

Traditional PPCs and BT's internal arrangements for network access.

Under the terms of Ofcom's "Final Statement and Notification of the Review of the retail leased lines, symmetric broadband origination and wholesale trunk segments markets" published on 24 June 2004, BT is required to publish a reference offer in relation to services provided within SMP designated markets.. For Partial Private Circuits (PPCs), which operate within the Traditional Interface Symmetric Broadband Origination and Wholesale Trunk Segments markets, this reference offer can be found at:

https://www.btwholesale.com/pages/static/Products/Data_and_IP_Connectivity/Partial_Private_Circuits/index.htm

The text below sets out an overview of the relationship between BT's wholesale PPC products and the network components it provides to itself for downstream service, such as retail private circuits. Annex A sets out the relevant parts of the reference offer condition and comments in relation to network components BT provides to itself for downstream services. Annex B provides an overview of typical retail private circuit routing scenarios and the imputed regulatory charges for retail costs stacks. Annex C contains an illustrative breakdown of regulatory charges for 2004/05. Annex D contains details of network components. Annex E contains an overview of the technical configuration of retail private circuits.

Please note that regulatory charges refers to charges as recorded in the Accounting Separation system (ASPIRE).

Overview

- Historically, PPCs were introduced by the regulator in 2001 in order to allow operators to compete on a level playing field with BT's retail private circuits. In practice, PPCs are also used for a range of other related services.
- A BT retail private circuit is an end to end service between two customer sites. In order for Communication Providers to offer similar services, PPCs connect the third party customer site to a point of handover with the Communication Provider's network.
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Typical examples of PPC usage by Communication Providers are:

- PPC from one customer site onto Communication Provider's network carried across the Communication Provider's network and terminated at the other end via either the same Communication Provider's fibre or other Communication Provider's fibre; and

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- PPC from one customer site onto Communication Provider's network carried across the Communication Provider's network and terminated at the other end via another PPC.
- Given that PPCs and retail private circuits make use of the same network and technology, geographic availability, technical characteristics, standards etc are common.
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- Regulated PPC charges are published in the Carrier Price List. Appropriate PPC price list components are used for downstream pricing of retail private circuits and other services in order to establish the cost stack for a circuit, thus ensuring non-discrimination.
- PPC lead-times and service levels for delivery, repair etc. was set by the regulator following consultation with industry in order that operators could compete on an equivalent basis to BT. A comprehensive set of PPC Key Performance Indicators is produced quarterly to measure performance at a detailed level and are then reviewed with Ofcom. A comparison of aggregate delivery and repair performance for PPCs and Private Circuits is also published on the PPC Reference Offer site.

Useful References

- Carrier Price List Section 8
https://www.btwholesale.com/pages/static/Products/Data_and_IP_Connectivity/Partial_Private_Circuits/index.htm
- Our Networks Site
https://www.btwholesale.com/pages/static/Products/Data_and_IP_Connectivity/Partial_Private_Circuits/index.htm
- Interface Specifications www.sinet.bt.com/
- PPC Reference Offer links
https://www.btwholesale.com/pages/static/Products/Data_and_IP_Connectivity/Partial_Private_Circuits/index.htm
- SOR Process see New Services Manual
https://www.btwholesale.com/pages/static/Products/Data_and_IP_Connectivity/Partial_Private_Circuits/index.htm
- BT Regulatory Financial Statements
www.btplc.com/Thegroup/Regulatoryinformation/Financialstatements/index.htm
- Imposing Access obligations under the new EU directives
www.ofcom.org.uk/static/archive/oftel/publications/ind_guidelines/acce0902.htm
- Internal Regulatory Charges for 2004/05

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https://www.btwholesale.com/pages/static/Products/Data_and_IP_Connectivity/Partial_Private_Circuits/index.htm

- BT's Terms and Conditions for Private Service – search for BT Terms of Agreement
<http://www2.bt.com/static/i/btetail/panretail/terms/pdfs/bt003.pdf>
-
- BT Price List <http://www.bt.com/pricing/>
- Review of the retail leased lines, symmetric broadband origination and wholesale trunk segments markets - Final Statement and Notification
www.ofcom.org.uk/consult/condocs/llmr/statement/#content

ANNEX A

NETWORK ACCESS USED BY BT'S DOWNSTREAM SERVICES.

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| <p>a)</p> | <p>a description of the Network Access to be provided, including technical characteristics (which shall include information on network configuration where necessary to make effective use of Network Access);</p> | <p>PPCs run from a point of aggregation at the operator's network (Point of Handover) to a third party site, whereas BT retail private circuits are an end to end service between two customer sites. The actual network routing of private circuits is assigned in an identical way to PPCs, using the same tools.</p> <p>For illustrative purposes, an overview of typical retail private circuit routing scenarios and the imputed regulatory charge for retail cost stacks is included at Annex B. No components are included in the retail cost stack for Point of Handover, as retail private services are carried end to end over the BT Network.</p> <p>BT's downstream divisions do not purchase PPCs. However, network access provided by BT Wholesale for downstream services (e.g. private circuits) is based on components which are common to PPCs. BT's downstream divisions use an almost identical set of components to that which other Communication Providers buy in order to build Private Circuits. Explicitly, these components are as set out in Annex D.</p> <p>However, where PPC SDH components are purchased by BT downstream to provide access to another platform, for example, Point of Handover (PoH) costs are included in the downstream price stack. Annex F shows a typical configuration for access to IP VPN</p> <p>An overview of the technical configuration of retail private circuits is available at Annex E</p> |
| <p>(b)</p> | <p>the locations of the points of Network Access;</p> | <p>Private Circuits are available at any location and use the same points of network access as PPCs. This information can be accessed at</p> <p>Our Networks Site</p> <p>https://www.btwholesale.com/pages/static/Products/Data_and_IP_Connectivity/Partial_Private_Circuits/index.htm</p> |
| <p>(c)</p> | <p>the technical standards for Network</p> | <p>Private Circuits and PPCs; use the same network,</p> |

