

Charges for Emergency Service (999) calls

**Consultation by the Director General of
Telecommunications following a request from
BT for consent to increase its wholesale
emergency service call handling charge**

5 March 2003

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Summary

S.1 All public telecommunications operators (PTOs) in the UK that provide Publicly Available Telephone Services are required to provide their customers with free access to emergency authorities (Police, Ambulance, Fire, Coastguard etc). BT, Cable & Wireless and Kingston Communications provide the emergency operator (answering) service on an agency basis which other PTOs utilise. The emergency operator obtains relevant information from the caller and connects the caller to the required emergency authority.

S.2 On 19 April 2002, BT requested the Director General (Director)'s consent to increase the call handling element of the charge it makes to other PTOs for calls made by their customers to BT's emergency operator (answering) service, above the safeguard cap of RPI+0 per cent.

S.3 For each call made to BT's emergency operator, BT charges the customer's host operator a pence per minute conveyance charge and also a fixed call handling charge. This consultation document is concerned only with the call handling charge. BT advised the Director that the proposed increase was driven by the need to deploy essential new call handling equipment for BT's operator call centres. BT requested an increase from 52.00 pence per call to 60.66 pence per call and BT proposed that this change took effect from 17 May 2002.

S.4 The Director has reviewed the need for this new equipment and is satisfied from a technical viewpoint that its deployment was necessary to ensure the quality and safety of providing its emergency operator (answering) service. The Director has also reviewed BT's costs of providing the service and is content that an increase of the charge to other PTO's above the safeguard is justified. However, the Director proposes that the increase should be set to 58 pence per call. As far as the current Relevant Year is concerned Condition 69.23 would continue to apply to the increased charge.

S.5 The Director is therefore minded to grant BT the necessary consent. However, before reaching a final decision the Director is taking the opportunity to invite the views of interested parties through this consultation exercise.

Chapter 1

Introduction and background

Note: when 999 is referred to in this document it equally applies to services provided by dialling 112.

1.1 Condition 69.23 of BT's Licence provides a 'safeguard cap' restricting the level of increase that BT can make to the fixed call handling charge for access to its 999 service to no more than RPI + 0 per cent in any 12 month period from 1 October to 30 September. The 'safeguard cap' was set to ensure that provision of this essential service does not disadvantage other PTOs. The safeguard cap was last reviewed as part of the Network Charge Control which took effect on 1 April 2002. In relation to the new European framework, the need for a continuing safeguard cap is being looked at during the review of wholesale fixed narrowband markets, on which Oftel will be publishing proposals shortly. The current document deals only with BT's request to price above the existing cap.

1.2 BT can seek the Director's consent to larger increases if it can demonstrate that failure to do so would endanger the quality and security of its handling of emergency calls.

1.3 On 19 April 2002, BT requested the Director's consent to increase the call handling element of the charge it makes to other PTOs for calls made by their customers to BT's emergency operator (answering) service. The proposed increase was from 52.00 pence per call to 60.66 pence per call and BT proposed that this change should take effect from 17 May 2002. BT's proposal represents an increase of 16.65 per cent which is in excess of the 2001/2002 RPI + 0 per cent 'safeguard cap' of 1.93 per cent. On the same date, BT published details of the proposed increase in Network Charge Change Notice (NCCN) number 332.

1.4 On 10 May 2002 the Director wrote to BT seeking further information in relation to the increased charge. The Director also advised BT that he expected to consult interested parties about the proposal and so was unlikely to reach a decision before 17 May when the increased charge was due to be introduced. In the circumstances the Director advised BT that if it went ahead with the implementation of the increased charge without his consent, BT would be in breach of Condition 69.23 of its Licence and the Director would have to consider whether to take enforcement action to remedy the breach.

1.5 In the light of this BT advised the Director on 8 May that it would not be implementing NCCN 332 on 17 May. NCCN 332 was formally withdrawn on 16 May 2002. However, BT asked that if the Director was prepared to grant the requested consent under Condition 69.23, he determine that the original proposed effective date of 17 May is reasonable under Condition 45.8 of BT's Licence.

