

Regulating VoIP services

A summary of our consultation

Introduction

We (Ofcom) are the independent regulator of television, radio, telecommunications and wireless communications services in the UK.

This consultation document sets out our proposed approach to regulating voice services as a result of new technological developments. In particular, it looks at how we should regulate different types of Voice over Internet Protocol services (VoIP services) to make sure customers' interests are protected as far as possible. This booklet gives you a summary of how we are planning to regulate VoIP services. You'll find the full consultation document on our website at www.ofcom.org.uk.

Traditional phone services have existed for over 100 years. However, changes are taking place that could significantly affect the way services are provided in the future. In particular, voice services using the 'Voice over Internet Protocol' (VoIP) change the way voice services are delivered. These services normally use a broadband connection to provide voice calls using VoIP technology through a personal computer (PC) with a handset or headset, or a special adaptor connected to a traditional phone handset. VoIP services could benefit customers greatly by reducing the cost of delivering existing services, encouraging new services and increasing competition.

When technologies change, we would normally expect customers to benefit most when:

- new technology can be introduced quickly;
- regulations do not prevent new services from being offered; and
- there is fair competition between old and new technologies and services.

It is also important that as technology develops, we review measures to protect customers so that the measures continue to be fully effective.

In response to early developments in VoIP services and discussions with stakeholders (such as network operators and customers), we published a consultation document called 'New Voice Services: A consultation and interim guidance' on 6 September 2004 (the '2004 consultation'). That document set out our proposals to help make sure that we are meeting customers' interests. The proposals reflected both the limits of relevant European Union directives and the fact that VoIP services were still relatively new.

Since September 2004, there have been a number of further developments which mean we need to reassess our previous proposals to make sure we achieve our aims for VoIP services.

The full consultation document sets out our new approach to regulating VoIP services to encourage the continued future development of VoIP services and make sure we continue to meet customers' interests.

Our main proposals

The consultation will be relevant to all providers of VoIP services (whether or not they provide 'publicly available telephone services', known simply as PATS). It is not really aimed at operators using next-generation networks (NGNs), although some issues may be relevant. However, the consultation document discusses other conditions which providers must meet, mainly to protect customers' interests (including transferring phone numbers). It will also be of interest to customers of voice services and operators who provide public voice services using other technology.

This document discusses a number of proposals and makes statements on a number of areas of regulating voice services. Here are the main proposals.

- To end our interim forbearance policy for VoIP services which we introduced in the 2004 consultation. This policy allowed VoIP services to offer access to emergency services ('999 access') without having to meet other regulatory requirements associated with being classed as a publicly available telephony services (PATS) provider. We are ending it to make sure we meet our duties under the relevant European Union directives.
- To withdraw the Essential Requirements Guidelines (which set out how to maintain reliable networks), because they are not flexible enough to cope with the development of new VoIP services.
- To set guidelines on how we would investigate possible cases of VoIP providers not meeting the duties, to make sure that VoIP operators who provide 999 access better understand their duties and to increase the incentives for them offering 999 access.
- To end our policy on transferring phone numbers where the interim forbearance policy applies (as introduced in the 2004 consultation).
- To amend condition 18 of the general conditions under section 45 of the Communications Act 2003, to make it clear when customers can transfer their existing phone number (known as 'number portability').
- To develop a code setting out information that certain providers of voice services must offer their customers so that they are aware of what services, including VoIP, are not able to do.
- To make this code compulsory for all relevant communications providers.
- To enforce, monitor and review this policy so that providers follow this policy as the market and technology develop. This will mean we are fully aware of the situation in case regulations need to be suitably adapted (particularly to make sure 999 services are widely available).

The consultation also highlights other relevant proposals and consultations that we have recently carried out, or are doing now, that may be relevant to VoIP services.

Structure of the full consultation document

Here are the main areas of the full consultation document.