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| | Access (including any usage restrictions and other security issues); | <p>technology and technical standards.</p> <p>This information can be accessed at : www.sinet.bt.com</p> |
| | | <p>Assured Resilience as a product is offered on narrowband circuits at 2Mbit/s and below for both retail private circuits and PPCs. Assured Resilience is not a product offering for high bandwidth circuits above 2Mbit/s as these circuits are delivered using the inbuilt SDH circuit protection. The standard protection provided on Highband circuits is known as 'Steel' and is common to both retail private circuits and PPCs.</p> |
| (d) | the conditions for access to ancillary, supplementary and advanced services (including operational support systems, information systems or databases for pre-ordering, provisioning ordering, maintenance and repair requests and billing); | <p>This type of contractual requirement would not reasonably apply to transactions, which take place within the same legal entity.</p> <p>The core provisioning system (COSMOSS) and repair system (CAMMS) are common to PPCs and retail private circuits. For external wholesale customers access is via eCO and their owning Customer Management Centres (CMCs) who can access core systems as required.</p> <p>BT's downstream divisions have historically been able to access the core provisioning/repair systems (COSMOSS/CAMMS) through front end systems via the Green side of the Firewall whereas external wholesale customers' access is via the Red side.</p> <p>System overview diagrams will be accessible from the "Our Networks" link below: https://www.btwholesale.com/pages/static/Products/Data_and_IP_Connectivity/Partial_Private_Circuits/index.htm</p> |
| (e) | any ordering and provisioning procedures; | <p>BT's core planning and provisioning processes are common to both retail circuits and PPCs. Front end PPC ordering procedures include a Firm Offer Confirmation (FOC) phase which as introduced through the Ofcom Phase 2 Direction following industry consultation. 'Subject to survey' conditions apply to any end customer taking a retail private circuit from BT.</p> <p>See also comments in section (d) concerning systems overview.</p> |
| (f) | Relevant charges, terms of payment and billing procedures; | <p>Regulated PPC charges are published in the Carrier Price List. Appropriate PPC price list components are used at published rates for downstream pricing of retail private circuits services in order to establish the cost stack for a</p> |

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| | | <p>circuit, thus ensuring non-discrimination.</p> <p>There are no terms of payment or billing arrangements for network components used in BT’s downstream services. Regulatory charges are applied within the Accounting Separation process.</p> <p>Annex C sets out the application of regulatory charges for 2004/05. Annex D explains the principles of how BT’s Accounting Separation systems apply regulatory charges.</p> <p>See BT’s Regulatory Financial Statements: http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/index.htm</p> <p>Credit vetting is a contractual requirement and not applicable to BT’s downstream divisions as the transaction are within the same legal entity.</p> |
| (g) | <i>details of interoperability test;</i> | <p>BT downstream services are generally delivered over the BT network. Therefore, interoperability considerations do not apply.</p> |
| (h) | <i>Details of maintenance and quality as follows:</i> | |
| (i) | <i>Specific timescales for the acceptance or refusal of a request for supply and for completion, testing and hand-over or delivery of services and facilities, for provision of support services (such as fault handling and repair);</i> | <p>PPC SLAs take account of retail provision and repair capability as required by regulation and are therefore comparable. Detailed PPC KPIs are monitored for the purposed of non-discrimination. BT also publishes an aggregate delivery and repair performance comparison with Retail private circuits on the PPC Reference site – see https://www.btwholesale.com/pages/static/Products/Data and IP Connectivity/Partial Private Circuits/index.htm</p> <p>BT’s core planning and provisioning processes are common to both retail circuits and PPCs. Front end PPC ordering procedures include a Firm Offer Confirmation (FOC) phase which was introduced through the Oftel Phase 2 Direction following industry consultation. ‘Subject to survey’ conditions apply to any end customer taking a retail private circuit from BT.</p> <p>Oftel considered the issue of reduced PPC delivery timescales in the Phase 2 Direction and, following consultation, decided that some reduction in PPC delivery timescales (Requisite Period) should be made within the SLA for testing before circuits are handed over. Decision</p> |

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6.268 contained a table of changes to PPC delivery timescales. These took account of reductions for testing (varied by bandwidth) and an addition for FOC Acceptance Interval. The resulting requisite Periods were subsequently taken forward and reiterated under the Leased Line Market Review (LLMR) Directions¹. The lead-time of 60 working days for the delivery of retail circuits (giving Industry 3 days to carry out Fit & Test work) have not changed and is still the timescale applicable to BT downstream divisions.

<http://www.ofcom.org.uk/>

¹Review of the retail leased lines, symmetric broadband origination and wholesale trunk segments markets - Final Statement and Notification

New and revised product requirements for BT's retail private circuits and other downstream products are submitted through the same regulated wholesale SOR process as used by any other operator. Standard timescales apply.