Chapter 2

Details of BT's request

2.1 BT has advised the Director that the latest proposed increase follows a significant increase in the underlying costs of providing the emergency operator (answering) service.

Routeing of a 999 call in the network

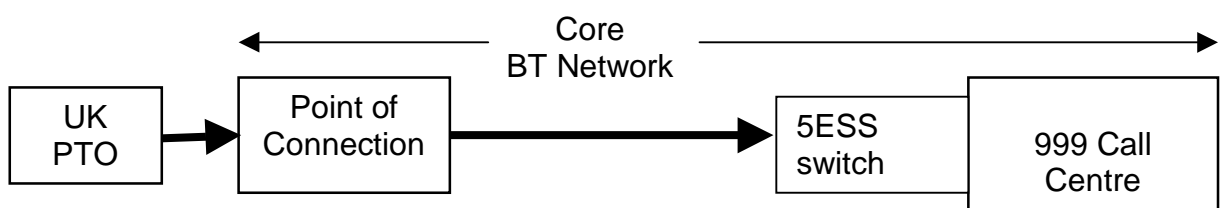


Fig 2.1

2.2 As shown in Fig 3.1, once a call is handed over at the Point of Connection (POC) by a PTO, BT routes the call through its core network until it reaches one of the 5ESS switches at the front end of the 999 call centres. The 5ESS switches then distribute the calls within the call centres, giving priority to 999 calls (other types of operator-assisted calls are also handled in the call centres).

Increased network costs

2.3 In October 2001, BT installed three new switches citing two main reasons:

1. The existing switches had become obsolete and BT was no longer able to secure maintenance for them. BT took out extended cover until September 2001 (i.e. beyond the maintenance-life of the switches). The manufacturer was unable to continue supporting the equipment beyond this date.
 2. The increase in 999 calls over the last few years, particularly originating from mobiles, required greater efficiency in handling the calls. In addition, increases in Operator Assistance and International Operator Assistance calls had also driven the need for replacement switches. The new switches allow BT to distribute the calls more evenly across a greater number of sites than previously, making better use of available operators at any particular time.
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2.4 The increased number of calls made to BT's 999 service over recent years is illustrated in the following table. A key contribution to this is the rapid penetration of mobile phones and their usage for 999 calls.

Financial Year	Total number of calls taken by BT (millions) ¹
1998/99	20.7
1999/00	22.7
2000/01	25.9
2001/02	33.1

Cost information provided by BT in support of its request

2.5 BT deployed 3 new 5ESS switches into the network in October 2001, making an investment of £23 million. One of these switches is dedicated to 999 use and the other two have 23 per cent of their capacity for 999 use. Based on these figures, the investment relating to 999 use is £11.2 million. BT's investment in the new switches, along with the associated changes to its call handling software and other infrastructure such as 999 recorders, was incorporated into BT's 999 service 'cost stack' which details the component costs of the call handling service.

2.6 BT has provided the Director with full details of its 'cost-stack'. In summary the costs anticipated by BT for 2001/02 are as follows:

	£m
Operating Costs ²	15.007
Depreciation due to the new switches	2.237
ROCE ³	1.456
TOTAL	18.700
Charge per 999 call ⁴	60.66p

¹ The total number of calls was derived from the ratio of total operator handling time for 999 to operator handling time per 999 call except for 2001/02, which was explicitly provided to the Director by BT. Total operator handling time for 999 was 1.3062 billion seconds in 1998/99, 1.4418 billion seconds in 1999/00 and 1.5827 billion in 2000/01. Operator handling time per call was 63.2s in 1998/99, 63.5s in 1999/00 and 61.2s in 2000/01.

² This captures the operator services costs, local exchange costs and other AS costs attributed to the 999 service on an FAC basis and anticipated by BT for the period shown.

³ Calculated as 13.5 per cent (ie BT's regulated cost of capital) multiplied by the sum of MCE in 2000/01 financial statement (£4.074M on an FAC basis) and estimated MCE for the remainder of the asset depreciation period (£6.711M on an FAC basis).

