calls are much less profitable, but make up the bulk of calls made in the residential sector. Local calls represent a particular problem for alternative Communications Providers, as can be seen in the following sections.
section 3

local call disadvantage

3.1 CPSOs are network competitors to BT. However, it is rarely economic for CPSOs to construct a network all the way to the end-users’ premises. Instead CPSOs construct a network which interconnects with that of BT. Interconnection terms are regulated under the interconnection regime, and BT has to meet all reasonable requests for Network Access.

3.2 Under the interconnection regime, each element of BT's network is charged to BT Retail, and to all interconnecting operators on a pence per minute basis. Both BT and CPSOs thus face the same charge for the same network element. However, this does not mean that BT Retail and CPSOs have the same costs for routing a call. A network operator that has a larger network, and so uses the most efficient routing system will use fewer network elements and so have lower costs than an operator with a less extensive network. BT has the most extensive network and so is able to route calls in the most efficient manner, minimising network costs.

3.3 A CPSO wishing to minimise its network costs is therefore incentivised to build its network to route calls more efficiently and so minimise call conveyance costs. However, even where a CPSO has interconnected at all BT's local exchanges (the maximum extent of network build that might be commercially viable) it is not possible for the CPSO to replicate BT Retail's call conveyance costs. This is due to two disadvantages within the interconnection regime. These disadvantages currently mean that an interconnecting operator, however efficient, is not able to replicate the call conveyance costs of BT Retail.

3.4 These two cost disadvantages are:

- the routing inefficiency for own-local exchange and adjacent local exchange calls, known as the local call disadvantage; and
- the charge for Project Management, Policy and Planning (PPP) that BT makes for interconnection with and use of its network.

3.5 This document does not address the PPP charge. This is being addressed in a separate Ofcom consultation document, the Review of BT’s product management, policy and planning (PPP) charge, published 4 June 2004.

what do we mean by “local” calls

3.6 In this context local calls mean those calls that are not routed via BT's trunk (or tandem) network. These calls originate and terminate either on the same local exchange or on adjacent local exchanges which have a direct link between them.

3.7 It is important to note that this network-based definition of local calls is not the same as that usually used at the retail level. At the retail level all calls within a local calling area are billed for as local calls. Of IA/CPS calls defined at the retail level as local calls Ofcom understands that:

- 34.6% are originated and terminated on the same DLE;
- 29.8% are originated and terminated on adjacent DLEs that have a direct link between them; and
- 35.6% are routed via the tandem network.
Why is there a local call disadvantage?

3.8 To understand why there is a local call disadvantage it is necessary to understand how CPS calls are routed differently to calls carried end-to-end on BT's network. At present, the CPS Functional Specification requires calls to be routed via a CPSO network. However, most fixed calls originate and terminate on BT's network. The requirement to route own local exchange and adjacent local exchange calls via a CPSO network results in a routing inefficiency known as "tromboning". Tromboning refers to the additional routing to the CPSO's tandem switch and back that is necessary for a CPS call, compared to the more direct routing of a BT call. The diagram below summarises the routing and call disadvantages of CPS.

Figure 3 – Summary of the local call disadvantage

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<tr>
<th>Calls originating and terminating on BT’s network</th>
<th>Calls terminating on other networks</th>
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<tbody>
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<td>Own local exchange calls</td>
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<tr>
<td>Adjacent local exchange calls</td>
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</tr>
<tr>
<td>Tandem calls</td>
<td></td>
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<tr>
<td>Call routing used by BT Retail</td>
<td></td>
</tr>
<tr>
<td>LECO LECT stick</td>
<td></td>
</tr>
<tr>
<td>Call routing used by fully interconnected CPSO</td>
<td></td>
</tr>
<tr>
<td>LECO LTC 2 x PPP</td>
<td></td>
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<tr>
<td>Cost disadvantage</td>
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| .354 ppm                                      | .204 ppm                                      |
| .096 ppm                                      | .048 ppm                                      |

LECO: Local Exchange Call Origination
LECT: Local Exchange Call Termination
LTC: Local to Tandem Conveyance
LLC: Local to Local Conveyance
ITC: Inter Tandem Conveyance
PPP: Product management, Policy & Planning

BT switch
CPSO switch
Terminating operator switch

Routing of own local exchange calls

3.9 When a BT customer makes a local call it is routed in this way:

- the call is originated and carried to the local exchange (DLE) – this is called Local Exchange Call Origination (LECO); and
- the DLE routes the call to the correct local destination – this is a form of Local Exchange Call Termination (LECT), but as the call has already been switched as part of LECO, this form of LECT does not need to include a further switching stage. This form of LECT is referred to as the LECT 'stick'.

3.10 When a CPS customer makes a local call (and assuming the CPSO is fully interconnected at the DLE level of BT's network) it is routed in this way:

- the call is originated and carried to the DLE as above;
- the DLE then routes the call to the appropriate CPSO's nearest tandem switch – this is called Local to Tandem Conveyance (LTC);
• the CPSO's tandem switch routes the call back to the same DLE using the LTC Stick; and
• the call is then routed to the correct destination by LECT.

3.11 A 'stick' is a service that performs the same function as a service sold to a CPSO but is only sold by BT to BT Retail and excludes unnecessary switching stages. For example, the local exchange call termination (LECT) stick performs the same function as the LECT service that is sold to CPSOs. However, when BT is originating and terminating a call on the same exchange the call only needs to be switched once. Therefore, the LECT stick costs less than LECT. As only BT Retail can buy the LECT stick it costs less for BT Retail to terminate an own local exchange call.

Routing of adjacent local exchange calls
3.12 When a BT customer makes a local call to a line on an adjacent DLE the call is routed in this way:

• the call is originated and carried to DLE – this is called Local Exchange Call Origination (LECO);
• the first DLE routes the call to the adjacent DLE by Local to Local Conveyance Stick (LLC Stick) (NB LLC is not formally defined in the BT regulatory accounts and therefore LTC has been used as a proxy); and
• the second DLE routes the call to the correct local destination by LECT.

3.13 When a CPS customer makes a local call (and assuming the CPSO is fully interconnected at the DLE level of the BT network) it is routed in this way:

• the call is originated and carried to the DLE as above;
• the DLE then routes the call to the appropriate CPSO's nearest tandem switch – this is called LTC;
• the CPSO's tandem switch routes the call back to the adjacent DLE using the LTC Stick; and
• the call is then routed to the correct destination by LECT.

Quantifying the local call disadvantage
3.14 The tromboning effect described above means that it costs CPSOs more to carry a local call than BT. This additional cost comprises:

• additional outpayments by the CPSO to BT for the use of BT's network, i.e. the PPP charges and charges for LECO and LECT; and
• additional costs incurred by the CPSO within its own network due to the routing inefficiency, i.e. the cost to the CPSO of routing the call from the DLE to its own tandem exchange and back to the DLE.

3.15 Ofcom has quantified the local call disadvantage as the CPSO paying:

• 0.354 pence per minute (ppm) more than BT for an own local exchange call; and
• 0.204 ppm more than BT for an adjacent local exchange call.

3.16 In quantifying the local call disadvantage Ofcom has made a number of assumptions:
the outpayments, i.e. for LECO, LECT and PPP, are based on BT's regulatory accounts for 2002/2003, using average charges for the year and not taking into account time of day gradients;

the costs of BT's sticks are based on BT's regulatory accounts for 2002/2003, using average charges for the year and not taking into account time of day gradients;

BT's charges for local-tandem conveyance (LTC) have been used as a proxy for the costs of the CPSO in providing conveyance from BT's DLEs to its own tandem exchange, i.e. Ofcom has assumed that it costs a reasonably efficient CPSO the same as it costs BT to provide LTC; and

the CPSO interconnects with all BT local exchanges.

3.17 Ofcom has used the figures in BT's regulatory accounts for 2002/2003. Ofcom understands that these are historical figures. However, they have been used as they are the latest audited numbers available to Ofcom and are used only to demonstrate the cost disadvantage and quantify the scale of the issue.