This process can be found in Part B2 of the New Service Manual at:

[https://www.btwholesale.com/pages/static/Products/Data and IP Connectivity/Partial Private Circuits/index.htm](https://www.btwholesale.com/pages/static/Products/Data_and_IP_Connectivity/Partial_Private_Circuits/index.htm)

Maintenance service levels offered by BT for downstream retail services are as published in the relevant BT Terms & Conditions and price list entry for the service concerned. See:

<http://www2.bt.com/static/i/btretail/panretail/terms/pdfs/bt003.pdf> and <http://www.bt.com/pricing/>

For example, for BT's retail private circuits:

“Standard Care” - fault repair work carried out during working hours (0800-1700) on Working Days. For a fault report received before 1700 hours on one Working Day, BT will aim to respond by the end of the next Working Day.

“Prompt Care” - fault repair work carried out during working hours (0800-1700) on Mondays to Saturdays but

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| <p>(ii)</p> | <p>service level commitments, namely the quality standards that each party must meet when performing its contractual obligations;</p> <p>the amount of compensation payable by one party to another for failure to perform contractual commitments;</p> | <p>excluding Public/Bank Holidays. BT will respond within 4 working hours of receipt of a fault report, unless it has agreed with the Customer in writing, at the time of signature of this Contract, that there are other periods within which it will respond to a fault report. If the fault is not cleared during this period, BT will advise the Customer, via the Contact Telephone Number, of the progress being made to clear the fault.</p> <p>“Total Care” - fault repair work carried out 24 hours per day, 7 days per week, including Public/Bank Holidays. BT will respond within 4 hours of receipt of a fault report, unless it has agreed with the Customer in writing, at the time of signature of this Contract, that there are other periods within which it will respond to a fault report. If the fault is not cleared during this period, BT will advise the Customer, via the Contact Telephone Number, of the progress being made to clear the fault.</p> <p>Details of published provision lead times for downstream retail services can be found in the relevant sections of the BT Price List. See:</p> <p>http://www.bt.com/pricing/</p> <p>In view of the fact that this type of contractual requirement would not reasonably apply to transactions which take place within the same legal entity, this information is not applicable to this document.</p> <p>However, as with PPCs, BT Wholesale inputs are provided in order to facilitate the delivery of BT’s retail service levels as set out in the section above.</p> <p>KPIs were set up in order to monitor PPC performance and ensure comparable performance with BT Retail.</p> <p>BT Wholesale does not currently compensate other BT Lines of Business for late delivery/repair.</p> |
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| (iii) | <p>(i) a definition and limitation of liability and indemnity; and.</p> <p>(ii) Details of any relevant intellectual property rights;</p> | <p>This type of contractual requirement would not reasonably apply to transactions, which take place within the same legal entity. However, BT's published retail terms and conditions contain provisions for Limitation of Liability. See:</p> <p>BT's Terms and Conditions for Private Service search for BT Terms of Agreement</p> <p>http://www2.bt.com/static/i/btetail/panretail/terms/pdfs/bt003.pdf</p> <p>Intellectual Property is deemed to vest in BT.</p> |
| (iv) | <p>procedures in the event of alterations being proposed to the service offerings, for example, launch of new services, changes to existing services or change to prices</p> | <p>New and revised product requirements for BT's retail private circuits and other downstream products are submitted through the same regulated wholesale SOR process as used by any other operator. Standard process timescales apply.</p> <p>This process can be found in Part B2 of the New Services Manual at:</p> <p>https://www.btwholesale.com/pages/static/Products/Data and IP Connectivity/Partial Private Circuits/index.htm</p> <p>The launch of new downstream products are managed in accordance with the guidelines published by Oftel entitled "Imposing access obligations under the new EU Directives". This document can be found at:</p> <p>http://www.ofcom.org.uk/static/archive/oftel/publications/in_d_guidelines/acce0902.htm</p> |
| (j) | <p>a dispute resolution procedure to be used between the parties;</p> | <p>Any disputes between BT Wholesale and other BT lines of Business are non-contractual and would be resolved through management escalation.</p> |

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| (k) | details of duration and renegotiation of agreements; | <p>In view of the fact that this type of contractual requirement would not reasonably apply to transactions which take place within the same legal entity, this information is not applicable to this document.</p> <p>The minimum period for a retail private circuit is 12 months and is consistent with the minimum period for PPCs.</p> |
| (l) | provisions regarding confidentiality of non-public parts of the agreements; | <p>In view of the fact that this type of contractual requirement would not reasonably apply to transactions which take place within the same legal entity, this information is not applicable to this document</p> |
| (m) | rules of allocation between the parties when supply is limited (for example, for the purpose of co-location or location of masts); | <p>Forecast provisions are designed to minimise the risks of supply limitations in the delivery of retail private circuits and PPCs.</p> <p>BT Retail provides forecast information to BT Wholesale for private circuits at the same intervals and bandwidth categories as Communication Providers. This arrangement extends to circuits only and does not include Point of Handover requirements as BT's downstream divisions do not run their own networks to interconnect with BT. Forecast underachievement charges apply internally.</p> <p>The generic process for the allocation of engineering time ensures that resource is allocated fairly across all PPC customers and BT Retail in a transparent and auditable way. Field engineers do not self allocate jobs; these are distributed by the appropriate system, Work Manager. Work Manager allocates jobs based on algorithms so it would not be possible for a field engineer to select a job by preference, assuming that he/she had any.</p> <p>However, there are instances towards the end of the working day when the system can be overridden by an engineer's supervisor. The supervisor will select a job that is compatible with the remaining time left in an engineer's working day, the engineer's location and his/her base (all of these details are clearly visible to the supervisor on Work Manager). Job selection performed under such conditions would not depend on who the customer was but purely on the need to ensure that the engineer has enough time to reach a destination, complete a job and arrive back at base at the end of his/her work day.</p> |