Section 2 (introduction and background) provides some background to VoIP services and our previous policy. In particular, it discusses:

- our 2004 consultation, the main aims we identified and the main proposals we made;
- a summary of responses to that consultation from over 50 people; and
- recent developments in VoIP services that have partly influenced our approach in this consultation.

Section 3 (regulatory approach to VoIP services) discusses the overall policy and regulatory framework that has influenced our proposals, including:

- a summary of our aims in developing our policy and regulation;
- a review of the main legal regulations;
- the challenges these regulations create for VoIP services;
- a summary of our proposals; and
- links to other projects such as regulating 'next-generation networks' that may be relevant to VoIP providers.

Sections 4 to 9 describe the measures we are proposing to deal with these challenges.

- Section 4 (application of general conditions) sets out proposals, guidance and links to other projects that affect the duties of VoIP providers.
- Section 5 (number portability) describes proposed changes to a number of rights and duties, including consultation on a proposed change to general condition 18 to amend the definition of 'number portability'.
- Section 6 (consumer protection – consultation on draft code) describes our detailed code outlining the information service providers must give to their customers.
- Section 7 (consumer protection – legal framework for putting the code into practice) describes a change to condition 14 of the general conditions to enforce the code.
- Section 8 (monitoring, enforcement and review) explains our approach to enforcing providers' duties and how we intend to consider future changes to policy and regulation.
- Section 9 (other issues) discusses other concerns that VoIP providers have raised, such as 'naked digital subscriber line' (a service that would mean customers would no longer need a traditional phone line if they only wanted broadband) and whether broadband networks should be able to stop VoIP traffic (particular types of information sent between computers).

Next steps

A measure in the consultation document which will come into force immediately is withdrawing the Essential Requirements Guidelines.

We are consulting on some other areas of the document and welcome comments on specific questions. You can find these questions at www.ofcom.org.uk. We need to receive your comments no later than 5pm on 10 May 2006. Please see the section on responding to this consultation later in this document for more information on how to respond. You can also get a copy of the consultation by phoning our Contact Centre on 020 7981 3040.

We expect to make a statement on these aspects in August 2006.

Introduction and background (section 2 of the full consultation document)

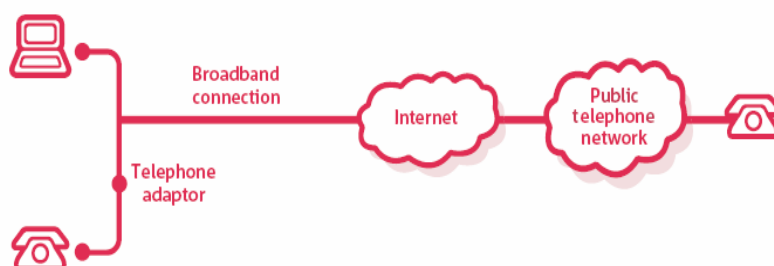
This section provides further details of:

- VoIP services;
- our previous policies in this area; and
- recent developments that have led us to review the policy we set out in the 2004 consultation.

Background

VoIP services normally use a broadband connection to provide voice services using VoIP technology from a personal computer (PC) and handset or headset, or a traditional phone handset using an adaptor (as shown in figure 1).

Figure 1: VoIP service



Over the last five years, VoIP services have begun to have an increasing effect on the UK communications market. In time, VoIP services could significantly benefit customers by reducing the cost of delivering existing services and allowing new services and increased competition. However, VoIP services are still relatively new, and it is not clear how these services and technology will develop in the future.

In response to early developments and discussions, we published the 2004 consultation document. In that document, we explained that some new voice

services (NVS) such as VoIP services, could 'look and feel' like traditional phone services but may not be able to deliver (in the same way or to the same standard) the features customers have come to expect, such as providing power to a phone so that it can continue to work if there is a power cut in the home. Although we recognised that these new services could bring opportunities (such as potential for competition and reduced costs), we pointed out that there were also challenges (such as potentially lower levels of protection for customers).

