



20 August 2009

**BT'S RESPONSE TO OFCOM'S CONSULTATION  
"A THREE-DIGIT NUMBER FOR NON-  
EMERGENCY HEALTHCARE SERVICES"**

BT would welcome any comments on the contents of this document which is also available electronically at <http://www.btplc.com/responses>

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## EXECUTIVE SUMMARY

- The Department of Health (DH) is planning to launch a National Non-Emergency Healthcare Service and has requested that Ofcom allocate 111 as the telephone number for the service. As the regulator responsible for the administration of telephone numbers in the UK, Ofcom is consulting on this request.
- BT is fully supportive of the proposed DH service and is keen for it to be a success. BT also believes that the proposed service meets Ofcom's criteria for the allocation of a short number. That said, we have serious concerns about the use of 111 in particular as the telephone number for the service and reservations about the use of short numbers in general.
- BT would strongly advise that a number other than 111 be used. This is because 111 would present serious implementation and operational difficulties as described below:
  - The effect of wind on overhead wires and creaking in underground joints can create "clicks" which networks see as dialled digits. Three single clicks in succession would therefore generate a spurious "ghost call" to 111. We believe this is why 111 is very rarely used internationally despite its obvious attraction in terms of memorability. The only current use of 111 BT knows of is in New Zealand, where the problem does not arise due to the different (and internationally unique) convention used there where the number of clicks to numbers for each dialled digit is reversed.
  - This problem already arises with regard to the EU-wide emergency number 112. BT employs network management techniques to minimise ghost calls to this number, but hundreds of thousands of such calls are nevertheless generated each year, and more would be expected with 111.
  - We believe that ghost calls to 111 would add considerably to the DH's costs of running the service, since presumably it would be necessary to check in each case whether the call had in fact been made by someone faced with an emergency who should have called 999.
  - The DH has not ruled out charging for calls to 111. Unless the calls were always free to the caller, customers would be charged for these ghost calls, a situation that would undermine confidence in communications providers' billing systems and generate customer service issues and billing complaints.
- BT's reservations around the further allocation of short numbers arise from their drawbacks in terms of tariff transparency and the need for bespoke technical and commercial arrangements to be made with each originating

network for the delivery of calls. In view of these factors, BT believes that although short numbers are clearly attractive, greater benefits may be delivered by the use of standard length numbers as long as they are effectively marketed and promoted.

- A further issue arises from the shortage of three-digit numbers. There are so few numbers available in this format (particularly since, for technical reasons, three digit numbers must begin with '1') that eventual exhaustion of the range is a risk. We would suggest that Ofcom should now consider using longer strings of four, five or six digits for short numbers of the type requested for the new DH service. Six-digit numbers could be an appropriate choice, since with the introduction of new 116xxx numbers and directory enquiry numbers, they are becoming familiar to customers.
- If it is concluded that a three-digit number should be used for the Non-emergency Healthcare Service, BT believes that alternative short numbers should be considered. In addition to the numbers that featured in the DH's market research, other possible three-digit numbers that are memorable and appear to be available include 199 and 133. Longer numbers could also be used: one possibility could be 1647, which spells out "1NHS" on a standard alphanumeric telephone keypad.
- We would be very happy to engage with Ofcom and DH to find a workable solution for their service which meets the needs of stakeholders and future users of the new service, and on the use and structure of short numbers more generally.

## **Introduction**

1. The Department of Health (DH) is planning to launch a National Non-Emergency Healthcare Service and has requested that Ofcom allocate 111 as the telephone number for the service. As the regulator responsible for the administration of telephone numbers in the UK, Ofcom is consulting on this request.
2. BT is fully supportive of the proposed DH service and is keen for it to be a success. However, we have reservations about the use of short numbers in general and serious concerns about the use of 111 in particular as the telephone number for the service. In this response we explain these issues and make suggestions for workable alternatives that we believe are likely to be appealing to the DH.