3.18 Ofcom calculated the own local exchange call disadvantage in the following way:

- by defining BT's ppm costs as LECO + LECT Stick;
- by defining the CPSO's ppm costs as LECO + LECT + LTC + LTC Stick + 2xPPP; and
- taking the difference between BT's costs and the CPSO's costs.

3.19 Ofcom calculated the adjacent local exchange call disadvantage in the following way:

- by defining BT's ppm costs as LECO + LLC Stick + LECT;
- by defining the CPSO's ppm costs as LECO + LECT + LTC + LTC Stick + 2xPPP; and
- taking the difference between BT's costs and the CPSO's costs.

3.20 Identifying only the tromboning effect, i.e. by deducting the cost of the PPP charges (which are the subject of a separate consultation), the call disadvantages still equal:

- 0.258 ppm for own local exchange calls; and
- 0.108 ppm for adjacent local exchange calls.

3.21 For own local exchange calls, the call disadvantage (excluding PPP) comprises:

- 0.11 ppm for outpayments, i.e. the difference between LECT purchased by the CPSO and LECT stick used by BT Retail; and
- 0.148 ppm in incurred costs, i.e. the cost to the CPSO of conveying calls to the tandem layer.

**Impact of the local call disadvantage**

3.22 As can be seen from paragraphs 3.14 to 3.21, there is a significant cost disadvantage to CPSOs in carrying own local exchange and adjacent local exchange calls. This disadvantage is the result of an intrinsic characteristic of the interconnection model. Even a CPSO which interconnects at all BT's local exchanges, the largest viable extent of network build, would face this cost disadvantage.
3.23 The cost to BT Retail of carrying an own-DLE call is 0.346 ppm; compared to 0.7ppm for a CPSO, i.e. the network costs faced by CPSOs are double those faced by BT.

3.24 As retail competition intensifies this cost disadvantage becomes increasingly important. For example, with BT’s new retail prices an evening or weekend local call costs the end-user 5.5p for up to an hour. While Ofcom accepts that very few local calls last up to an hour, it is not possible to be certain of the average call duration as the new prices may stimulate new calling patterns. However, on the basis of the costs of carrying a local call identified above, Ofcom notes that it would cost BT more than 5.5p to carry the call after 14 minutes, while it would cost a CPSO more than 5.5p to carry the call after only 7 minutes. CPSOs introducing packages such as BT Together, with a strong emphasis on flat-rate local calls, therefore face a significantly greater risk than BT.

3.25 Ultimately, as BT’s call charges continue to move towards cost, CPSOs will be unable to compete in the local calls market. It is also unlikely that CPSOs would be able to offer national calls without being able to offer local calls. The likely outcome of this would be a niche residential market for CPSOs selling into the more profitable but much smaller international calls market. International calls make up only 1.5% of total calls by volume and only 3.9% of total call revenues. Furthermore, international calls make up a significant proportion of only the top two deciles of residential callers, meaning competition in international calls would only have an impact on these top two deciles. This would mean that there would be no competition by means of CPS for the majority of the residential market.

Figure 4 – Residential call volumes by call type, 2003

![Pie chart showing residential call volumes](chart.png)
Mitigating the impact of the local call disadvantage

3.26 The only way that a CPSO can fully overcome the local call disadvantage would be to build-out its network to the remote concentrator units in BT’s network. This would be broadly equivalent to using LLU on a national basis for narrowband services. This is unlikely to be viable on the grounds of cost, or indeed efficient if each remote concentrator had many redundant networks built out to it.

3.27 Therefore, the only feasible way for CPSOs to mitigate the impact of the local call disadvantage is to interconnect with every BT DLE. By doing so, CPSOs are effectively substituting their own tandem exchanges for BTs tandem exchanges. This allows them to eliminate unnecessary inter-tandem conveyance.

3.28 However, CPSOs cannot substitute their own local exchanges for BT’s local exchanges, and therefore have no means of eliminating unnecessary local-tandem conveyance. This is an unavoidable residual cost, that is intrinsic to the current interconnection regime.

Question 1: Do you agree with Ofcom’s identification of the local call disadvantage? And do you agree with the methodology used to quantify of the local call disadvantage?
Section 4

Solutions

4.1 Ofcom's principal duty in carrying out its functions, as set out in Section 3 of the Communications Act 2003 (the "Act"), is to further the interests of citizens in relation to communications matters, and to further the interests of consumers in relevant markets, where appropriate by promoting competition. Section 4 of the Act sets out Ofcom's duties for the purposes of fulfilling Community obligations. In regard to Ofcom's proposals for addressing the local call disadvantage as set out below, Ofcom has considered all the requirements in those sections, in particular the furthering the interests of consumers in relevant markets, where appropriate by promoting competition; the desirability of promoting competition; the desirability of encouraging investment and innovation; and promoting efficient and sustainable competition in the provision of electronic communications networks and services.

4.2 As explained in Section 3, Ofcom has determined that BT has SMP in the market for call origination. It has imposed a set of regulatory requirements in this market whose objective, amongst others, is to promote effective competition in retail local calls. In accordance with this, Ofcom's aim in its proposal to address the local call disadvantage is to promote effective competition in the provision of retail local calls.

Regulatory impact assessment

4.3 The analysis presented in this Section, when read also with the previous sections as indicated, represents a Regulatory Impact Assessment (RIA), as defined by section 7 of the Act. You should send any comments on this RIA to us by the closing date for this consultation. We will consider all comments before deciding whether to implement our proposals.

4.4 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 when there is a major change in Ofcom's activities. In accordance with section 7 of the Act, in producing the RIA in this document Ofcom has had regard to such general guidance as it considers appropriate, including related Cabinet Office guidance.

Summary of the issue

4.5 As can be seen from the preceding sections CPSOs have a significant intrinsic disadvantage compared to BT due to the less efficient routing of their local calls against BT's call routing. In the past this difference has not been material, due to the large margins enjoyed by BT Retail on most calls. But as margins are reduced, as has happened with BT's proposed price changes, the difference becomes material.

4.6 Ofcom has considered a range of options to address this issue:
• option 1 – do nothing;
• option 2 – wholesale end-to-end calls; and
• option 3 – CPS Local Calls Option.

Option 1 – Do nothing

4.7 Under Section 6 of the Act, Ofcom has a duty to ensure that it does not impose or maintain unnecessary regulatory burdens.

4.8 Ofcom has considered whether the most appropriate course of action would be to take no action to address this issue. However, the analysis set out in Section 3 demonstrates that there is a significant and intrinsic disadvantage to CPSOs due to the inefficient routing of own local exchange/adjacent local exchange calls. If this disadvantage is not addressed, then it is likely that CPSOs will be unable to provide sustainable competition to BT in the mass residential market.

4.9 Also the analysis set out above, in particular paragraphs 3.26 to 3.28, shows that the only way for CPSOs to resolve the local call disadvantage under the current interconnection regime would be to build out their networks to the remote concentrator units in BT’s network. The provision of national coverage in this manner would require a level of capital investment far greater than can reasonably be justified to address this issue. Therefore, Ofcom’s initial view is that it would be failing its obligations to encourage competition in relevant markets if it took no action.

Option 2 – Wholesale end-to-end calls

4.10 The Director set out his plans for a formal review of the market for wholesale end-to-end calls in paragraph 1.27 of the Review of the fixed narrowband wholesale exchange line, call origination, conveyance and transit markets (published 26 August 2003). The main reason for initiating out this review was to give proper consideration to the issue of whether BT should be required to make wholesale end-to-end calls available on cost-based terms to all Communications Providers, including those with no or little infrastructure of their own.

4.11 This option would address the local call disadvantage, since Communications Providers would essentially be reselling the same wholesale service that is available to BT Retail.