⁴ Using BT's anticipated total operator handling time and operator handling time per call for 2001/02 the number of calls implicit in BT's calculation is 30.83 million. Spreading the anticipated operating costs and capital costs over this number of calls gives the charge per call shown (ie 60.66p).

2.7 BT submitted a simple depreciation and FAC based approach to recover the costs associated with the 999 service and derived a total charge of 60.66p per call, that is, an increase of over 16 per cent. However, BT's calculation ignores an inherent accounting distortion. While the 999 charge can increase in line with the safeguard cap, BT's approach implies a declining path of capital costs (as the mean capital employed will diminish over time). Other things being equal, this would give BT the opportunity to over-recover costs during the lifetime of the switches. Given this distortion and for other reasons, the Director considers that an alternative calculation of the charge for the 999 service is appropriate. This is set out in Chapter 3.

Chapter 3

The Director's view

Safety and quality of the service

3.1 The Director considers that the installation of the three new switches was necessary to ensure the quality and safety of the 999 call handling service. The previous switches had become obsolete and support for the previous platform supplied by Marconi was to be discontinued. As a result there was an urgent need to replace this system. The Director considers that the 999 service needs to be absolutely resilient and cannot afford to be placed at risk – the risk of the system failing in the absence of readily available maintenance could have had extremely serious consequences. The Lucent 5ESS switch is a widely used and established product and the 999 call handling service is supported with the equipment purchased.

3.2 Moreover, massive growth of calls in the mobile sector, especially large numbers of accidentally dialled 'silent calls' originating from mobiles, has contributed to a changing balance between non-emergency and emergency calls on BT's Operator switches. Greater sophistication in handling and distributing these calls across the network is desirable. BT is able to continue to safely filter-out about 60 per cent of all 999 calls so they do not reach the emergency services. Moreover, the new switches allow the handling and distribution of 999 and operator services calls making better use of available multi-skilled operators at any particular time.

3.3 The increased number of 999 calls made over recent years for the network as a whole (ie. including calls to the emergency operators of BT, Cable & Wireless and Kingston Communications) is illustrated in the following table. The Director notes that a key contribution to this dramatic increase is the rapid penetration of mobile phones. Some 52 per cent of calls to the 999 service in 2001 originated from mobiles.

Annual number of 999 calls (to all providers)

Year	Total number of calls taken (millions)
1997	22.6
1998	23.1
1999	27.0
2000	31.1
2001	39.7

The Current 999 handling service charge

3.4 A safeguard cap of RPI +0 per cent applies to the charge for calls to emergency services provided by BT for other operators' customers. The charge has been increased once in the last charge control period, as shown below. This increase was in line with the safeguard cap.

Effective date	Until	Charge per call
1 October 1997	30 June 2001	48.66
1 July 2001	Present	52.00

3.5 As noted above, the safeguard cap allows BT to increase the charge in line with the RPI. The starting price of the service set in 1997 was based on FAC historical accounting costs and the current cap does not reflect the costs for major replacement investment.

3.6 The Director has reviewed BT's costs of providing the Emergency operator (answering) service and is satisfied that the costs have increased in real terms because of the need for the investment in the new switches to ensure the safety and quality of the service.

The Director's Methodology

3.7 In contrast to BT's calculation, the Director considers that a discounted cash flow (DCF) approach to recover the LRIC of providing the service is more satisfactory in the context of investment in new switches and its implication for this charge cap and the cost floor based on LRIC. The DCF based calculation derives the constant (ie real) per call charge which if allowed to grow at the rate of inflation and given forecast usage, would yield a revenue stream with a present value equal to the present value of capital and operating costs over the life of the investment (ie 5 years).

3.8 Lifetime costs comprise the investment outlay associated with the 5ESS switches attributed to 999 calls, other 999 related capital expenditure including a mid-life software upgrade, and lifetime operating costs.