## **Issues relating to three-digit numbers**

3. The consultation document sets out the results of research carried out by the DH which have led it to request a three-digit number for access to non-emergency healthcare services. The key factors are that:
  - three-digit numbers are memorable;
  - the current 0845 number for NHS Direct is not sufficiently well-known;
  - as a result, members of the public enter the health service system at the wrong point and make calls to the emergency services in inappropriate circumstances.
4. Whilst BT recognises the attraction of three-digit numbers, and short numbers in general, a key disadvantage of such numbers is that they are not linked to a particular tariff structure, and the cost of calling such numbers currently varies between free and Premium Rate. As a result, customers cannot intuitively understand the cost of calls to such numbers, and the lack of tariff transparency could potentially be a barrier to use, especially by disadvantaged consumers.
5. The DH should also note that whilst commercial arrangements across networks are established for standard numbers, they would need to negotiate individually with each provider how calls to 111 should be treated.
6. There are also a number of implementation complexities that would need to be considered and resolved, some of which are covered in Annex 1 of this response.
7. For these reasons, and bearing in mind the scarcity of three-digit numbers, BT would suggest that alternative numbering formats should be considered.

## Alternatives to three-digit numbers

8. One alternative put forward in the consultation document, but rejected by Ofcom, is the use of a 116xxx number. BT agrees with Ofcom's conclusion. To bring such a number into use, there would be a need to get European consensus around a service definition, then agreement to its use in a significant number of EU states. There would need to be a consultation in the UK followed by a call for interest in the given number. BT believes that this process would not be quick and since 116 numbers must be free to caller or Freefone, a 116 number might also prematurely restrict the DH's tariff options.
9. In 2006, Ofcom established the 03 number range for customers who wanted a non-geographic number but did not want to be seen to be profiting from inbound calls through revenue share. The 03 range would seem to BT to be the ideal place for the DH to establish this service, especially as it is currently so lightly used that the DH could select from a huge choice of numbers. Using the number for this service could serve to kick-start the range itself, reinforcing public awareness and trust in it, in keeping with what we believe to be objectives of the COI and Ofcom. Using a different type of number seems potentially to miss an opportunity. Whilst we recognise that this would mean using a standard number rather than a short number which is the principle matter under consultation, a golden number starting 03xx might still be worth considering.
10. As a more general matter, in the event that Ofcom concludes that there is benefit to the UK in short numbers being available, in keeping with its number husbandry duties, BT would urge Ofcom to consider increasing the length of all unallocated short numbers to 4, 5 or 6 digits, increasing the supply 10-, 100- or 1000-fold (since 116 and 118 numbers are already six digit, this might be the best option), so that there are more of them available for future use. There would also then be very many more memorable numbers available for cases justifying them.
11. In terms of the management of short numbers, it is worth recalling the single non-emergency service launched using the number 101. What was envisaged as a critical national service of public value is now a service available on that number in just three pockets of the UK, not very many years on. Had the current lack of coverage been anticipated, it is questionable whether a three digit number should or would have been allocated. This illustrates why BT does not generally favour further allocations of three digit numbers and proposes that short numbers, insofar as more should be allocated, should be longer.

## Disadvantages of 111

12. If Ofcom agrees that the DH should be allocated a short number, we would advise that a number other than 111 should be used. Whilst BT recognises the market research presented by the DH that suggests that customers prefer the number 111 to other specific three digit strings, the issue referred to in paragraph 4.55 of the consultation document would lead to very significant operational problems for the DH, the communications industry and callers. In the UK, loop-disconnect dialling is supported in addition to tone dialling. Loop disconnect dialling sends sequences of pulses (or clicks) to exchange equipment to represent digits dialled, which taken together indicate a destination telephone number. Whilst these clicks are usually generated by telephone apparatus on their premises, they can be generated on customers' lines but from within the network, for example as a result of overhead wires blowing in the wind or in dry joints underground. With a single click representing the digit "1", three of these in succession could send a "ghost call" to the service.
13. As Ofcom states, in order to minimise such problems in relation to calls to the 112 emergency operator, which must be made available throughout the EU, BT has implemented a four second delay after the digit "2" is received after two "1s", the call being rejected if further digits are received during this period. This eliminates calls set up by longer sequences of noise following the clicks representing 112 so that these are not presented to the operator. The four second gap is not ideal for calling customers, as four second silences after dialling could lead infrequent callers of numbers where this technique is used to think that they have not been connected, hang up and try again. It is not a technique that should be used unless there is little choice, as is the case with implementing 112.
14. Even with this measure in place, i.e. with only digit strings of precisely 112 rather than 112x(x)(x)(etc) being passed on, BT's Operator Services Platform receives about 88,000 calls to 112 a month that originate within BT's network of which only about 5% are genuine calls (we assume other providers must also pass on a significant number of 112 calls to BT, not all of them necessarily using a four second delay, so potentially passing on very many more "ghost calls"). As CPs change the presentation of 112 calls to 999 calls before handing them to BT, we do not have figures for these. The figures we do have alone equate to over 100 calls an hour, all of which need handling, to try and ensure that a vulnerable customer had not made the call, for example someone who had collapsed at the other end of the line. Based on our 112 experience, if it takes on average 30 seconds a call to carry out out this check, three people working eight hours a day would be needed to handle just these "ghost calls" on an ongoing basis. BT considers it likely that false "111" sequences would be more likely than "112" sequences, therefore the figures above are likely to represent a significant under-estimate.