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| | | <p>In the event of an equipment supply shortage, the standard process is to allocate kit to the next job in the system, irrespective of whether this is a PPC or retail private circuit</p> <p>KPIs were set up in order to monitor PPC performance and ensure comparable performance with BT Retail.</p> |
| (n) | <p>the standard terms and conditions for the provision of Network Access;</p> | <p>In view of the fact that this type of contractual requirement would not reasonably apply to transactions which take place within the same legal entity, this information is not applicable to this document.</p> <p>However, BT's PPC contract reflects directed requirements which followed detailed industry consultation and analysis by the regulator of our retail capabilities/offers. The contract also provides for a regular review with Wholesale customers in order that any proposed changes can be considered.</p> |
| (o) | <p>the amount applied to:</p> <p>(i) each Network Component used in providing Network Access with the relevant Usage Factors;</p> <p>(ii) the Transfer Charge for each Network Component or combination of Network Components described above;</p> <p>reconciled in each case to the charge payable by a Communications Provider other than the Dominant Provider.</p> | <p>BT's regulated accounts contain financial information as required by current regulation. Page 108 of the 2004 Regulated Accounts refers.</p> <p>Annex C sets out the application of regulatory charges for 2004/05.</p> |

ANNEX B

CIRCUIT ROUTING AND RETAIL COST STACKS.

BT uses the same routing system for both PPCs and BT Retail circuits. The actual physical routings will be allocated, on a like for like basis, depending on standard network optimisation rules and plant availability for both types of circuits. There is no inherent bias in BT's routing system.

In relation to the physical routing in the network, the basic transmission element for the routing of a circuit is the SDH protected structure or 'ring'. BT has installed many rings covering the UK. Usually each ring connects to other rings at 2 or more specific nodes on that ring. Provision of a circuit is a matter of connecting an SDH provided exchange with another Serving Exchange located as close as possible to the destination. The rings are grouped together into 'Tiers' for management and planning reasons but this does not induce a rigid hierarchy i.e. to get from a T3 to another T3 it is not always necessary to route via a T1 node. Establishing a link between the serving exchanges is a complex task and BT uses a specific software tool to route a path between these nodes via all the intermediary rings. The same tool is used for Retail Private circuits, PPCs and any other service that requires an SDH transmission path.

The regulatory framework for PPCs introduced a Logical model (and hence a billing algorithm) as the basis for charging external customers. For the purposes of BT's retail pricing, BT ensures a consistent approach is taken through the use of cost stack tests.

The calculation of trunk and terminating rentals imputed in the BT Retail cost stacks for the main link depends upon bandwidth. For 34Mb and above the Logical pricing model is used as for PPC calculations. However, due to the high volume of circuits below 34Mb, an average distance is used to determine the terminating/trunk split and radial distances of 15km or less are assumed to be Terminating Segments. Beyond this distance, Trunk charges apply.

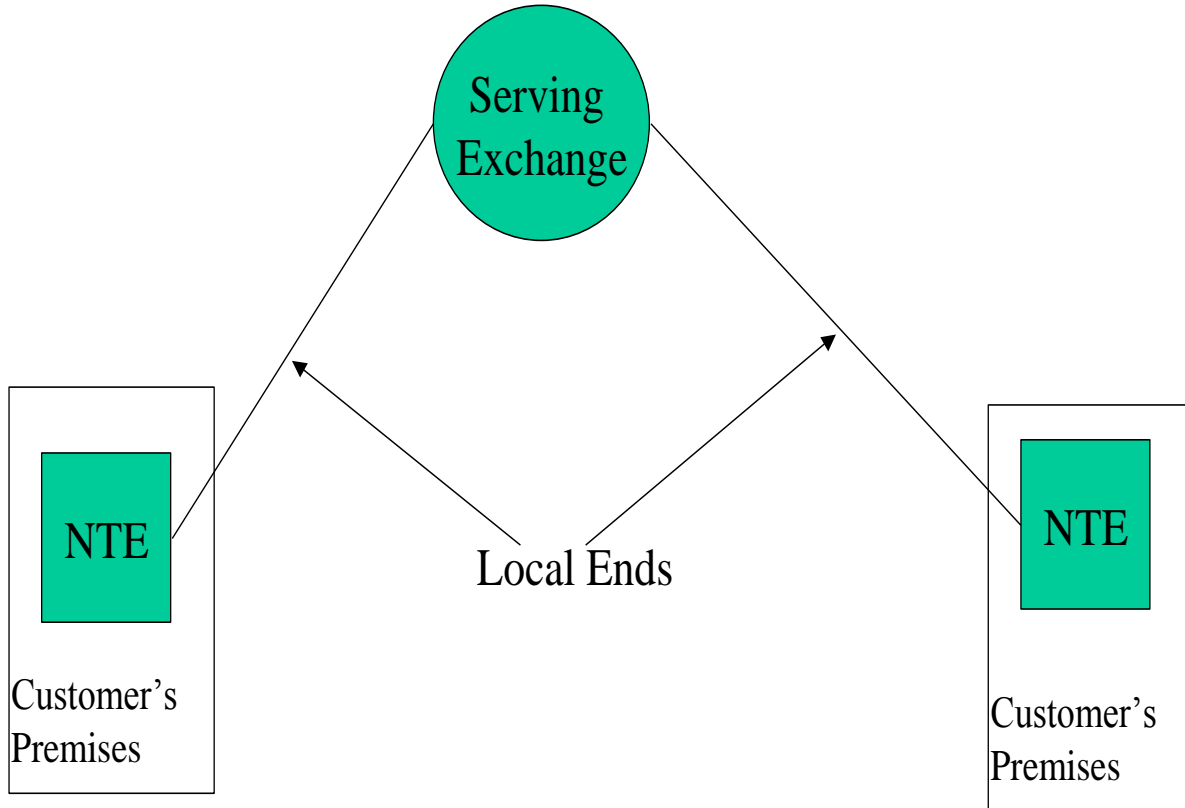
For infrastructure and electronics charges, BT Retail imputes actual equipment charges for 34Mb services and above. Below that bandwidth, an average charge is used.