4.12 However, Ofcom’s initial view is that that a general requirement on BT to offer cost-based wholesale end-to-end calls would not be a proportionate and objectively justifiable remedy to the local call disadvantage. This is for the following reasons:

• it would result in Ofcom imposing a formal obligation on BT to set cost-based charges across a wide range of call types. A number of associated SMP conditions would also need to be imposed (e.g. cost accounting). However, the problem that needs to be addressed is in relation to only one call type (local calls), and even for that call type there is only a subset of calls that are actually affected (i.e. those local calls that are not carried via BT’s trunk network);

• it would be a major new regulatory intervention by Ofcom at a point in time when there was little evidence that the existing remedy (CPS) had failed. The number of CPS lines has grown from 1.188m lines to 3.276m lines over the
last year. This is therefore an inappropriate point in time for a completely new regulatory intervention at a different point in the value chain and would therefore be disproportionate;

- over the last couple of years several CPSOs have invested significantly in network infrastructure, in order to interconnect with BT’s DLEs. Such investment requires a stable regulatory regime. The introduction of cost-based wholesale end to end calls would penalise those operators that have invested in network infrastructure, and provide a major disincentive to future investment; and

- the benefits of competition include not just lower prices, but also service innovation. CPS provides the potential for service innovation, since much of the underlying network infrastructure is provided by the CPSO (for a fully DLE-interconnected CPSO, the only conveyance provided by BT is that which relates to the access bottleneck). Wholesale end to end calls however provide little potential for service innovation. Retail competition based on this model relies on arbitrage, and may not be sustainable.

4.13 Therefore, for the reasons given above, Ofcom does not consider at this stage that a general requirement on BT to offer cost-based wholesale end-to-end calls would be an appropriate remedy to the local calls disadvantage.

Option 3 – CPS Local Calls Option

4.14 In its press release of 13 May 2004, BT announced that it would develop a wholesale CPS Local Calls Option for DLE-interconnected CPSOs that would address the local call disadvantage.

Description of the CPS Local Calls Option

4.15 The wholesale CPS Local Calls Option would cover (at least in principle) all calls that BT does not route to the tandem network. There are currently two main types of call that meet this definition:

- calls that are originated and terminated on the same DLE without being routed to the tandem layer; and
- calls that are originated on one DLE, and terminated on an adjacent DLE via a direct transmission link, without being routed to the tandem layer.

4.16 CPSOs would be able to buy call origination in relation to these calls, but instead of the calls being conveyed via the CPSOs network, BT would terminate the call, and charge the CPSO for a service bundle comprising local exchange call origination and local exchange call termination. That is, BT would make available to CPSOs on a non-discriminatory basis (as it would be subject to BT’s SMP Condition AA2 in particular) the same ‘stick’ services available to BT Retail.

4.17 The new routing option would be available to CPSOs for those calls which originate on those DLEs to which they interconnect. For adjacent exchange calls it is only necessary for the CPSO to be interconnected at the originating DLE not at both the originating and terminating DLEs. The new routing option would not be available to CPSOs on DLEs to which they were not interconnected. Calls originating on these DLEs would continue to be routed to the agreed point of connection as at present. CPSOs who are not DLE-interconnected can buy the
CPS Local Calls Option from BT; however, as they would not be interconnected at the DLE they would not benefit from the new routing option.

4.18 Calls which would be routed by BT via its tandem exchanges are unaffected by this change. This is because CPSOs can route these calls as efficiently as BT, by interconnecting with BT’s DLEs, and substituting their own tandem exchanges for BT’s tandem exchanges.

Regulatory framework

4.19 In the Review of the fixed narrowband wholesale exchange line, call origination, conveyance and transit markets (published 28 November 2003), the Director/Ofcom found – among other things – that BT has SMP in the market for call origination on fixed public narrowband networks.

4.20 In the document Fixed Narrowband Retail Services Market (published 28 November 2003), Ofcom found – among other things – that BT has SMP in the residential local calls and the business local calls markets in the UK excluding Hull.

4.21 The CPS Local Calls Option addresses SMP at the wholesale level in the call origination market by rectifying the local call disadvantage.

Availability of CPS Local Calls Option only to DLE-interconnected CPSOs

4.22 Sustainable competition at the retail level is only possible if the wholesale inputs available to CPSOs from BTW provide them with an opportunity to compete that is equivalent to that available to BT Retail. The tromboning effect is a structural characteristic of the interconnection model that disadvantages CPSOs (even those that are fully interconnected at the DLE level) in the provision of own local exchange and adjacent local exchange calls. Therefore, as Ofcom has found BT to have SMP in call origination (Review of the fixed narrowband wholesale exchange line, call origination, conveyance and transit markets, published 28 November) the implementation of a CPS Local Calls Option would be justified as a measure to improve competition in the calls market.

4.23 A CPSO that is interconnected at the DLE currently picks up local calls which originate and terminate on the same DLE at this DLE, and then conveys these calls to its own switch. It then conveys them back to the same DLE to be terminated. Therefore, because of the structural disadvantage it faces as an interconnecting operator the CPSO is being required to carry out work that is entirely nugatory – it delivers the traffic to the same point at which it picks it up.

4.24 However, a CPSO that has not built out to the relevant DLE is not in a position to pick up calls from or deliver calls to this DLE. It is choosing to rely on other conveyance services and its own network as a means of routing calls, and it accepts a level of routing inefficiency for many types of calls as the cost associated with not having a network with reach. Ofcom considers that it is reasonable for the new local calls CPS option to be made available only to those CPSOs who have sought to overcome routing inefficiency by their build-out, and that therefore it is reasonable for it to be available only when a CPSO has built out to the relevant DLE.

4.25 It could be argued that nugatory work is performed similarly by CPSOs who interconnect at the DMSU, for calls which originate from and terminate to
customers served by the same DMSU, and that a similar end-to-end product should be made available for such calls. However, in this case the situation can be overcome by the CPSO building out to the DLE. For same DMSU calls using different DLEs the CPSO is then in the same position as BT in relation to routing, while for same DLE calls the CPSO can take advantage of the local calls CPS option.

4.26 Although a CPSO that is not interconnected at the DLE is still carrying out this work it has made a decision to only interconnect at the DMSU and therefore the conveyance is an integral part of their business plan and not nugatory.

Impact on the CPSO market

4.27 In order to benefit from the CPS Local Calls Option directly, CPSOs do need significant scale and reach, but this degree of scale is attainable. The intention of the current changes is not to compensate for the lack of scale of smaller CPSOs. Ofcom considers that sustainable competition depends on a willingness and ability to invest and innovate in infrastructure. Ofcom considers that it is essential to retain an incentive to operators to build out their own networks. Certainly CPSOs that have invested in developing reach and scale should not be penalised for doing so.

4.28 Ofcom considers that a range of competing Communications Providers is beneficial for the competition. Therefore, Ofcom considers that smaller CPSOs should be able to benefit from these changes, but indirectly and on a commercial basis.

4.29 That is, CPSOs that do not have or have only limited DLE-interconnection should be able to purchase wholesale services from those CPSOs who do interconnect with BT's DLEs.

4.30 Therefore, Ofcom considers that a non-DLE interconnected CPSO should be able to take a CPS option of all calls except local calls from BT Wholesale and route these over its own network. The CPSO could then purchase local calls on commercial terms from a DLE-interconnected CPSO, and therefore be able to offer all calls to end-users. Ofcom would expect that competitive pressures between DLE-interconnected CPSOs should lead to local calls being resold to smaller CPSOs at a price that enables the smaller CPSO to make a margin on local calls.

4.31 The diagram below sets out the supply chain that Ofcom envisages being established. Please note, the diagram is a simplification to demonstrate the potential relationship of a DLE-interconnected CPSO to a smaller CPSO. There is nothing preventing the DLE-interconnected CPSO from selling all calls direct to end-users. There is also nothing to prevent a smaller CPSO from continuing to use the current CPS ‘all calls’ option. Also, a CPS Reseller could purchase all calls from either a DLE-interconnected CPSO or from a smaller CPSO that was purchasing local calls from a DLE-interconnected CPSO.
Summary of decision

4.32 As discussed above, Ofcom's initial view is that doing nothing is not a viable option given the intrinsic and significant disadvantage for local calls and the subsequent detriment to competition in the communications sector.

4.33 Also, Ofcom's initial view is that the imposition of wholesale end-to-end calls would be a disproportionate response. That is, Ofcom considers that wholesale end-to-end calls would penalise those CPSOs that have invested in reach and scale in an attempt to mitigate the local call disadvantage, while rewarding CPSOs and resellers that have not invested in reach and scale, i.e. not attempted to address the disadvantage. Additionally, the setting of prices for wholesale end-to-end calls would require a level of intervention that would be disproportionate to the problem given the availability of other options.