In dealing with these opportunities and challenges, we identified our main aims (which meet our legal duty to protect customers' interests) as:

- helping to create an environment in which new technologies can be developed and used successfully so that customers can benefit from a wider range of new services;
- making sure customers are properly informed and protected in relation to the products they are using; and
- reducing the extent to which regulation limits how effective competition is.

We also recognised that there was a clear and strong public interest in reliable, good-quality 999 access being available which gave the emergency services information on where the caller is calling from (this is known as 'caller location').

Based on these aims, in our 2004 consultation we took initiatives in several areas. These initiatives were as follows.

- Our position to allow providers of NVS to enter the market and offer 999 access without having to meet all the regulatory requirements associated with PATS (this is known as the 'interim forbearance policy'). We explained that we had asked for more information from the European Commission (EC) (which at the time was also consulting on how VoIP should be treated under the European regulatory framework) and on some legal issues which could affect how we apply our interim forbearance policy in the future. The interim forbearance policy allowed for VoIP services providers to enter the market and offer 999 access without having to meet other regulatory requirements associated with being classed as a publicly available telephony services (PATS) provider (as introduced in the 2004 consultation). As a result, we emphasised that this policy was temporary and could change.
- Our related policy on how the right to transfer phone numbers would be affected during the forbearance policy period. In particular, we said that a provider would not be expected to provide this right to a PATS provider who was not following all other PATS duties, to increase the incentives on providers to offer 999 services.
- Our proposal on whether to keep, reissue or withdraw existing guidelines on making sure the network is reliable (known as 'network integrity').
- Our proposals on the information NVS providers should give their customers and whether providing this information should be compulsory.

At the same time as the 2004 consultation, we issued a statement that made both standard geographic phone numbers (such as 0141 and 01252) and new numbers

beginning with 056 available for VoIP services. The availability of geographic numbers has allowed VoIP service providers to offer services without the need for users to have to use an unfamiliar number range.

Responses to the 2004 consultation

As well as asking for comments on our specific proposals, we also asked questions about a number of other questions, in particular about 999 access and the ability of NVS to be high quality and reliable. Annex 4 of the full consultation document gives a list of the questions.

We received over 50 responses to our proposals set out in the 2004 consultation. Below is a summary of the responses we received. Annex 5 of the full document gives a list of the non-confidential responses we received. Broadly, these responses supported our proposals, although there were some disagreements in certain areas. We have taken the responses into account when developing our revised proposals.

General comments (including our main aims)

Most people who responded broadly supported our attempt to explain the guidelines for providers of NVS. Many supported our overall approach to exchange new ideas, backed up by the development of a code of practice for providers of voice services. Also, most network operators preferred the interim policy while no European Commission guidance was available.

Most people who responded agreed that the interim forbearance policy (question 18) was a realistic policy due to the arguments set out in the 2004 consultation. However, five people said that their support for that policy depended on us receiving guidance or further advice from the European Commission.

In contrast, one PATS provider wanted to see the interim policy made permanent. Also, some people did not consider that not applying the relevant duties (known as 'forbearance') to be a reasonable method of regulation, with one of them saying that regulation would have a negative effect on customers' and market confidence.

Three people did not like the plan to give the right to transfer phone numbers to publicly available telephony service (PATS) providers only. An equipment supplier argued that all communications providers should be allowed to transfer phone numbers. In this context, one international network operator considered that it was inappropriate to use the right of customers to move their number to another provider's service as an incentive for a communications provider to meet other PATS duties.

For one of our policy aims on providing information on where the caller is (caller location), to support the work of the emergency services, most people who responded to questions 24 and 25 mainly agreed that it was practical for NVS to provide that information. However, many said that it was complicated to do this. A few said that they would like to see us and industry working groups taking a lead in developing a suitable solution. (In our response to this, we are a member of the Network Interoperability Consultative Committee (NICC) working group on how networks that use the Internet Protocol (the way in which computers and phones using VoIP services can send information between each other) can provide information on where the caller is.)