Capital costs

3.9 In order to perform the relevant DCF calculation, the Director used BT's derived figure for total switch expenditure allocated to the 999 service. Of the total outlay of £23 million for 3 5ESS switches the allocation to the 999 service is £11.2 million – on the basis of 1 switch being dedicated to the 999 service to ensure resilience and the other two being used only 23 per cent of the time. The Director reviewed BT's estimate of the proportionate use of the switches using historical calling patterns and considers that this allocation of the use of the switches is reasonable.

3.10 The charge derived using a DCF approach should cover the total costs of BT's 999 service, therefore capital costs should include not only the switch outlay but also other capital costs associated with the 999 service. As a proxy for other 'up-front' capital outlay the Director used BT's mean capital employed figure for 2000/01, stated on an incremental cost basis. This figure is £3.4 million. The other relevant capital outlay is a software upgrade anticipated half-way through the life of the switches, estimated by BT at £1.1 million. Although this is anticipated to arise in the future it has been expressed on a present value basis in the Director's calculation.

Operating Costs

3.11 Operating costs are assumed to be driven by total operator handling time. Forecasts for annual total operator handling time are derived by multiplying the forecast annual number of calls (see table below) by the 2001/02 per call operator handling time (the Director assumes that the per call operator handling time will remain constant over the appraisal period).

3.12 To forecast annual LRIC operating costs, the Director calculates the historic three-year average ratio of LRIC operating costs to total operator handling time (based on years 98/99 – 00/01) and assumes that this ratio remains constant over the appraisal period. Annual LRIC operating costs are then derived by multiplying this ratio by the estimated annual total operator handling time.

3.13 The volume of calls estimated over the life of the switches is shown in the following table.

Actual and forecast number of calls to BT's 999 call handling service

Financial Year	Actual and forecast number of calls (millions)*
2001/02	33.1
2002/03	34.0
2003/04	34.0
2004/05	34.7
2005/06	35.4

*The 2001/02 figure is for the actual number of calls – as submitted to by BT. BT only provided forecasts for the two years post 2001/02. Forecasts for 2004/05 and 2005/05 were derived by the Director and assume 2 per cent p.a. growth for these years. The upward trend of the last few years in the actual number of calls is anticipated to level out mainly because mobile handset growth has flattened. In any case, the calculated charge is not particularly sensitive to reasonable variation in the call growth assumption.

Resulting 999 call handling charge

3.14 Finally, the Director calculates the real charge per call which, if allowed to increase at the rate of inflation, would just allow recovery of the capital costs and

subsequent discounted annual LRIC operating costs. The resulting base case charge per 999 call is 58 pence for the financial year 2001/02. This is an increase of approximately 11.5 per cent, 9.6 per cent higher than the 2001/02 safeguard cap.

3.15 Sensitivity analysis on the inflation assumption underlying BT's regulated nominal cost of capital indicates that inflation at 1.5 per cent would result in a charge less than 1p higher than the base case and inflation at 3.5 per cent would result in a charge less than 1p lower. If the Director's call growth assumption for each year of the investment horizon were 10 per cent in contrast to the profile shown in the above table, the charge per call would be less than 2p lower than in the base case calculation. The resulting charge calculation would therefore seem reasonably robust to plausible variations in key assumptions.

Request for retrospection

3.16 As noted in Chapter 2, BT asked that if the Director is prepared to grant the requested consent under Condition 69.23, he determine that the original proposed date of 17 May 2002 is reasonable under Condition 45.8 of BT's Licence. BT submitted that it published NCCN 332 to give the requisite 28 days notice to OLOs of a proposed charge change for the 999 service. Following the Director's letter of 10 May 2002, BT withdrew NCCN 332 on 16 May 2002 rather than risk being in breach of licence. BT added that the Director has the discretion to agree to the proposed effective date, irrespective of the withdrawal of NCCN 332.

3.17 The Director, however, considers that he has no power to grant retrospection in this case for the following reasons.

3.18 Condition 69.23 of BT's Licence does not give the Director any power to grant consent for an increase in the charge retrospectively. However, Condition 45(8) allows the Director to make retrospective decisions when considering a term of an interconnection agreement (including a charge).