4.34 In contrast Ofcom considers that the CPS Local Calls Option for DLE-interconnected CPSOs resolves the local call disadvantage in a more proportionate and targeted way. That is, the CPS Local Calls Option will resolve the local call disadvantage for CPSOs that have invested in reach and scale and therefore rewards investment in the market. It also only addresses the problem that has been identified with CPS, but does not change the regime in relation to call types for which no problem has been identified. Additionally, Ofcom considers that the benefits of the CPS Local Calls Option will trickle down the value chain to smaller CPSOs101 KBas the result of normal competitive pressures and commercial negotiation, as described above. Also, the CPS Local Calls Option would be provided at cost by BT Wholesale to DLE-interconnected CPSOs with the result that BT Wholesale would recover its costs. Therefore, the CPS Local Calls Option would also have a minimal impact on BT.

4.35 Therefore, Ofcom considers that the CPS Local Calls Option is the most appropriate response to address the significant and intrinsic disadvantage for local calls.
Communications Act tests

4.36 In making decisions Ofcom is required to meet various tests set out in the Communications Act 2003 (‘the Act’). These tests and Ofcom’s assessment of how these are met are set out below.

Section 3 – Ofcom’s general duties

4.37 Section 3 of the Act sets out the general duties of Ofcom. Ofcom is required by this section to carry out its functions in line with these duties.

4.38 Ofcom considers that the proposal for a CPS Local Calls Option falls within the scope of Section 3 of the Act. In particular, Ofcom considers that the following duties are appropriate to this issue:

- Section 3(1)(b) states that Ofcom should “further the interests of consumers in relevant markets, where appropriate by promoting competition”;
- Section 3(2)(b) states that Ofcom is required to secure “the availability throughout the United Kingdom of a wide range of electronic communications services”;
- Section 3(4)(b) states that Ofcom must have regard to “the desirability of promoting competition in relevant markets”; and
- Section 3(4)(d) states that Ofcom must have regard to “the desirability of encouraging investment and innovation in relevant markets”.

4.39 Ofcom considers that by addressing the local call disadvantage so as to promote competition the proposal will, among other things, further the interests of consumers. Additionally, by rewarding investment in network infrastructure the proposal will both encourage investment and allow for innovation.

Section 4 – European Community requirements for regulation

4.40 Section 4 of the Act requires Ofcom to act in accordance with the six European Community requirements for regulation. In summary these requirements are to:

- promote competition in the provision of electronic communications networks and services, associated facilities and the supply of directories;
- contribute to the development of the European internal market;
- promote the interests of all persons who are citizens of the European Union;
- not favour one form of or means of providing electronic communications networks or services, i.e. to be technologically neutral;
- to encourage the provision of network access and service interoperability for the purpose of securing:
  - efficient and sustainable competition; and
  - the maximum benefit for customers of Communications Providers;
- encourage compliance with certain standards in order to facilitate service interoperability and secure freedom of choice for the customers of Communications Providers.

4.41 Ofcom considers that a CPS Local Calls Option will – by addressing the local call disadvantage for DLE-interconnected CPSOs – promote efficient and sustainable competition in the provision of electronic communications networks and services by allowing CPSOs that have invested in reach and scale to compete with BT in the provision of local calls. Ofcom also considers that this proposal is the most proportionate way in which to encourage and promote efficient and sustainable competition.
Section 49 – the setting of directions

4.42 Respectively, Section 49 of the Act requires Ofcom to ensure that any direction it gives is:

- objectively justifiable in relation to the networks, services, facilities, apparatus or directories to which it relates;
- not unduly discriminatory against particular persons or against a particular description of persons;
- proportionate to what it is intended to achieve; and
- transparent in relation to what it is intended to achieve.

4.43 Ofcom is proposing to give a direction amending BT’s CPS Functional Specification to reflect the implementation of the CPS Local Calls Option. As discussed above, Ofcom considers that the CPS Local Calls Option – and therefore the necessary amendments to the CPS Functional Specification – is objectively justifiable to redress the significant and intrinsic local call disadvantage.

4.44 Ofcom considers that the proposal is not unduly discriminatory because it requires equivalence between BT and CPSOs that have interconnected at the DLE for the provision of local calls. The exclusion of non-DLE interconnected CPSOs is not unduly discriminatory because these companies have made no attempt to address that part of the tromboning problem which is within their control. Therefore their business case does not depend materially on resolution of this issue. Additionally, Ofcom considers that not requiring Kingston Communications to offer the CPS Local Call Option is not unduly discriminatory, as Kingston Communications has not received any requests for interconnection from CPSOs wishing to offer CPS in the Hull area.

4.45 Ofcom considers that the proposal is proportionate because it directly addresses the local call disadvantage only for those companies that have invested in connecting to the DLE. It would be disproportionate to require BT to provide this service to CPSOs or resellers that do not interconnect at the DLE.

4.46 Ofcom considers that the proposals are transparent because they are clearly set out in this document and Ofcom is consulting upon them.

Question 2: Do you agree with Ofcom’s initial view that Option 3 – a CPS Local Calls Option available to DLE-interconnected CPSOs – is the most appropriate response to the local call disadvantage? If not, which of the other options – or what option not identified by Ofcom – do you believe would be more appropriate?

Obligation to inform the Commission, other National Regulatory Authorities and the Secretary of State

4.47 Pursuant to section 50 of the Act, the notification specifying the proposed condition and modification has been sent to the European Commission, other NRAs and the Secretary of State.
Section 5

Implementation

5.1 This section sets out the modifications required to BT’s CPS Functional Specification in order to establish a CPS Local Calls Option as described in the previous sections. In addition, this section discusses some of the implementation issues that would need to be addressed in establishing a CPS Local Calls Option. These are:

- the definition of DLE interconnection;
- applicability to indirect access (IA);
- product development by BT;
- the price of the CPS Local Calls Option and the interim adjustment; and
- the practicalities of DLE interconnection.

Modification of BT’s CPS Functional Specification

5.2 The CPS condition (AA8) requires CPS to be provided at the request of any customer and that relevant wholesale interconnection facilities are provided to CPSOs on reasonable terms and in accordance with the CPS Functional Specification. The CPS Functional Specification establishes certain technical and other principles in order to enable the efficient implementation of CPS.

5.3 The Director made a direction setting out the CPS Functional Specification on 28 November 2003 as part of the Review of the fixed narrowband wholesale exchange line, call origination, conveyance and transit markets. This CPS Functional Specification of 28 November 2003 applies to both BT and Kingston Communications.

5.4 The introduction of a local calls option will require modifications to BT’s CPS Functional Specification. Therefore, Ofcom is consulting on a draft direction to modify BT’s CPS Functional Specification as described below. It should be noted that, for the reasons given at paragraph 4.44, the CPS Functional Specification of 28 November 2003 will continue to apply to Kingston Communications. The modifications to the CPS Functional Specification set out below will apply solely to BT.

Subscriber options

5.5 Currently paragraphs 12-16 of the CPS Functional Specification refer to the three options:

- Option 1 – international calls;
- Option 2 – national calls; and
- Option 3 – all calls (including international, national, local, mobile, non-geographic (e.g. freephone, local rate, national rate), premium rate, personal, paging and 118XXX codes for Directory Enquiry Facilities).

5.6 The list of options will need to be amended to take into account the new local calls options. This will also impact on the descriptions of combinations of options.

5.7 Ofcom’s initial view is that – in order to reflect the CPS Local Calls Option – the following CPS options should be added to the list above in BT’s CPS Functional Specification:
• Option 4 – all calls except local calls (but including international, national, local, mobile, non-geographic (e.g. freephone, local rate, national rate), premium rate, personal, paging and 118XXX codes for Directory Enquiry Facilities); and
• Option 5 – local calls.

5.8 There are some combinations of the existing and new options that are technically impossible to combine. For example, it is not technically possible for one CPSO to take the 'all calls' option and for another CPSO to take the 'local calls' option on the same line. There are other combinations which are possible in principle, but which may cause practical difficulties or raise policy concerns. For example, the simultaneous selection of 'local calls', 'national calls' and 'international calls' on the same line may be both technically complex, and provide a means of excluding other call types from CPS-based competition. This could be undesirable in both respects.