For questions 4 and 5 on other aims and policy questions we should be considering, the people who responded said that we should consider issues such as naked digital subscriber line, how networks are connected, and making sure that a consistent set of regulations applied across the European Union.

999 access

Most people agreed that not all voice services must offer 999 access, as long as customers were properly informed (question 12). There were exceptions to that general view, including some operators and customer groups. They considered that allowing voice services into the market which did not provide 999 access was an alarming development, and that competition by itself could not be relied on to make sure 999 access was widely available. However, there was some support for waiting for a common European position and for measures to make sure any NVS provided features and services similar to that of voice services provided by traditional 'public switched telephone networks' (PSTNs). A consumer body wanted to see existing services on PSTN (such as text relay services, used by people who are hard of hearing to communicate) also provided in new voice services.

Most people disagreed with our view in question 11, that most customers value 999 and would have at least one phone line at home with 999 access. A consumer body said that people on low incomes may not be able to afford separate phone lines. One PATS provider said that there would be many ways of contacting 999 (such as a mobile phone) rather than a single high-quality method over a fixed line.

However, in answering question 10 (that, in general, providers would prefer to offer a basic form of 999 access) a communications provider said that any provider with a corporate social responsibility (CSR) programme (which sets out their responsibilities to customers and society as a whole) would offer 999 access. But, a service providers' association and another person who responded disagreed with that view. Instead, they argued that it would be a purely commercial decision for providers to provide 999 access.

Maintaining a reliable service

Most people supported withdrawing the Essential Requirements Guidelines (question 20). In support, they said that those guidelines were specific to PSTN and were not relevant to new providers who provided services over networks that they did not control. A significant number of people said that general condition 3 provided a suitable test for making sure services were reliable and should be applied on a case-by-case basis. A PATS provider and equipment supplier expressed their concerns at the effect withdrawal may have on the telecoms aspects of 'critical national infrastructure'. 'Critical national infrastructure' is the essential aspects (such as electricity, gas and water supplies) needed at all times and which must be maintained in times of a crisis.

Unlike traditional voice services, VoIP services can be used from locations other than the home address. This is known as 'nomadic' use. In response to question 19 (about having different network integrity requirements for nomadic services compared with services at a fixed location), two equipment manufacturers argued that the difference between fixed and nomadic is becoming unclear and it is not appropriate to have different regulations for nomadic services. However, two PATS network operators said that the requirements for a mobile PATS service should also apply to nomadic NVS. A consumer body would like to see features such as 999

access, caller location and the ability for security agencies to monitor calls (known as 'lawful intercept') provided on both nomadic and fixed NVS.

Most people who responded to questions 21 and 22 believed that NVS service providers could offer more reliable services by negotiating agreements between themselves and network providers to provide guarantees on quality targets. An existing VoIP provider, among others, said that entering into these agreements would be a problem where an NVS service provider is offering a service across many networks. An existing PATS provider said that they would prefer to have control over any voice service offered over its network.

Line powering is a way of making sure that a phone service can continue to operate if there is a power cut on a customer's premises. Nobody who responded believed that line powering for NVS (question 23) was a practical option. However, they did say that line powering should still be needed for certain services such as those provided using existing technologies such as the Integrated Service Digital Network (ISDN) and public switched telephone network (PSTN) (a traditional phone network). An approvals body suggested battery backup as an option for NVS.

Keeping customers informed

For our proposals and questions relating to providing information to customers (questions 26, 27 and 28), most people who responded agreed with our views. Our views were that where a service is different from a traditional phone service (and so may not meet customers' expectations), customers should be told about these differences so that they can make informed decisions about what services they want to buy and how to use them. In particular, people agreed that customers needed to be fully aware of any service limitations, in particular about whether 999 access was provided.

Recent market and regulatory developments

At the time of publishing our 2004 consultation, we expected that the effect of our policy would be to allow new and original services to be offered. This has happened to some extent. However, since September 2004, a number of market and regulatory developments have meant that we may need to revise some areas of this policy. We set out these developments below.