3.19 The Director believes that his ability to grant retrospection under Condition 45(8) has to be considered in terms of his powers under the EC Interconnection Directive 1997 ("ICD"). The ICD is implemented by the Telecommunications (Interconnection) Regulations 1997 (the "Regulations").

3.20 Pursuant to Regulation 6(6) of the Regulations, the Director can make a direction to resolve an interconnection dispute. The Director considers, however, that he could not make a direction under Regulation 6(6) (and so make a retrospective decision under Condition 45(8)) in this case as there is no dispute.

3.21 In addition, the Director may consider a term of an interconnection agreement which has already been concluded when he acts under his own initiative pursuant to Regulation 6(3) of the Regulations. If the Director could intervene on this basis, Condition 45(8) could be relevant to how he exercised his

powers. However, the test for intervention under Regulation 6(3) requires exceptional circumstances for intervention and justification in terms of ensuring effective competition. In this case, intervention is not on the basis of ensuring effective competition. This is because the safeguard cap does not derive from the need to ensure competition but to ensure that the OLOs are not disadvantaged by a higher charge beyond the price cap and that the quality of the emergency service is not compromised. The Director does not therefore consider that he has any power to intervene on an own initiative basis under Regulation 6(3) as the 'exceptional circumstances' test is not satisfied

3.22 The Director therefore considers that he has no powers to grant retrospection in this case.

Conclusion

3.23 The Director is therefore minded to grant BT the necessary consent to increase the charge as set out in paragraph 4.14 above. However, before reaching a final decision the Director is taking the opportunity to consider the views of interested parties through this consultation exercise.

3.34 If following consultation the Director remains of the view that the increased charge is justified, he proposes that it should be effective from the date of consent. As far as the current Relevant Year is concerned Condition 69.23 would continue to apply to the increased charge.

Chapter 4

Consultation

How to make comments on the questions raised in this consultation document

Oftel is publishing this consultation document so that interested parties may comment on the issues which it addresses. The closing date for submitting comments is 2 April 2003 at 12 noon.

Where possible, comments should be made in writing and sent by e-mail to tanya.rofani@Oftel.gov.uk. However, copies may also be posted or faxed to the address below. If any interested parties are unable to respond in one of these ways, they should contact

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Publication of comments made by stakeholders

On this occasion, Oftel is not programming a formal period during which interested parties may comment on the responses made by others. Nevertheless, in the interests of transparency, comments will be published, except where respondents indicate that a response, or part of it, is confidential. Respondents are therefore asked to separate out any confidential material into **a confidential annex which is clearly identified** as containing confidential material. Oftel will take steps to protect the confidentiality of all such material from the moment that it is received at Oftel's offices. However, in the interests of transparency, respondents should avoid applying confidential markings wherever possible.

Non confidential responses can be viewed on Oftel's website in the *Publications* section under *Responses to Oftel consultations*. Comments can also be viewed at Oftel's Research and Information Unit. Appointments must be made in advance (see contact details in paragraph three).

e-mail notifications

Oftel has a free e-mail based mailing list to help people stay informed about the work that Oftel is doing. Each time an Oftel document is published and placed on Oftel's website at www.oftel.gov.uk, subscribers to the list receive an e-mail alert. To register, please go to the *What's New* section of the website and access the electronic form.

The consultation criteria

Oftel considers that this document meets the Cabinet Office code of practice on written consultation documents. The code is reproduced below for convenience. If you have any comments or complaints about this consultation **process** please contact:

Oftel co-ordinator for the code of practice:
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London EC4M 7JJ.

e-mail: rob.jex@oftel.gov.uk

Tel: 020 7634 5350
Fax: 020 7634 8940

1. Timing of consultation should be built into the planning process for a policy (including legislation) or service from the start, so that it has the best prospect of improving the proposals concerned, and so that sufficient time is left for it at each stage.
 2. It should be clear who is being consulted, about what questions, in what timescale and for what purpose.
 3. A consultation document should be as simple and concise as possible. It should include a summary, in two main pages at most, of the main questions it seeks views on. It should make it as easy as possible for readers to respond, make contact or complain.
 4. Documents should be made widely available, with the fullest use of electronic means (though not to the exclusion of others), and effectively drawn to the attention of all interested groups and individuals.
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Sufficient time should be allowed for considered responses from all groups with an interest. 12 weeks should be the standard minimum period for consultation.