Hence appropriate PPC charges are imputed as the input costs for Retail Private Circuits and the examples below illustrate how these charges are calculated. No components are included in the retail cost stack for Point of Handover, as retail private services are carried end to end over the BT Network.

However, where PPC SDH components are purchased by BT downstream to provide access to another platform, for example, Point of Handover (PoH) costs are included in the downstream price stack. Annex F shows a typical configuration for access to IP VPN

Example 1:

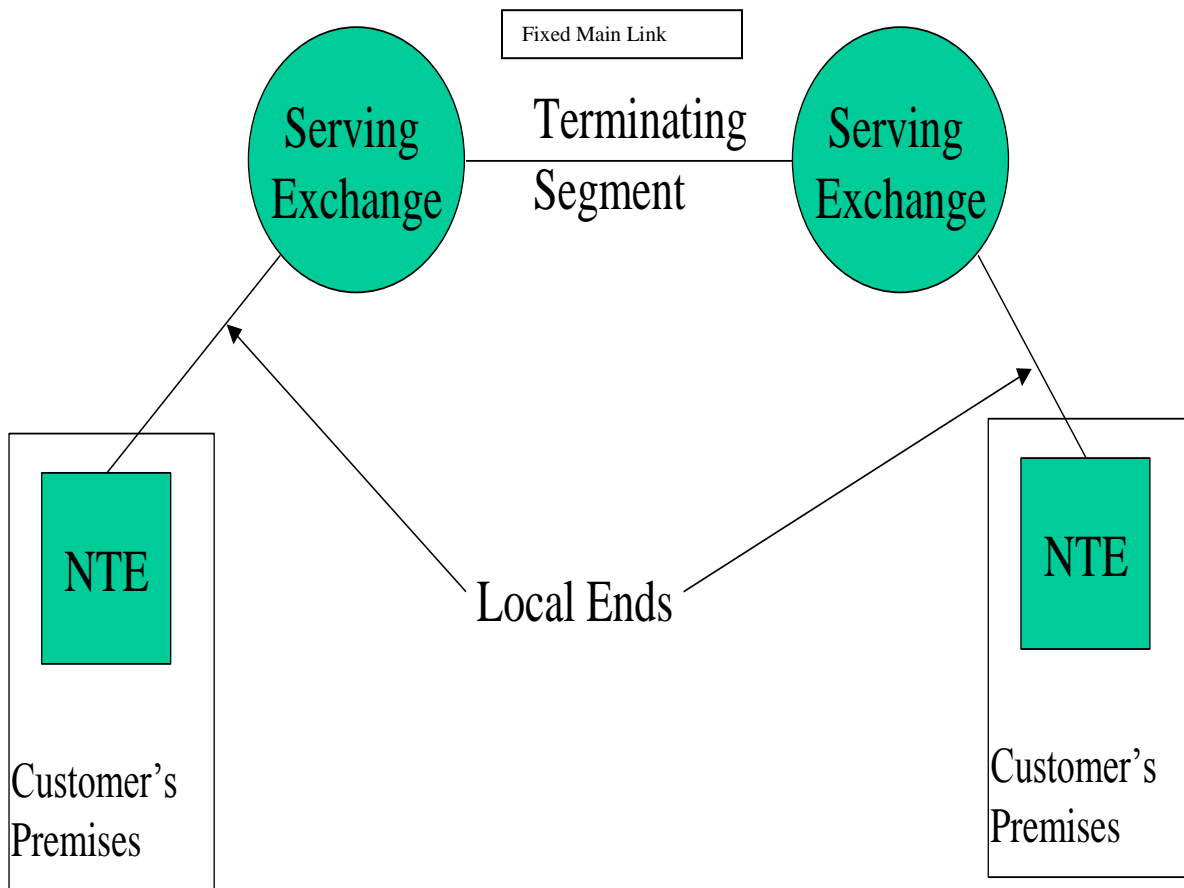
In a situation where both ends are within the catchment area of a single serving exchange.



As the circuit consists of two local ends, BT Retail's imputed charge is based on two local ends. Similarly, where a Communication Provider has built to the serving exchange, this would be an own exchange PPC and the Operator would only pay for one local end.