15. If the DH concludes that calls to 111 need not be free to callers, there is an extra problem – these “ghost calls” would also appear on phone bills, resulting in BT and other call originators receiving a significant level of complaints about charges for calls which customers did not make. This would add cost to customer service and billing operations and also undermine confidence in billing systems as a whole.
16. The problems in the above paragraphs would occur most frequently with numbers with shorter digit strings and lower digits. Longer digit strings and the use of higher numbers would dramatically reduce such problems.
17. It is worth noting that despite the obvious attractiveness / memorability of “111”, the only country to our knowledge in which it has been implemented (we have specifically been advised that it is not used in Belgium, Poland, Norway, Ireland, Spain, Denmark, Slovakia, Italy, France, Netherlands, Portugal and Greece) is New Zealand, where it is the emergency number, akin to our 999. This is possible because in that country, their loop disconnect code is reversed. That is, the digit 9 pulses once, 8 twice etc, with the digit 1 pulsing nine times.
18. BT believes that the Norwegian experience is relevant. In Norway in the 1990s, short emergency numbers of the form 1xx were piloted including calls to 111 for the Fire Department. It became clear quickly in the trial areas that 111 received a great number of “ghost calls”. The nationwide launch was postponed and when it was reactivated six months later, the service was launched on 110.
19. In addition to the problems above, BT believes that mobile phones in pockets and bags would be more susceptible to a sequence of the same digit being pressed three times and generating a false call rather than any other particular three (or more) different digit sequence. Again, if this were to be a chargeable call, this could be costly for callers and furthermore compromise a pre-pay customer’s outstanding credit balance, leaving them short when they find themselves in a non-emergency but urgent situation.
20. Thought should also be given to whether the choice of 111, being so similar to the 112 emergency number and 0800 1111 Childline number, would also cause problems for vulnerable callers who inadvertently find themselves talking to the non-emergency healthcare service through either misdialling a digit or not dialling the 0800 code (BT accepts in the Childline case, where a call delay is employed eliminating over-dialled calls, the call would be rejected). These problems would be exacerbated if 111 were to be chargeable, the other calls being free.
21. BT would also point out a further potential problem. BT has experienced occasional unfortunate cases of people with dementia who repeatedly call the same number running up large bills from ringing the speaking clock (123) and the same could happen with 111, if chargeable. We believe that

this problem would be less likely with a longer, less unique or standard number.

22. For the reasons set out above, we would strongly advise that if a three-digit number is to be used for the new service, it should be a number other than 111.

### **BT's suggestions for short numbers other than 111**

23. As earlier in this response, BT suggests that Ofcom could consider using longer strings of four, five or six numbers for short numbers of the type requested by DH. Indeed, there is a body of work showing that memorability does not necessarily decrease with longer numbers. An example of such work is a study on "the Expanding Telephone number" by Raanaas, Ruth Kjaersti, Nordby, Knut and Magnussen, Svein (2002). It would be worth the DH therefore being aware that strong options exist that contain more than 3 digits. Below we have listed a selection of memorable (and available) numbers which are longer than three digits and would seem to confirm this:

1020  
102030  
1066  
1099  
111XYZ (though not 111111)  
1199  
1331  
133133  
1333  
1647 (this number spells out 1NHS alpha-numerically on a standard telephone keypad, although not on some of the qwerty keyboard devices now in use)  
1991  
199199

24. BT is aware that some of the numbers above are not designated Type A access codes<sup>1</sup>, but believes that it would be a relatively simple and non-controversial matter for Ofcom to convert them to Type A for this service, as none of them is Type C and therefore potentially in use.