Question 3: Do you agree with the permitted combinations of options in the draft direction? Should the combinations of CPS options that are permitted be constrained either because of practical or policy concerns?

Call routing
5.9 Paragraphs 17-20 of the CPS Functional Specification describe the routing of calls by CPS. Currently the CPS Functional Specification states:

17. Where a Subscriber has elected to have calls routed by Carrier Pre-selection the following shall apply:

   (i) calls to numbering ranges subject to Carrier Pre-selection shall be routed according to the Subscriber's selected CPS Provider to an agreed Point of Connection; and
   (ii) calls to numbering ranges excluded from the particular Subscriber option(s) selected shall not be affected.

18. Where a call is routed by Carrier Pre-selection, the Dominant Provider shall prefix the Subscriber's dialled digits with the CPS Code before passing the call across the Point of Connection. The CPS Code ensures routing through the Dominant Provider's Public Telephone Network to the Point of Connection.

19. Where a pre-selected call is dialled using the local dialling format, the Dominant Provider must insert the leading zero and area code between the CPS Code and the dialled Telephone number.

5.10 Ofcom's initial view is that these paragraphs should be amended for BT's CPS Functional Specification as set out in the draft direction at Annex 4. That is, to clarify that under Option 5 own-DLE and adjacent-DLE calls should be routed end-to-end over BT’s network, with other calls routed like any other CPS call, i.e. to the CPSO to an agreed point of connection.

Question 4: Do you think that the proposed modifications to the CPS Functional Specification will allow for the establishment of a CPS Local Calls Option?
Question 5: Do you anticipate any unintended consequences as a result of the modifications to the CPS Functional Specification?

5.11 Ofcom has also carried out a ‘tidying exercise’ of BT’s CPS Functional Specification, i.e. references to “the Director” have been changed to “Ofcom”.

What counts as DLE-interconnection

5.12 Ofcom considers that it is essential that there is clarity on what counts as DLE interconnection. It would not be efficient for many CPSOs to interconnect to many DLEs using their own fibre. Therefore, Ofcom considers that the leasing of capacity should also qualify as DLE interconnection. In Ofcom’s view this will drive efficient infrastructure investment.

5.13 Therefore, Ofcom considers that there are at least three scenarios where a CPSO should be regarded as interconnecting to a DLE in a manner that qualifies for the CPS Local Calls Option:

- using their own fibre, i.e. In-Span Interconnect (ISI);
- leasing someone else’s fibre, i.e. third-party ISI; and
- leasing the underlying 2Mbit/s interconnection circuit from BT, i.e. a Customer Sited Interconnect (CSI), Interconnection Extension Circuit (IEC) or an Intra Building Circuit (IBC).

Question 6: Do you agree with Ofcom’s definition of DLE-interconnection? If not, how would you define DLE-interconnection?

Applicability to indirect access (IA)

5.14 A number of CPSOs treat IA and CPS interchangeably. Therefore, Ofcom considers that there is a reasonable case that the CPS Local Calls Option should also apply to IA.

5.15 BT has suggested that IA should not be within the scope of the CPS Local Calls Option as it would present technical difficulties. Ofcom understands that for CPS calls BT validates the CLI at the local exchange. However, for IA the IA Provider validates the CLI upon receipt of the call.

5.16 BT has also suggested that the volume of local calls carried using IA may be low. However, a number of CPSOs have informed Ofcom that they are carrying significant volumes of IA local calls. Ofcom considers that these call volumes do need to be considered – many of these calls are functionally equivalent to CPS, but routed using autodiallers rather than CPS. Excluding these calls would essentially be rewarding BT for the delayed introduction of permanent CPS, since many CPSOs used interim CPS (which involved the installation of autodiallers) in the absence of permanent switch-based CPS during the period from April 2000 to December 2001.

5.17 Ofcom considers that there may be a reasonable case for excluding IA if the technical problems are significant. However, in this case an efficient and industry-agreed migration process from IA to CPS would be essential. The availability of such a migration process would have to be considered as an integral part of the implementation programme for the new service.
5.18 If it were necessary to require formally the scope of the CPS Local Calls Option to include IA, Ofcom could make a direction under BT’s SMP Service Condition AA9.

**Question 7:** Do you consider that IA should be included in the scope of the CPS Local Calls Option? Would an effective migration process from IA to CPS be an acceptable alternative?

**Product development**

5.19 The development of the CPS Local Calls Option will be carried out by BT Wholesale. Ofcom expects that the product should be launched by the end of 2004, preferably earlier, and that BT Wholesale will produce a development timetable on that basis.

5.20 Ofcom considers that there would be significant benefits in CPSOs being closely involved in the development of this product to ensure that functionality such as billing, fraud detection, gateways and so on is implemented in a way that is reasonable for both BT and CPSOs. Additionally, there will be a range of process and IT automation issues that will need to be resolved. Ofcom’s initial view is that this work should be carried out in the context of the existing industry groups.

**Question 8:** Do you agree with the product development proposals and timescales?

**The price for the product**

**Ongoing price of the product**

5.21 On the basis of BT’s cost orientation and no undue discrimination obligations in the call origination market, Ofcom considers that DLE-interconnected CPSOs that take up the CPS Local Calls Option should be charged on the same basis as BT Retail. That is, the CPSO should be charged:

- for same-DLE calls for LECO and the LECT stick; and
- for adjacent-DLE calls for LECO, LLC Stick and LECT.

**Interim adjustment of CPSO costs**

5.22 In its announcement of 13 May 2004, BT stated that until the CPS Local Calls Option was launched interim arrangements would be put in place from 1 July 2004. These interim arrangements will adjust the amount that DLE-interconnected CPSOs are charged to compensate for the tromboning effect as if the new CPS Local Calls Option was in place.

5.23 Ofcom considers that this adjustment should address the total local call disadvantage and not just that part of the disadvantage which relates to the outpayments to BT. For example, BT should adjust the charges to CPSOs so that they face the same cost that they would face if each own-local exchange call was using only LECO and LECT stick. Ofcom considers that BT’s local tandem conveyance (LTC) costs should be used a proxy for the costs of a reasonably efficient CPSO in calculating the adjustment for the tromboning of the call.

5.24 Ofcom considers that this adjustment will redress the local call disadvantage in the short term in the absence of the CPS Local Calls Option. Ofcom also
considers that it will provide BT with an incentive to deliver the product as soon as practicable.

5.25 BT has stated that it hopes to calculate the interim adjustment by using offline rating of actual CDRs. However, BT has said that if this is not feasible, statistical methods will be used to develop the traffic volumes against which the relevant prices will be applied. Any statistical methodology would be based on a monthly sample of BT’s retail traffic data (for call profiling) and actual billable interconnect minutes with the relevant CPSO.

Cost recovery

5.26 Ofcom expects that each element of cost of the CPS Local Calls Option will fall into one of four categories of cost identified in BT’s CPS SMP Condition, namely: System Set-up Costs, Per Operator Set-up Costs, Per Operator Ongoing Costs, and Per Customer Line Set-up Costs. Ofcom considers that the vast majority of costs will be system set-up costs, and will expect BT to provide detailed breakdowns to Ofcom of any costs BT incurs, whether system set-up or otherwise. The six principles of cost recovery have already been used by the Director to decide how these four different categories of CPS-related costs should be recovered, and this is captured in BT’s CPS SMP Condition.

5.27 As with other CPS system set-up costs, Ofcom considers that system set-up costs for the local calls produce should be recovered by means of a pence-per-minute surcharge on all BT-originated “Relevant Calls”, i.e. all calls which originate on BT’s network and that are of a type that are available for selection in accordance with the CPS Functional Specification. There is already an existing pence-per-minute surcharge by means of which BT is recovering BT’s previous CPS system set-up costs. Ofcom considers that the system set-up costs for the CPS Local Calls Option should be added to the costs to be recovered by means of this existing surcharge.

Question 9: Do you agree with Ofcom’s proposals for the ongoing price of the CPS Local Calls Option?

Question 10: Do you agree with Ofcom’s view on the scope and calculation of the interim adjustment?