Over the last 18 months, VoIP services have developed significantly both in terms of the range and number of providers, the services offered and the equipment that customers use. We describe some of the main developments below.

There is now an increasing number and range of proposals, including the following.

- PC-based services that allow calls from one personal computer (PC) to another (such as Skype PC-to-PC and Google Talk), which are often called PC-to-PC services.
- Services marketed as 'secondary-line' services that allow calls to and from traditional phone numbers (such as Freetalk, Wanadoo, BT Communicator, Tesco and Gossiptel). Some of these services include 999 services and some do not.
- Other services that are marketed as replacements for traditional PSTN-based call services. Normally, the PSTN line stays in place and the VoIP service is then used only for calls.

- Services targeted for mobile and nomadic use have also started to enter the market, including 'Voice over wireless' services.

These services are based on a range of computer software and equipment, including adaptors that support standard phones, adaptors with headsets or handsets, PC-based software, third-generation mobile phones (smartphones), Personal Digital Assistants (PDAs) and Wi-Fi devices. These services are being offered by a range of providers. In some cases, they are offered with internet access and in others as stand-alone services, such as a software service which includes a voice application that can be used with any type of internet access.

No single combination of equipment and features has emerged to lead the market, and we expect this range to remain for the foreseeable future as customers use services in different ways. Although VoIP service providers are making a wider range of services with new features available to customers, the ability to make and receive voice calls is still a main feature for all voice services.

These services are now becoming more popular. According to our research in 2005, around 50% of people know about VoIP services. One of our recent surveys suggested that a further three million customers were considering buying or using VoIP services in the next six months. By the end of 2007, some forecasts predict that there will be about three million PC-to-PC VoIP users and about one million who use VoIP services to call to and from PSTN numbers.

Next-generation networks (NGNs), including BT's 21st Century Network, are also becoming increasingly relevant to VoIP services. NGNs deliver many services over a single IP (Internet Protocol) network (Internet Protocol is the language computers connected to the internet use). They can also provide guarantees of the quality of service for voice services that are not available on broadband networks today. This means the development of VoIP services must be viewed alongside developments in NGNs. We are separately consulting on NGNs, including their effect on regulated voice services and how networks are connected.

There have also been a number of significant changes in regulations and policies that affect the approach in the UK.

- UK regulation is based on relevant European Union directives. In its paper of 14 June 2004, the European Commission set out the basis on which a service qualifies as PATS. At the time, we understood the European Commission's view was that providers should be allowed to choose whether or not they are providing PATS, even if they offer a service that includes all of the PATS features. Following internal legal review and discussions with European Commission services (DG Information Society), we have now decided that if a VoIP service offers all four PATS features (that is, a service available to the public for making and receiving calls through a phone number and providing 999 access), it automatically becomes a PATS service.
- At the same time as development with the European Commission, the European Regulators Group (ERG) set up a working group to consider VoIP policy and whether consistent regulation could be applied across the EU. We took an active part in the group. After the conclusion of the group's work, the ERG published a statement on their approach to VoIP policy. This showed there were many approaches to regulating VoIP services in each European Union country, based on individual national communications law.

- Over the last 12 months, regulation in other countries has also developed. For example, in the US following high-profile incidents in 2005, the Federal Communications Commission in the USA changed regulation so that VoIP services connected to the PSTN (to allow calls to or from traditional phone lines) must provide access to emergency services.

In response to one of the main recommendations in the 2004 consultation, a group of providers have developed a code of practice for VoIP providers, setting out the information that should be provided to people buying and using VoIP services. This code now needs to be formally put into practice.

The role of the full consultation and the statement

We believe that customers benefit when regulation is well-adapted to changing conditions. Due to the large number of developments in the market and in regulation over the last 16 months, we believe it is now appropriate to look again at the overall policy that affects VoIP services.

The full consultation and the statement describe an amended range of measures to reflect this new situation. We aim to provide clearer information on a wide range of issues that affect customers and operators developing VoIP services.