25. If a 3-digit number remains the preferred option, we believe consideration could be given to 133 or perhaps better still 199.

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<sup>1</sup> Short numbers beginning with a 1 are more properly known as Access Codes. Type A Access Codes are available for use by all providers of a Public Telephone Network and are used in such a way as to enable End-Users to access designated services across all Public Telephone Networks; Type B Access Codes are allocated individually by Ofcom and are adopted in such a way as to either (i) enable End-Users to access services provided by their Communications Provider or (ii) enable End-Users to access services provided by other Communications Providers (eg, Indirect Access, Directory Enquiry Facilities and Harmonised numbers for harmonised services of social value); and Type C Access Codes are available for use for service provision within a Communications Provider's own Electronic Communications Network.



## **Implementation issues**

26. Because commercial and access arrangements are not applied consistently across all short numbers, they need to be agreed and established for each number individually. To avoid misunderstandings or problems downstream, BT has set out, as it did when we responded recently to Ofcom's recent consultation concerning the implementation of 116 numbers, a list of assumptions or issues that should be considered from the outset, on which we invite Ofcom to offer clarification. Some issues arise if calls to the number would be chargeable, non-chargeable or either. We have set these out in Annex 1 of this response.

## **Conclusion**

27. BT recognises the case for a short number starting with the digit "1" to access the proposed non-emergency healthcare service, although on balance we believe that callers may be better served by the use of standard numbers.
28. If a three-digit number is to be used, we would strongly advise against the specific number 111, because of the volume of "ghost calls" that would be generated. Only a proportion of these calls could be suppressed through network management techniques. Further, if calls to 111 were chargeable, customers would be billed for ghost calls and suffer the inconvenience of having to resolve the resulting billing issues.
29. In view of this, BT believes that alternative short numbers should be considered for the service. Possible three-digit numbers that are memorable and available include 199 and 133. As suggested above, longer numbers could also be used: one possibility could be 1647, which spells out "1NHS" on a standard alphanumeric telephone keypad. We would be very happy to engage with Ofcom and DH to find a workable solution to this issue which meets the needs of stakeholders and future users of the new service.

## Responses to Ofcom's questions

***Question 1: Do you agree with Ofcom's view that the proposed non-emergency healthcare service represents a justified use of a three-digit number? Please give reasons for your views?***

Standard numbers convey information to customers, for example about the level of call charges, which short numbers do not. BT believes that for the reasons given in the body of this document, the further use of short numbers should be minimised.

If short numbers are to be used more frequently, then we suggest that they should be allocated in longer digit strings so that the range is not exhausted. Whilst they could be 4 or 5 digits in length, 6 digits would seem to be a good choice, as customers become more familiar with the structure, reinforced by the similarity to Directory Enquiries numbers and the new 116 numbers.

Nevertheless, BT agrees that the proposed DH service would meet the criteria for the allocation of a short number.

***Question 2: Do you agree with the DHs view that: a) a three-digit number is the best choice for the proposed service; and b) of the three-digit numbers available, '111' is the best option? Please give reasons for your views.***

BT would strongly advise against using 111 for this or any other service, as it will generate a high level of (potentially chargeable) "ghost calls" that network management techniques would not be able to effectively eliminate, because the network supports loop disconnect dialling. This would increase the cost of the service to the taxpayer, and if the calls were not free to caller, "ghost calls" would appear on customers' bills and would undermine confidence in all telephone companies' billing systems, negatively impacting the customer service and billing functions, dealing with refunds (noting that it would not in any event always be easy to differentiate between "ghost" and real calls). The DH's service would be likely to be damaged by association.

Additionally, BT believes that there are a number of other reasons set out in this response why there may be calls in error and general misdials to the service, intended for important services to the vulnerable that are free to caller, which make 111 specifically an unattractive option.