6. Responses should be carefully and open-mindedly analysed, and the results made widely available, with an account of the views expressed, and reasons for decisions finally taken.

7. Departments should monitor and evaluate consultations, designating a consultation co-ordinator who will ensure that all the lessons are disseminated.

Annex A

Draft consent

TELECOMMUNICATIONS ACT 1984

CONSENT UNDER CONDITION 69.23 OF BT'S LICENCE

WHEREAS:

- (1) On 22 June 1984, the Secretary of State granted a Licence (the "Licence") to British Telecommunications under Section 7 of the Telecommunications Act 1984 (the "Act") for the running of the telecommunications systems specified in Annex A to the Licence and subject to the conditions contained in its Schedule 1;
 - (2) By virtue of section 109 of, and paragraph 20 of schedule 5 to, the Act, the Licence has effect as if granted to British Telecommunications plc (the "Licensee").
 - (3) Condition 69.23 of the Licence requires that except to the extent that the Director otherwise consents (on the grounds that the quality and security of the Service would be endangered), the Licensee shall secure that each discrete charge for the non-conveyance element of a Public Emergency Call Service (as defined in the Licence) does not increase by more than the safeguard cap calculated in accordance with that condition.
 - (4) On 19 April 2002, BT requested the Director General's consent to increase the call handling element of the charge it makes to other public telecommunications operators for calls made by their customers to BT's emergency operator (answering) service. The proposed increase is from 52.00 pence per call to 58.00 pence per call for the Relevant Year 2001/2002 with effect from [date 2003].
 - (5) BT's proposal represents an increase to the charge of 11.5%. This is in excess of the safeguard cap set out in Condition 69.23 by 9.6%. The proposed increase can only be introduced therefore with the Director General's consent pursuant to Condition 69.23.
 - (6) The Licensee has requested that the increased charge be permitted following the deployment of essential new call handling equipment for the Licensee's operator call centres which was required to ensure that the quality and security of its Public Emergency Call Service (as defined in the Licence) would not be endangered.
 - (7) The Director has consulted the Licensee and other Interested Parties (as
-

defined in the Licence) and is content that the revised charge is justified on the grounds set out in Condition 69.23.

THEREFORE:

The Director hereby consents to the call handling element of the charge the Licensee makes to other public telecommunication operators for calls made by their customers to the Licensee's emergency operator (answering) service being increased from 52.00 pence per call to 58 pence per call with effect from [date 2003]

Annex B

Glossary

5ESS Switch - widely used, modern digital switch, manufactured by Lucent.

Network Charge Control (NCC) - The arrangements under C69 of BT's licence for regulation of BT's interconnection regime. BT issues Network Charge Change Notifications (NCCNs) whenever BT changes the charge for a BT wholesale service or offers a price for a new BT wholesale service.

Points of Connection (POC) – also known as 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.

Public Telecommunications Operator - network operators providing services to the public with powers granted by the Secretary of State for Trade and Industry under the Telecommunications Act 1984 to enable them to install their systems on public and private land, property etc.

Publicly available telecommunications services - whether a service is "publicly available" is likely to be a question of fact and judgement which will depend on all the circumstances. As a minimum it is likely that a telecommunication service will be publicly available if it is "on offer" to anyone who is prepared to pay for it, probably with standard terms and conditions. Sometimes this criterion may not be sufficient. Public accessibility of the network over which the service is provided may also need to be taken into account.

Relevant Year – for the purposes of Condition 69 only, any of the four periods of 12 months beginning on 1 October starting with 1 October 2001 and ending on 30 September 2005

RPI - X - the system of price control where average annual price changes for the price-controlled services are limited to the increase in inflation (as measured by the Retail Price Index) less a specified number (X).
