

## Cover sheet for response to an Ofcom consultation

### BASIC DETAILS

Consultation title: "Regulation of Voice-over-IP/VoIP Services".

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### CONFIDENTIALITY

What do you want Ofcom to keep confidential?

Nothing

\*

Name/contact details/  
job title

Whole response

Organisation

Part of the response

If there is no separate annex, which parts?

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

Yes

No

# Ofcom Consultation on 'Regulation of VOIP services'

Intellect Final Response dated 10th May 2006

## A - Intellect's Preliminary Comments

Intellect welcomes this opportunity to respond to the Ofcom consultation "Regulation of VoIP services". In considering the points raised by Ofcom and their own mandate to innovate, adopt and be a "Light touch " regulator, from their consultation document Intellect are assuming the following sections as being true.

1.3 Consumers benefit most when new technology can be adopted quickly, when regulatory rules do not prevent new services from being offered, and when competition between old and new services occurs on a level playing field.

2.38 Ofcom believes that consumers benefit when regulation is well adapted to changing market conditions.

3.3 Consumers benefit most when new technology can be adopted quickly, when regulatory rules do not prevent new services from being offered, and when competition between old and new services occurs on a level playing field.

3.4 Therefore, one key objective in regulating VoIP services is to avoid creating and/or removing barriers to the development of VoIP services. In particular, the regulatory framework should not prevent different business models to enter the market – for instance: services aimed at providing second line as well as primary line replacements; or alternatively, services bundled with access (line rental) as well as those offered as a standalone service of voice calls alone. In doing this, Ofcom seeks to ensure that regulation is technology neutral, in order that new technologies are able to be deployed as soon as competitive forces dictate that consumers will benefit.

## **B - An Intellect Position Statement**

Ofcom has a unique opportunity to address VoIP in a forward thinking and exceptional manner. The introduction of IP products will flourish through innovative new products and regulation. To adapt (and both words are relevant in this context) by reference to older technologies, such as PSTN, and using them as the benchmark, may be misguided. This may stifle a market where the consumer benefits could outweigh some or any short-term loss of certain services.

VoIP offers cheap national and international call connection charges in a relatively unregulated market driven market. More regulation does not necessarily lead to more flexibility and innovation.

To try and impose regulatory requirements may lead to off shoring of the VoIP services. This would be detrimental in Ofcom's ability to regulate their own national market.

Regulations are already covered in Civil Law with the Duty of Care and this in most cases covers the main concerns and issues raised by Ofcom.

Ofcom should focus on a Technology Neutral approach and also be aware of a recent statement from the ECC Commissioner Vivianne Reding (European Spectrum Management conference 28/3/2006) that the EU should adopt a Service Neutral approach.

To require a New Voice Service to become PATS is not necessarily in the interest of consumers as it may reduce competition, lead to off shoring, restrict the ability to regulate within the UK

VoIP has the capability to overcome many of the issues associated with consumers who may have a disability. White boards, text messaging and video conferencing can only enhance the consumers enjoyment of communication.

The General conditions and Code are well designed and intended for the PSTN and cellular markets. It may be as the market matures that NVS VoIP services may become PATS. Will traditional PSTN offer video conferencing, white boards and texting as part of a Code or General Condition? Both technologies have advantages and disadvantages, to assume they should be bound by the same codes may reduce innovation, as VoIP should not be seen as an IP clone of PSTN, but a potentially different method of individual communication. It is disappointing that Ofcom has felt it necessary to discontinue the interim forbearance policy which has made possible PECS VoIP services to deliver PATS lookalike services. This has allowed the VoIP market to flourish.

For Number portability, VoIP offers a degree of flexibility that falls outside the present parameters of the PSTN. Ofcom proposes to use the non geographic numbers 056 for VoIP services, yet VoIP providers offer a far greater range of possible number permutations, such as geographical numbers outside the exchange area [Skype] and international (USA) numbers [net2phone]. It would be possible for instance to port to or from a geographical number to a non geographical number. The Ofcom proposal of tying in the 999 emergency number, with the ability to port as a packaged deal does not appear to be in the interest of the consumer, nor would it help with emergency services as the end user could well be outside the traditional PSTN exchange area in any event.

It is agreed that public awareness of the capability of their services and a consumer information requirement is necessary to ensure that the end user has both

confidence and knowledge of the capacity of their system. Typical of the present information is shown below.

**“Can I call an emergency number (e.g. 112, 211, 999, 911)?**

The current version of software does not support calls to any emergency numbers or emergency services (e.g. 211, 911, 999 etc). To perform calls of this type please make sure to use a landline telephone or a cellular/mobile phone.”

The proliferation of the mobile market means that the majority of households have at least one mobile phone.

VoIP equipment can range from headsets, PDA's, VoIP specific phones or analogue phones [HNS] and as such non permanent labeling does not make standardisation possible, nor would, in the case of non specific VoIP phones, it be possible to identify VoIP equipment.

To put stickers on equipment may well reduce the standing of telecom equipment to the consumers and public.

Providing the NVS clearly states at point of signature (or on-line equivalent) and that the screen identifies the non emergency nature of the service, this should be enough.

NGN may make the concept of a static location obsolescent. Had mobile phones not had a visitors register and the end user was required to register at each new location before use, then it is probable that the mobile phone industry would have stagnated in the UK. Registering may become so cumbersome that the end user neglects to do it or becomes so burdensome it may not achieve the desired effect of providing good emergency information.

Naked DSL will come to the UK market. Ofcom could mandate that existing PSTN line providers inform the consumer that their emergency access may be reduced. This assumes that there is an existing PSTN line connected to the site. The use of Naked DSL will become more attractive as the cost differential becomes more apparent to consumers. A demand will grow and it would have to be accepted that the existing model will change. Naked DSL may come from WiMAX and other radio technologies or transport mechanisms, such as power line connection, and should not be restricted to a LLU model.