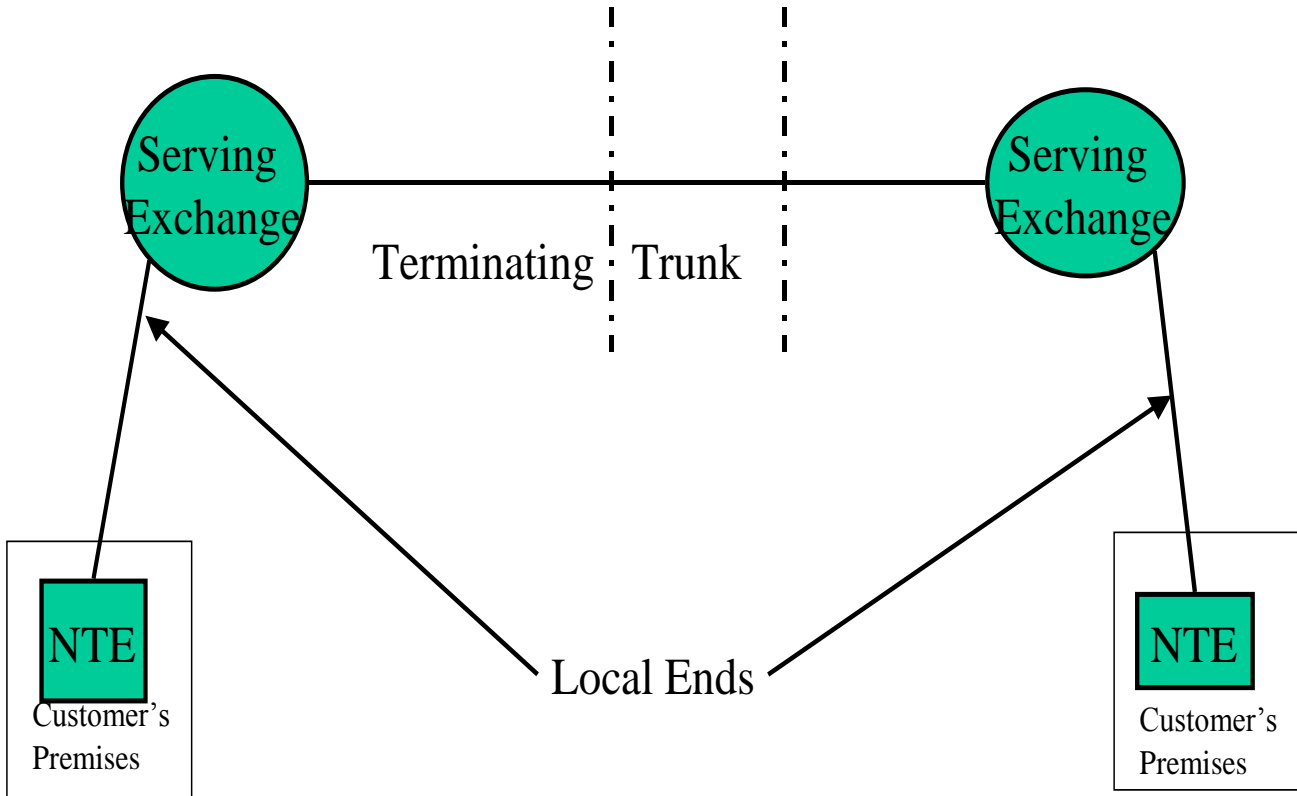
Example 2:

Where the customer premises are further apart and can no longer be reached from the same serving exchange, a main link charge is required – see diagram below. The charges for the main link cover the costs of the SDH route chosen. Although this could traverse many rings, only the straight-line distance between the exchanges is used to calculate the charge. In addition to the charges in the previous diagram BT Retail would have to include the fixed main link and the per km Terminating segment rental.



Example 3:

When the customer's premises are even further apart the main link may include a Trunk segment (i.e. between two tier 1 nodes).



In addition to the charges in Example 2, BT Retail include the per km rental for a Trunk Segment in their Private Circuit prices.

ANNEX C

REGULATORY CHARGES FOR 2004/05.

Please see link at:

https://www.btwholesale.com/pages/static/Products/Data_and_IP_Connectivity/Partial_Private_Circuits/index.htm

ANNEX D

NETWORK COMPONENTS & CHARGES

BT's Downstream Divisions use an almost identical set of components to that which other Communication Providers buy in order to build Private Circuits. Explicitly, these components are as follows:

Connection

CO412: 64Kbit/s Private Circuit Link: Circuit Provision
CO413: 2-622Mbit/s Private Circuit Link: Circuit Provision
CO422: 64Kbit/s Private Circuit Installation

Rental

CL171: E Side Copper: Capital Account
CL172: E Side Copper: Current Account
CL173: D Side Copper: Capital Account
CL174: D Side Copper: Current Account
CL175: Local Exchanges General Frames: Capital Account
CO371: Private Circuit 2Mbit/s Link Per Kilometre Distribution
CO372: Private Circuit 2Mbit/s Link Per Kilometre Trunk
CO373: Private Circuit 34Mbit/s Link Per Kilometre Distribution
CO374: Private Circuit 34Mbit/s Link Per Kilometre Trunk
CO375: Private Circuit 140Mbit/s Link Per Kilometre Distribution