***Question 3: What are your views on the tariff options selected by the DH?***

In choosing a tariff for the service envisaged here, the DH would need to be sensitive to public opinion. As Ofcom and the Central Office of Information (COI) are aware, some number types are viewed with concern by

citizens/consumers. The level and nature of the responses to Ofcom's series of consultations over recent years on Number Translation Services, in particular relating to 0870, and the well-publicised "Say No to 0870" campaign would suggest that if the DH introduces a new number with a tariff that is not free or not likely to be within inclusive call packages, they may encounter a backlash from the public. There seems to be no let-up in public concern on this matter, as the current petition on the No10 web-site "<http://petitions.number10.gov.uk/Healthtelephone/> (*We the undersigned petition the Prime Minister to prevent local health centres and hospitals from using 08 numbers such as 0844, 0845 or 0870*) demonstrates.

The public might be sympathetic to the DH not wishing to change its existing special 0845 number, because it is special, and because of the costs involved in changing number, even though from some providers they may pay a premium above the cost of a call to a geographic number. However, BT believes that they would not be likely to respond favourably to the number changing and the tariff arrangements not falling into line with what are regarded as current best practice, especially if they felt, however wrongly, that the choice of number was in part an attempt to hide the charges. It is worth noting that BT consumer customers generally would pay the same or less to call 0845 numbers than they would pay under some of the DH charging proposals in this consultation.

Given the tariff options and revenue share arrangements the DH is considering, it should perhaps discuss its proposals with PhonepayPlus (the premium rate services regulator) to ensure that the service they launch is either excluded from, or compliant with, the mandatory premium rate services code of practice

The only tariff options that we believe are likely to be acceptable to the public would be local geographic call rates, 03 rates or Freephone, with commercial arrangements for the number such that providers will want to include calls to the number within inclusive packages. If the DH wants callers to pay higher rates for calls to the non-emergency healthcare service, it should simply consider continuing with its existing 0845 number. From its experience, BT believes that any charge such as 3ppm or 10ppc for a new service would be viewed negatively by citizens/consumers.

If Ofcom concludes that 111 should be used for this service, then BT believes that the number should always be free to caller so that customers cannot be charged for "ghost calls".

***Question 4: Do you have any comments on the proposed notification of modification to the Numbering Condition in Annex 8 of this document?***

BT has no comments.

## **ANNEX 1 - CHARGING AND IMPLEMENTATION ISSUES**

If a short number is chosen as opposed to a standard number, decisions need to be taken on how the number will be treated as call traffic is carried between providers. As such, the commercial terms should be fair so that all providers - fixed, VoIP, mobile - will want to provide access since there is no origination obligation other than where Significant Market Power (SMP) has been designated.

In BT's view therefore, the following points need to be noted or addressed:

- Calls to the non-emergency healthcare number would generally appear on callers' phone bills if a charge is made. If calls are free, then it is a matter for the originating provider to decide whether or not to show them.
- It would be for payphone operators to determine whether or how calls to the number from their public payphones were charged. If BT Payphones made the number free to dial, it would expect to be able to recover costs via the Payphones Access Charge (PAC).
- It should be noted that renters of private Payphones can charge broadly whatever they choose for calls to the number from their apparatus, including for calls that the DH might expect to be free. Additionally, it may not be possible for some models to be adjusted appropriately in any event.
- The non-emergency healthcare number must not subsequently set up new chargeable calls directly. That is, that there would not be the ability to convert a free or lower tariff call to the non-emergency healthcare number into a chargeable or higher tariff one.
- BT would expect calls to the number always to be directly dialled and that there is no requirement for calls to be connected via the 100 operator.
- We assume that there will be no requirement for calls to be connected via any DQ118 service providers.
- We assume that the non-emergency healthcare number would have to be able to receive calls using the Voice to Text Network (VTN).
- We assume that the non-emergency healthcare number would not have to be able to receive calls using any video services.
- We assume that there is no expectation that the non-emergency healthcare number should be able to receive SMS texts.

- We assume that appropriate records would need to be kept for the purposes of tracing nuisance calls, etc.
- We assume that once a decision has been made on tariffing, a decision will then be required on whether the terminating or originating operator is responsible for the transit interconnect TWIX charge.
- We assume that the non-emergency healthcare number will never be shown as CLI at Points of Connection when the service provider concerned makes outbound calls because the geographic originating point needs to be identified from CLI if the CLI-based interconnect billing is not to be compromised.
- We assume that the non-emergency healthcare number will not be subject to Carrier Pre-Selection (CPS).
- We assume that calls to the non-emergency healthcare number are not to be diallable from abroad.