We believe that these measures, combined with other initiatives described in this document, will provide a strong platform for developing VoIP services while protecting customers and encouraging providers to make sure 999 services are widely available.

This consultation will be relevant mainly to providers of VoIP services to whom certain duties and rights could apply. It is not really aimed at operators using next-generation networks (NGNs), although some issues may be relevant – in particular, this consultation does not specifically deal with the use of VoIP in core networks (the networks used within networks). The consultation may also interest other people who are interested in VoIP regulation. Certain parts may be relevant to providers of other voice services, such as those based on PSTN technology, and also to providers of networks which are used to provide VoIP services.

In the 2004 consultation, we used the term 'new voice services' (NVS) to describe the types of service being considered as part of the consultation. This new consultation uses the term 'VoIP services', which includes those voice services described in the 2004 consultation such as services being provided in the UK such as 'voice over the public internet' and 'voice over broadband'.

Responding to this consultation

How to respond

If you would like to comment on the issues in this document, we need to receive your written comments by **5pm on 10 May 2006**.

We prefer to receive responses by e-mail (in Microsoft Word format) as this helps us to process the responses quickly and efficiently. We would also be grateful if you could fill in a response cover sheet (see annex 3 of the full consultation document), tell us whether or not you want us to keep your comments confidential. You should also download the cover sheet from the 'Consultations' section of our website. If you do not have access to the internet, please phone our Contact Centre on 020 7981 3040, who will post a copy of the consultation to you.

Please send your response to robindhra.mangtani@ofcom.org.uk. Or, send it to the address below, marked with the title of the consultation.

Robindhra Mangtani
Competition Group
Ofcom
Riverside House
2A Southwark Bridge Road
London SE1 9HA
Fax: 020 7981 4103

We do not need a hard copy as well as an electronic version. Also, we do not normally let you know that we have received your comments.

It would be helpful if your response could include direct answers to the questions we ask in this document, which are listed together at annex 3 of the full consultation document. It would also help if you could explain the reasons for your views and how our proposals would affect you. If you do not have access to the internet, please phone our Contact Centre on 020 7981 3040, who will post a copy of the consultation to you.

More information

If you want to discuss the issues and questions in this consultation, or need advice on how to respond, please phone Robindhra Mangtani on 020 7981 3030.

Confidentiality

We believe it is important for everyone interested in an issue to see the comments people have sent us. This means we will usually publish all responses on our website (www.ofcom.org.uk) as long as the people responding have given us permission on their response cover sheet.

We will treat all comments as not confidential unless somebody you tells us that part or all of the response is confidential. If any parts of your response are confidential,

please send these to us separately so that we can publish non-confidential parts with your identity.

We may have to publish some information if this is necessary to carry out our legal duties. However, we will carefully consider the confidentiality of any information you provide.

If your response includes any information protected by copyright, we will assume that you license us to use that information to meet our legal duties. You can find more information on this on our website at www.ofcom.org.uk/about_ofcom/gov_accountability/disclaimer.

Next steps

Following the end of the consultation period, we plan to publish a statement around the end of summer 2006.

You can register to get automatic notices of when our documents are published at www.ofcom.org.uk/static/subscribe/select_list.htm.

Our consultation processes

We are keen to make responding to consultations easy, and have published some consultation principles (see annex 2 of the full consultation document) which we aim to follow, including on the length of consultations.

If you have any comments or suggestions on how we carry out our consultations, please call our consultation helpdesk on 020 7981 3003 or e-mail us at consult@ofcom.org.uk. We would particularly welcome your views on how we could more effectively ask for the views of people who are less likely to respond to formal consultation (such as small businesses and residential customers).

If you would like to discuss these issues, or our consultation processes more generally, you can contact Vicki Nash, Director for Scotland.

Vicki Nash
Ofcom Scotland
Sutherland House
149 St Vincent Street
Glasgow
G2 5NW
Phone: 0141 229 7401
Fax: 0141 229 7433
E-mail: vicki.nash@ofcom.org.uk