Question 11: Do you agree with Ofcom’s proposals for cost recovery for the CPS Local Calls Option?

Practicalities of DLE interconnection

5.28 The proposals outlined above are based on the underlying assumption that there is no barrier other than scale to DLE interconnection. However, Ofcom is aware that there are potentially a number of outstanding issues in relation to interconnection. These may need to be addressed if the proposed solution is to be successfully implemented.

5.29 These issues include:

- the availability of Signalling Transfer Point (STP) signalling, which is essential for efficient interconnection with a large number of DLEs;
• the availability of overflow on DLE routes. Typically BT links each DLE to three different tandem exchanges, and this availability of overflow allows higher utilisation of capacity;
• planning rules for DLE routes, i.e. the rules in relation to 'fully provisioned' and 'high usage' interconnect routes equivalent to the planning rules adopted internal to BT's network; and
• forecasting – the ACO forecast means that interconnect capacity must be predicted nine months in advance. Ofcom considers that this period should be reduced, particularly for simple augmentation of capacity on existing routes.

5.30 This document does not propose solutions for these issues. However, Ofcom expects these issues to be addressed and will take action to ensure that they are if necessary. Ofcom notes that BT has undertaken to address these issues in developing the CPS Local Calls Option.

Question 12: Are there any other issues relating to the practicalities of DLE-interconnection that Ofcom has not identified?
Section 6

Responding to this consultation

How to respond

6.1 Ofcom invites written views and comments on the issues raised in this document, to be made by 5pm on Monday 5 July 2004.

6.2 Ofcom strongly prefers to receive responses as e-mail attachments, in Microsoft Word format, as this helps us to process the responses quickly and efficiently. We would also be grateful if you could assist us by completing a response cover sheet (see Annex 2) to indicate whether or not there are confidentiality issues. The cover sheet can be downloaded from the ‘Consultations’ section of our website.

6.3 Please can you send your response to chris.rowsell@ofcom.org.uk.

6.4 Responses may alternatively be posted or faxed to the address below, marked with the title of the consultation.

Chris Rowsell
Competition and Regulation
4th Floor
Ofcom
Riverside House
2A Southwark Bridge Road
London SE1 9HA

Fax: 020 7783 4109

6.5 Note that we do not need a hard copy in addition to an electronic version. Also note that Ofcom will not routinely acknowledge receipt of responses.

6.6 It would be helpful if your response could include direct answers to the questions asked in this document, which are listed together at Annex 3. It would also help if you can explain why you hold your views, and how Ofcom’s proposals would impact on you.

Further information

6.7 If you have any questions about the issues raised in this consultation, or need advice on the appropriate form of response, please contact Chris Rowsell on 020 7783 4176.

Confidentiality

6.8 Ofcom thinks it is important for everyone interested in an issue to see the views expressed by consultation respondents. We will therefore usually publish all responses on our website, www.ofcom.org.uk, as soon as possible after the consultation period has ended.
6.9 All comments will be treated as non-confidential unless respondents specify that part or all of the response is confidential and should not be disclosed. Please place any confidential parts of a response in a separate annex, so that non-confidential parts may be published along with the respondent's identity.

6.10 Ofcom reserves its power to disclose certain confidential information where this is necessary to fulfil its functions, although in practice it would do so only in limited circumstances.

6.11 Please also note that copyright in responses will be assumed to be assigned to Ofcom unless specifically retained.

Next steps

6.12 Following the end of the consultation period, Ofcom intends to publish a statement around mid-July 2004.

6.13 Please note that you can register to get automatic notifications of when Ofcom documents are published, at http://www.ofcom.org.uk/static/subscribe/select_list.htm.

Ofcom's consultation processes

6.14 Ofcom is keen to make responding to consultations easy, and has published some consultation principles (see Annex 1) which it seeks to follow, including on the length of consultations.

6.15 This consultation is shorter than Ofcom's standard 10 week period because it is an urgent issue. Ofcom considers that it is necessary to consult upon and issue a final statement on the local call disadvantage and remedies to it as quickly as possible due to the introduction of BT's new retail prices on 1 July 2004.

6.16 If you have any comments or suggestions on how Ofcom conducts its consultations, please call our consultation helpdesk on 020 7981 3003 or e-mail us at consult@ofcom.org.uk. We would particularly welcome thoughts on how Ofcom could more effectively seek the views of those groups or individuals, such as small businesses or particular types of residential consumers, whose views are less likely to be obtained in a formal consultation.

6.17 If you would like to discuss these issues, or Ofcom's consultation processes more generally, you can alternatively contact Philip Rutnam, Partner, Competition and Strategic Resources, who is Ofcom's consultation champion:

Philip Rutnam
Ofcom
Riverside House
2A Southwark Bridge Road
London SE1 9HA
Tel: 020 7981 3585
Fax: 020 7981 3333
E-mail: philip.rutnam@ofcom.org.uk
Annex 1

Ofcom’s consultation principles

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

Before the consultation

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

During the consultation

2 We will be clear about who we are consulting, why, on what questions and for how long.

3 We will make the consultation document as short and simple as possible with a summary of no more than two pages. We will try to make it as easy as possible to give us a written response. If the consultation is complicated, we may provide a shortened version for smaller organisations or individuals who would otherwise not be able to spare the time to share their views.

4 We will normally allow ten weeks for responses, other than on dispute resolution.

5 There will be a person within Ofcom who will be in charge of making sure we follow our own guidelines and reach out to the largest number of people and organisations interested in the outcome of our decisions. This individual (who we call the consultation champion) will also be the main person to contact with views on the way we run our consultations.

6 If we are not able to follow one of these principles, we will explain why. This may be because a particular issue is urgent. If we need to reduce the amount of time we have set aside for a consultation, we will let those concerned know beforehand that this is a ‘red flag consultation’ which needs their urgent attention.

After the consultation

7 We will look at each response carefully and with an open mind. We will give reasons for our decisions and will give an account of how the views of those concerned helped shape those decisions.
Annex 2

Consultation response cover sheet

A2.1 In the interests of transparency, we will publish all consultation responses in full on our website, www.ofcom.org.uk, as soon as possible after the consultation period has ended, unless a respondent specifies that all or part of their response is confidential. We will also refer to the contents of a response when explaining our decision, unless we are asked not to.

A2.2 We have produced a cover sheet for responses (see below) and would be very grateful if you could send one with your response. This will speed up our processing of responses, and help to maintain confidentiality by allowing you to state very clearly what you don’t want to be published. We will keep your completed cover sheets confidential.

A2.3 We strongly prefer to receive responses in the form of a Microsoft Word attachment to an email. Our website therefore includes an electronic copy of this cover sheet, which you can download from the ‘Consultations’ section of our website.

A2.4 Please put any confidential parts of your response in a separate annex to your response, so that they are clearly identified. This can include information such as your personal background and experience. If you want your name, contact details, or job title to remain confidential, please provide them in your cover sheet only so that we don’t have to edit your response.
## Cover sheet for response to an Ofcom consultation

### BASIC DETAILS

**Consultation title:**

**To (Ofcom contact):**

**Name of respondent:**

**Representing (self or organisation/s):**

**Address (if not received by email):**

### CONFIDENTIALITY

**What do you want Ofcom to keep confidential?**

- [ ] Nothing
- [ ] Name/contact details/job title
- [ ] Whole response
- [ ] Organisation
- [ ] Part of the response

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

- [ ] Yes
- [ ] No

### DECLARATION

I confirm that the correspondence supplied with this cover sheet is a formal consultation response. It can be published in full on Ofcom’s website, unless otherwise specified on this cover sheet. If I have sent my response by email, Ofcom can disregard any standard email text about not disclosing email contents and attachments.

**Name**

**Signed (if hard copy)**
Annex 3

Consultation questions

Question 1: Do you agree with Ofcom's identification of the local call disadvantage? And do you agree with the methodology used to quantify the local call disadvantage?

Question 2: Do you agree with Ofcom's initial view that Option 3 – a CPS Local Calls Option available to DLE-interconnected CPSOs – is the most appropriate response to the local call disadvantage? If not, which of the other options – or what option not identified by Ofcom – do you believe would be more appropriate?