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| CO376: | Private Circuit 140Mbit/s Link Per Kilometre Trunk |
| CO381: | Private Circuit 64Kbit/s Link Per Link |
| CO383: | Private Circuit 2Mbit/s Link Per Link |
| CO385: | Private Circuit 34Mbit/s Link Per Link |
| CO388: | Private Circuit 140 Mbit/s Link Per Link |
| CO391: | Private Circuit 64Kbit/s Link Per Kilometre |
| CO432: | Private Circuit 64Kbit/s Link Local End |
| CO434: | Private Circuit 34Mbit/s Link Local End |
| CO436: | Private Circuit 140Mbit/s Link Local End |
| CO438: | Private Circuit 2Mbit/s Local End Copper |
| CO439: | Private Circuit 2Mbit/s Local End Fibre |

BT's total Network costs are disaggregated into a number of Network Components, the above being those used partially, and some solely by Private Circuits. The way in which these Network Components receive costs is by the attribution methods described in detail in Section 3.3 of the Detailed Attribution Methodology document (The DAM). Briefly, Section 3.3 of the DAM describes how costs are collected at General Ledger Code level and then sorted into cost pools, which are then exhausted across Activity Groups, Plant Groups and then Components. The DAM can be found on the BT.com Internet site at the following Internet address:

<http://www.btplc.com/Thegroup/RegulatoryandPublicaffairs/Financialstatements/index.htm>

Alternatively, the DAM can be accessed on the BT.com website by clicking on "About BT", then "The Group", "Regulation", "Financial Statements", "Regulatory Financial Statements 2005" and then "The DAM". The DAM is an Adobe File which makes it possible to search on a Component by Component basis. It is also possible to search on the Plant Groups that feed into the above components and see a detailed description of what types of costs the Plant Group captures and the Methodology it uses to apportion the costs to Components.

Section 7 of the DAM describes how the Component Costs are charged to Products and Services.

A reading of the Regulatory Pricing Principles document (which can be found under "Primary Accounting Documents") is also recommended. This gives an overview of Attribution Methods and Concepts of Attribution. It may also be helpful to look at Annex 34 to BT's 2005 Current Cost Financial Statements which detail Floors, Ceilings and FAC for the Private Circuit components and usage factors. There are one or two exceptions to the component group purchased by BT Retail and that purchased by other Communications Providers. BT Retail costs include components:

CO378
CO387
CO437
CB451

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These components relate to the 622Mbit/s bandwidth and the Radiostream Products for which BT does not offer PPCs.

SG&A

BT's Downstream Divisions use Component SG&A Component CO505 whereas other Communications Providers use SG&A Component CO506. The origin of the deployment of separate SG&A components goes back to Oftel's PPC Phase 2 Determination which states:

"3.76 Cost Exclusion 3.2:the Director considers that a reasonable range for the wholesale cost mark up on network costs (including ROCE where appropriate) is 4.4 per cent to 11 per cent. The Director determines a rate of 10 per cent – towards the upper end of the benchmark data – as the appropriate mark up on wholesale costs"

CO379 Point of Handover

A component used by other Communications Providers, but not by BT's Downstream Divisions, is CO379 – Point of Handover. This applies to Retail private circuits. As explained in Annex A paragraph (a), Point of Handover costs are included when PPC SDH components are supplied in order to provide access to other platforms.

Regulatory Charges

The spreadsheet provided at Annex C "Regulatory Charges for 2004/05" explains how PPC charges from section B08 of the Carrier Price List are converted into a suitable form to apply as charges for downstream products within BT's regulatory accounting system (Accounting Separation or AS).

Due to the structure of data held within the AS system, it is not possible to apply PPC charges in exactly the same format as would be used on an external bill. Data in AS is not held at the same level of granularity. For example, Third Party Infrastructure, Protected Paths or Cancellation Charges are not identified as data items within the AS model in a way which allows Price List items to be applied directly.

However, regulated charges for both internal and external sales are applied using the same process. There are specific differences in treatment for some items (e.g. Local End usage factors and SG&A costs) but these processes and specific treatments are explained further within the spreadsheet.

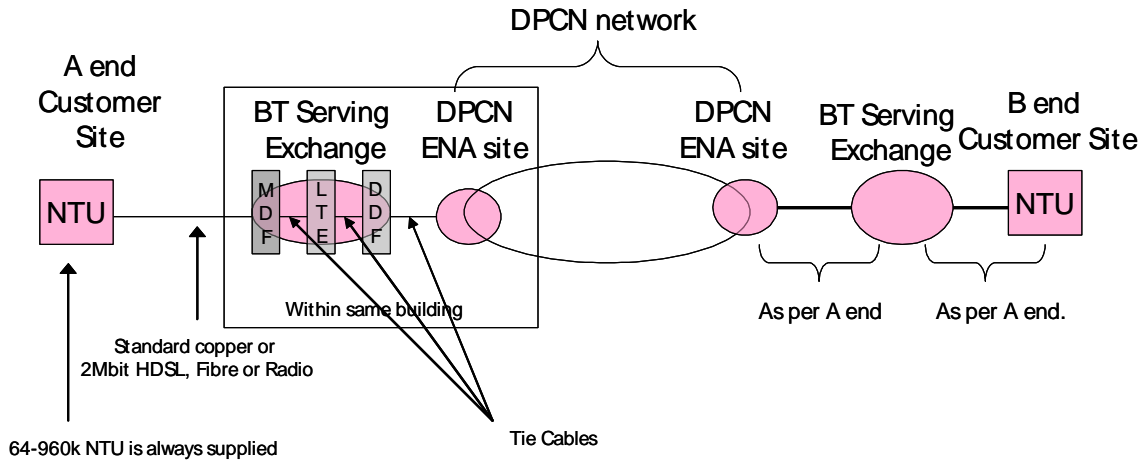
The appropriate cost stacks used by BT Retail in assessing business cases and prices are explained in Annex B to the reference offer. BT's internal processes are such that regulated wholesale charges are always applied in assessing relevant business cases and again this is explained further in Annex B and in other reference offers made available by BT.