Question 3: Do you agree with the permitted combinations of options in the draft direction? Should the combinations of CPS options that are permitted be constrained either because of practical or policy concerns?

Question 4: Do you think that the proposed modifications to the CPS Functional Specification will allow for the establishment of a CPS Local Calls Option?

Question 5: Do you anticipate any unintended consequences as a result of the modifications to the CPS Functional Specification?

Question 6: Do you agree with Ofcom's definition of DLE-interconnection? If not, how would you define DLE-interconnection?

Question 7: Do you consider that IA should be included in the scope of the CPS Local Calls Option? Would an effective migration process from IA to CPS be an acceptable alternative?

Question 8: Do you agree with the product development proposals and timescales?

Question 9: Do you agree with Ofcom's proposals for the ongoing price of the CPS Local Calls Option?

Question 10: Do you agree with Ofcom's view on the scope and calculation of the interim adjustment?

Question 11: Do you agree with Ofcom's proposals for cost recovery for the CPS Local Calls Option?

Question 12: Are there any other issues relating to the practicalities of DLE-interconnection that Ofcom has not identified?
Annex 4

Notification and draft direction

Notification of a proposal under section 49 of the Communications Act 2003

Proposal for modifying a Direction made under Condition AA8 in Schedule 1 to the Notification at Annex B to the explanatory statement of the fixed narrowband wholesale exchange line, call origination, conveyance and transit markets market review statement published on 27 November 2003 imposed on British Telecommunications plc ('BT') as a result of the market power determinations made by Ofcom that BT has significant market power in the market for call origination on fixed public narrowband networks for the UK (excluding the Hull Area)

1. Ofcom hereby makes, in accordance with section 49 of the Communications Act 2003 ('the Act'), the following proposal to modify a Direction given under Condition AA8, in Schedule 1 to the Notification at Annex B to the explanatory statement of the fixed narrowband wholesale exchange line, call origination, conveyance and transit markets market review statement published on 27 November 2003.

2. The draft modification to the Direction is set out in the Schedule to this notification.

3. The effect of the draft modification to the Direction, and the reasons for making the proposal, are set out in the accompanying explanatory statement.

4. Representation may be made to Ofcom about the proposed draft modification to the Direction by 5pm on 5 July 2004.

5. In accordance with section 50 of the Act, copies of this notification have been sent to the Secretary of State, the European Commission and to the regulatory authorities of every other Member State.

Steve Unger

A person authorised by Ofcom under paragraph 18 of the Schedule to the Office of Communications Act 2002

4 June 2004
Direction: BT’s Carrier Pre-selection Functional Specification

[Draft] Direction modifying a Direction under section 49 of the Communications Act 2003 and Condition AA8 imposed on British Telecommunications plc (“BT”) as a result of the market power determinations made by the Director General of Telecommunications that BT has significant market power in the market for call origination on fixed public narrowband networks for the UK (excluding the Hull Area)

WHEREAS:

(A) as a result of a market analysis carried out by the Director General of Telecommunications (the “Director”), he proposed on 26 August 2003 (the “First Notification”) in accordance with sections 48(2) and 80 of the Act that BT has significant market power in the market for call origination on fixed public narrowband networks for the UK (excluding the Hull Area);

(B) the Director having considered every representation duly made, and thereafter on 28 November 2003 pursuant to sections 48(1) and 79 of the Act by way of publication of a Notification identified the relevant services markets, made market power determinations to the effect referred to in recital (A) above and set certain SMP conditions on BT to take effect on 28 November 2003, unless otherwise is stated in Schedule 1 thereto, such as, in the case of BT, Condition AA8 which imposes obligations concerning Carrier Pre-selection etc.;

(C) on 28 November 2003, the Director also gave a Direction under Condition AA8 pursuant to section 49 of the Act which set out the Carrier Pre-selection Functional Specification (the ‘Original Direction’);

(D) this modified Direction concerns matters to which Condition AA8 relates and, in particular, the manner in which Carrier Pre-selection and Carrier Pre-selection Interconnection Facilities are to be made available in accordance with that Condition and modifies the Original Direction;

(E) the Carrier Pre-selection Functional Specification is a document, which specifies technical and other principles which are intended to effect the efficient implementation and utilisation of Carrier Pre-selection and Carrier Pre-selection Interconnection Facilities, as may be directed by Ofcom from time to time for the purposes of BT complying with its respective obligations under that Condition;

(F) for the reasons set out in Section [4] of the explanatory statement accompanying this modified 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;

(G) for the reasons set out in Section [4] of the explanatory statement accompanying this modified Direction, Ofcom have considered and acted in accordance with the six Community requirements set out in section 4 of the Act and their duties in section 3 of the Act;

(H) on 4 June 2004, Ofcom published a notification of the proposed modified Direction in accordance with section 49 of the Act;

(I) Ofcom has considered every representation about the proposed modified Direction duly made to them; and

NOW, therefore, pursuant to section 49 of the Act and Condition AA8 in Schedule 1 to the Notification, Ofcom gives the following modification to the Original Direction:

1. BT’s Carrier Pre-selection Functional Specification as set out in the Schedule to the Original Direction shall be replaced with the Carrier Pre-selection Functional Specification as set out in the Schedule to this Notification.

2. For the purpose of interpreting this modified Direction, 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 any 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) "Director" means the Director General of Telecommunications as appointed under section 1 of the Telecommunications Act 1984;

   (d) "Kingston" means Kingston Communications (Hull) plc, whose registered company number is 2150618, and any 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; and

   (e) "The Notification" means the Notification referred to in recital (B) of this modified Direction above.

3. Except insofar as the context otherwise requires, words or expressions shall have the meaning assigned to them in this Notification and otherwise any word or expression shall have the same meaning as it has in The Notification and otherwise any word or expression shall have the same meaning as it has in the Act.

4. For the purpose of interpreting this modified 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.

7. The Schedule to this Direction shall form part of this Direction.

[Name]
A person authorised by Ofcom under paragraph 18 of the Schedule to the Office of Communications Act 2002
[Date]
Purpose of this document

1. Carrier Pre-selection is a facility offered to Subscribers which allows them to opt for certain defined classes of calls (see under 'Subscriber Options' below) to be carried by a provider of a Public Telephone Network selected in advance (and having a contract with its Subscriber), without having to dial a routing prefix or follow any other different procedure to invoke such routing. Carrier Pre-selection can be overridden by dialling an Indirect Access Code of another provider of a Public Telephone network (again where there is a contract between the Subscriber and the provider).

2. Carrier Pre-selection must be provided by the relevant Dominant Provider to any of its Subscribers upon request in accordance with this Carrier Pre-selection Functional Specification under obligations imposed on such a Provider under UK legislation implementing the provisions of Article 19 of the Universal Services Directive (2002/22/EC) (see further about those provisions under 'Scope' below). The Dominant Provider must also provide Carrier Pre-selection Facilities in accordance with this Functional Specification under above-mentioned obligations.

3. The Carrier Pre-selection Functional Specification sets out technical and other principles which are intended to effect the efficient implementation and utilisation of Carrier Pre-selection and Carrier Pre-selection Facilities.

Scope

4. Article 19(1) of the Universal Service Directive provides that "National regulatory authorities shall require undertakings notified as having significant market power for the provision of connection to and use of the public telephone network at a fixed location in accordance with Article 16(3) to enable their subscribers to access the services of any interconnected provider of publicly available telephone services: (a) on a call-by-call basis by dialling a carrier selection code; and (b) by means of pre-selection, with a facility to override any pre-selected choice on a call-by-call basis by dialling a carrier selection code." In the United Kingdom, that provision is implemented into UK legislation through the imposition of significant market power
Addressing the local call disadvantage

(SMP) conditions, which impose obligations relating *inter alia* to Carrier Pre-selection etc on the Dominant Provider.

5. Carrier Pre-selection and Carrier Pre-selection Facilities must be provided by the following Dominant Provider:

   - BT.

6. The Dominant Provider shall be required to provide Carrier Pre-selection Interconnection Facilities to CPS Providers only.