As regulated accounts have typically been produced on an annual basis, regulated charges have also been calculated on a once off annual basis. Annual connection volumes are assessed by recording the total number of connections made during the BT financial year. Rental volumes are typically assessed by deriving a mid-year rental system size and applying an average annual charge taking account of any price changes and appropriate period weightings.

ANNEX E

OVERVIEW OF RETAIL PRIVATE CIRCUIT CONFIGURATION

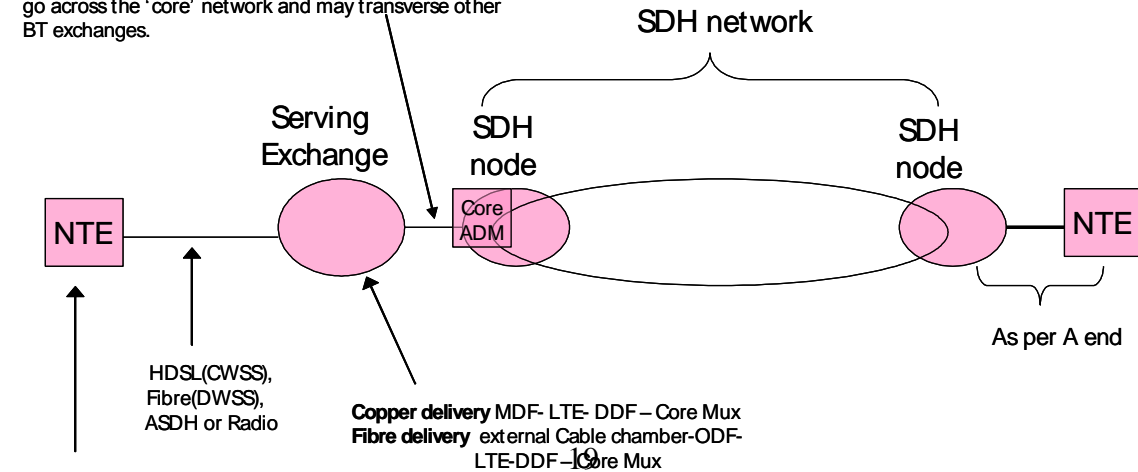
Kilostream 64-960k



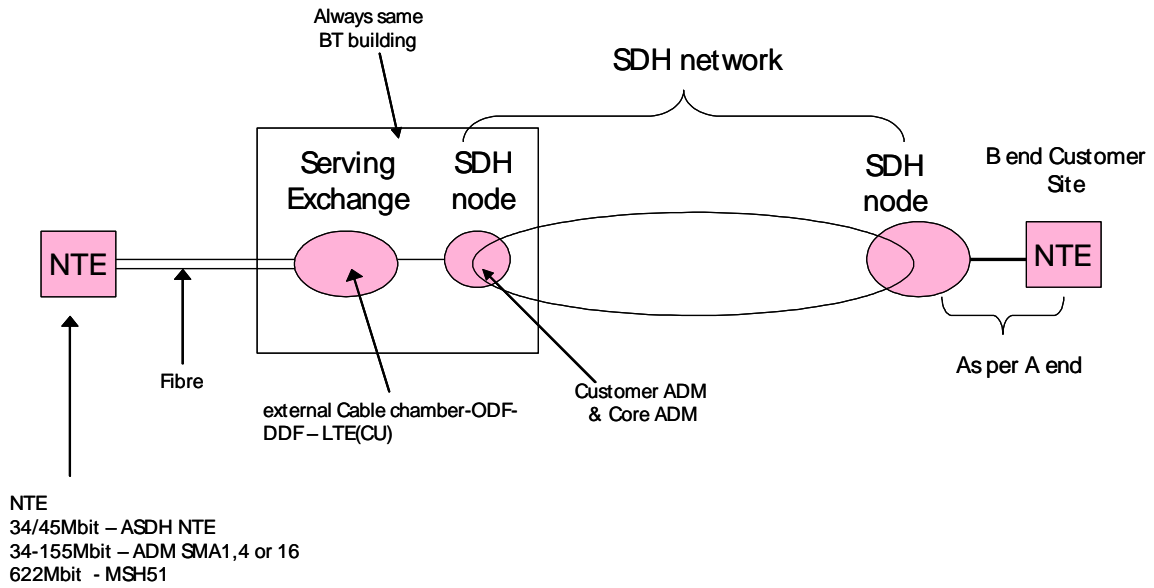
- 320-640k can also be delivered over 2Mbit copper or fibre Infrastructure
- 704-960k is always delivered over 2Mbit Fibre infrastructure
- Where 2Mbit infrastructure is used/required this is provided using an NTE in addition to the 64-960k NTU

MEGASTREAM 1/2Mbit

Serving exchange and SDH node may be in same building. If not the link between the exchange and the SDH Node will go across the 'core' network and may transverse other BT exchanges.



Megastream 34-622Mbit



Annex F

Overview of BT Downstream IP VPN Configuration