7. The Dominant Provider shall provide, on request, Carrier Pre-selection to all Subscribers on Exchange Lines, including the integrated services digital network (ISDN) and Centrex lines. However, the Dominant Provider is not required to provide either Carrier Pre-selection or Carrier Pre-selection Facilities in relation to lines on special schemes to assist Consumers who have difficulty affording telephone services.

**Definitions**

8. The following words or expression in this Carrier Pre-selection Functional Specification shall have the meaning ascribed hereunder:

   **Access Code**
   
   This term shall have the meaning given to the term Access Code in the National Telephone Numbering Plan.

   **BT**
   
   British Telecommunications plc, whose registered company number is 1800000, and any 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.

   **CPS Code**
   
   This term shall have meaning given to the term Carrier Pre-Selection Code in the National Telephone Numbering Plan.

   **CPS Provider**
   
   A Pre-selected Provider that has established Points of Connection with the Dominant Provider and has been allocated a CPS Code by Ofcom.

   **Indirect Access**
   
   A facility which allows a Subscriber to whom a Publicly Available Telephone Service is provided by means of a Public Telephone Network to select which such Service provided wholly or partly by means of that Network is the service he wishes to use by the use of a telephone number on each separate occasion on which a selection is made.

   **Indirect Access Code**
A type of Access Code used to provide Indirect Access.

**Indirect Access Provider**

A provider of Indirect Access services.

**Kingston**

Kingston Communications (Hull) plc, whose registered company number is 2150618, and any 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.

**National Telephone Numbering Plan**

The National Telephone Numbering Plan published from time to time by Ofcom pursuant to sections 56 and 60 of the Act 2003.

**Point(s) of Connection**

A point at which one Public Telephone Network is connected to another.

**Type B Indirect Access Code**

A type of Access Code allocated to individual Public Communications Providers to be used for the provision of Indirect Access.

**Interpretation**

9. Except in so far as the context otherwise requires, words or expressions in this Carrier Pre-selection Functional Specification shall have the meaning ascribed to them under paragraph 8 above, and otherwise any word or expression shall have the meaning as it has for the purposes of the SMP conditions concerning Carrier Pre-selection etc imposed on Dominant Providers pursuant to section 45 of the Communications Act 2003 (c. 21) (which are Condition AA8, in the case of BT, at the time of the publication of this Issue No.2 of the Specification) or, if it has no meaning ascribed thereunder and if the context so permits, in the Communications Act 2003 (c. 21).

10. The Interpretation Act 1978 (c. 30) shall apply for the purpose of interpreting this Carrier Pre-selection Functional Specification as if it were an Act of Parliament.

11. For the purposes of interpreting this Carrier Pre-selection Functional Specification, headings and titles shall be disregarded.

**Subscriber Options**

12. Subscribers opting to use Carrier Pre-selection may select from the following options:

   (i) **Option 1**: international calls;

   (ii) **Option 2**: national calls;
(iii) **Option 3**: all calls (including international, national, local, mobile, non-geographic (eg freephone, local rate, national rate), premium rate, personal, paging and 118XXX codes for Directory Enquiry Facilities);

(iv) **Option 4**: all calls except for local calls (including international, national, mobile, non-geographic (eg freephone, local rate, national rate), premium rate, personal, paging and 118XXX codes for Directory Enquiry Facilities); and

(v) **Option 5**: local calls.

13. If a Subscriber selects Options 1 and 2 (see paragraphs 12 (i) and (ii) above), he can have calls from those options carried either by the same CPS Provider or by different CPS Providers. Neither Options 1 and 3, nor Options 2 and 3, may be combined on the same line. Option 4 cannot be combined with Options 1 to 3 on the same line. Option 5 cannot be combined with Option 3 on the same line.

14. Carrier Pre-selection shall not apply to calls using Type A Access Codes (eg 100, 112, 192), Type C (operator specific) Access Codes or the 0844 04yyxxx and 0808 99yyxxx number ranges used for unmetered Internet access (with unmetered interconnect) or any other number range used for unmetered Internet access with unmetered interconnect. Nor shall Carrier Pre-selection apply to the '999' code.

15. Where no option is selected by the Subscriber, relevant calls shall be routed according to the decision of the Dominant Provider.

16. Local calls shall be deemed to be calls to those geographic destinations which are charged at local rate by the Dominant Provider.

**Routing**

17. Where an a101 KB Subscriber has elected to have calls routed by Carrier Pre-selection, the following shall apply:

(i) calls to numbering ranges subject to Carrier Pre-selection (see under 'Subscriber Options' above) except for calls under Option 5 above shall be routed according to the Subscriber's selected CPS Provider to an agreed Point of Connection;

(ii) under Option 5, calls that originate on a DLE at which the Third Party is interconnected and which terminate on the same DLE or a directly connected adjacent DLE of the Dominant Provider's Network shall be routed end-to-end over the Dominant Provider's Network. All other local calls shall be routed according to the Subscriber's selected CPS Provider to an agreed Point of Connection; and,

(iii) calls to numbering ranges excluded from the particular Subscriber option(s) selected shall not be affected.

18. Where a call is to be routed by Carrier Pre-selection across the Point of Connection, the Dominant Provider shall prefix the Subscriber's dialled digits with the CPS Code before passing the call across the Point of Connection. The
CPS Code ensures routing through the Dominant Provider's Public Telephone Network to the Point of Connection.

19. Where a pre-selected call is dialled using the local dialling format and the call is to be routed across the Point of Connection, the Dominant Provider must insert the leading zero and area code between the CPS Code and the dialled Telephone Number.

20. Carrier Pre-selection shall not apply to operator controlled calls, including (but not limited to) transfer charge calls. Operator and other special services of CPS Providers shall be accessed using the appropriate Indirect Access Code.

Override

21. Calls using Type B Indirect Access Codes shall override options for Carrier Pre-selection and route to the Indirect Access Provider identified by that code, without alteration to the digit string dialled by the Subscriber (for the avoidance of any doubt, it should be noted that this does not include 118XXX DQ codes).

Billing

22. Responsibility for billing the calling Subscriber for Carrier Pre-selection calls rests with the CPS Provider. Where no pre-selection or other form of selection has been made by the calling Subscriber, the Dominant Provider will bill for those calls.
Annex 5

Glossary

**Digital Local Exchange (DLE)** – the telephone exchange to which customers are directly connected, often via a remote concentrator unit.

**Digital Main Switching Unit (DMSU)** – a tandem exchange primarily used for connecting calls between DLEs.

**IEC** – Interconnection Extension Circuit.

**Inter-tandem conveyance** – Interconnection service that involves the use of a tandem switch and transmission between two tandem switches. It is sub-divided into three distance bands.

**Inter-tandem transit** – Interconnection service that involves the use of two tandem switches and one inter-tandem transmission link. It is sub-divided into three distance bands.

**Interconnection** – the linking (whether directly or indirectly by physical or logical means, or by a combination of physical or logical means) of one Public Electronic Communications Network to another for the purpose of enabling the persons using one of them to be able:

(a) to communicate with users of the other one; or

(b) to make use of services provided by means of the other one (whether by the provider of that Network or by another person);

**ISI** – In-Span Interconnect.

**Outpayments** – these are the payments made by one network operator to another for the purpose of conveying messages between the two systems.

**Points of Connection (POC)** – also known as a Switch Connections ie where an operator’s network interconnects with BT usually at a Digital Main Switching Unit (DMSU) or Wide Area Tandem (WAT). Points of connection with BT in the context of OfTEL’s Direction of BT’s NTS Conveyance refer only to switch connections carrying NTS calls where the links were ordered by the operator and agreed with BT according to forecasts of capacity requirements provided by the operator. The operator will also have paid any appropriate charges. Circuits provided by BT for its own network management purposes, referred to as NTS Extension Circuits (NTSECs), do not qualify as they are not a BT standard interconnection product. These are distinct from Interconnection Extension Circuits (IECs) which are a BT Standard Service.

**STP** – Signalling Transfer Point – A facility whereby C7 signalling messages can be passed between exchanges without requiring a discrete circuit between them.

**Tandem exchange** – A main exchange in BT’s network which has the primary function of switching calls between other exchanges, rather than to and from customers’ exchange lines.