The advent of the Internet has blossomed with many Malware and Virus programs. Equally the industry has responded to these and will continue to look for loopholes and exploited programs and systems. Technology can be double edged and consumers are aware of this. Where the market sees a need to enhance and protect it rises to the occasion. This would be no different for VoIP services as for simple IP communications.

## **C - Questions and Answers to Ofcom's VOIP Consultation**

*Question 1: Given recent developments, do you agree that Ofcom's focus should be on the following three objectives in developing our policy for VoIP services, namely (in so far as is possible) (i) enabling innovation in a technological neutral way, (ii) ensuring consumers are well informed, and (iii) ensuring maximum availability of 999 services?*

Ofcom has a unique opportunity to address VoIP in a forward thinking and exceptional manner. The introduction of IP products will flourish through innovative products and regulation. To adapt older technologies, such as PSTN, as the benchmark, may be misguided. This may stifle a market where the consumer benefits could outweigh some or any short-term loss of certain services.

*Question 2: Do respondents agree with this approach for the interaction between network providers and PATS providers?*

In most cases it will be difficult to determine the use of data being transported throughout a network and would agree to the approach suggested.

*Question 3: Do you agree that the limitation of GC 3 obligation to providers of service at a 'fixed location' is not sustainable in the long term? What views do you have on how this may be addressed?*

NGN may make the concept of a static location obsolescent. Had mobile phones not had a visitors register and the end user was required to register at each new location before use, then it is probable that the mobile phone industry would have stagnated in the UK. Registering may become so cumbersome that the end user neglects to do it or becomes so burdensome it may not achieve the desired effect of providing good emergency information.

The answer may not be what the Network Operators can do for the Emergency Services, but what the emergency services can use as an alternative, that network operators could provide.

*Question 4: In light of the other measures proposed in this document, are there particular issues in relation to VoIP services that should be addressed in this review?*

VoIP has the capability to overcome many of the issues associated with consumers who may have a disability. White boards, text messaging and video conferencing can only enhance the consumers enjoyment of communication.

The General conditions and Code are well designed and intended for the PSTN and cellular markets. It may be as the market matures that NVS VoIP services may become PATS. Will traditional PSTN offer video conferencing, white boards and texting as part of a Code or General Condition? Both technologies have advantages and disadvantages, to assume they should be bound by the same codes may reduce innovation, as VoIP should not be seen as an IP clone of PSTN, but a potentially different method of individual communication.

Intellect has had brought to its attention that Operators or Service providers can block access to VoIP services through their network and/or technology offerings, e.g. blocking HDPSA data users from using VoIP. The Implications of this should be carefully monitored and to ensure it is not against the interests of the consumer.

*Question 5: Are there particular issues in relation to VoIP services that should be addressed in this review?*

Has there been a regulatory impact assessment carried on this, as this would be in contravention of the 2003 Comms Act if not?

*Question 6: Do you have any comments on Ofcom's proposed modification to the PATS definition in GC 18?*

To require a NVS to become PATS is not necessarily in the interest of consumer as it may reduce competition, lead to off shoring, restrict the ability to regulate within the UK.

Number portability, VoIP offers a degree of flexibility that falls outside the present parameters of the PSTN. Ofcom proposes to use the non-geographic numbers 056 for VoIP services, yet VoIP providers offer a far greater range of possible number permutations, such as geographical numbers outside the exchange area [Skype] and international (USA) numbers [net2phone]. It would be possible for instance to port to or from a geographical number to a non-geographical number.

The Ofcom proposal of tying in the 999 emergency number, with the ability to port as a packaged deal does not appear to be in the interest of the consumer, nor would it help with emergency services as the end user could well be outside the traditional PSTN exchange area in any event.

*Question 7: Do you agree with the proposed application of the code?*

**Services/equipment;** VoIP equipment can range from headsets, PDA's, VoIP specific phones or analogue phones [HNS] and as such non permanent labeling does not make standardisation possible, nor would, in the case of non specific VoIP phones, it be possible to identify VoIP equipment.

To put stickers on equipment may well reduce the standing of telecom equipment to the consumers and public.

Providing the NVS clearly states at point of signature (or on-line equivalent) and that the screen identifies the non-emergency nature of the service, this should be enough.

**Timing;** There is a need to look after the consumers and any potential issues during the transition period.

*Question 8: Do you agree with the proposed approach for informing consumers that services may cease to function if the broadband connection fails or there is a power cut or failure?*

*Question 9: Do you agree with the proposed approach for informing customers where access to emergency calls is not available?*

*Question 10: Do you agree with the proposed approach for informing consumers that access to emergency calls may cease to function if the Data Network fails or there is a power cut/ failure?*

It is agreed that public awareness of the capability of their services and a consumer information requirement is necessary to ensure that the end user has both confidence and knowledge of the capacity of their system. Typical of the present information is shown below.

**“Can I call an emergency number (e.g. 112, 211, 999, 911)?**

**The current version of software does not support calls to any emergency numbers or emergency services (e.g. 211, 911, 999 etc). To perform calls of this type please make sure to use a landline telephone or a cellular/mobile phone.”**

DECT and Cellular telephones do not carry battery failure or signal attenuation warnings.

Providing the NVS clearly states at point of signature (or on-line equivalent) and that the screen identifies the non-emergency nature of the service, this should be enough.

*Question 11: Should the code be extended to point of signature acknowledgement in respect of reliability of access to emergency calls?*

In most cases this is what actually happens, however it would not work for peer to peer communications, but as this does not involve “telephone numbers” it cannot even be considered.

*Question 12: Do you agree with the proposed approach to location information providers where the service does provide access to emergency calls? In particular, do you believe that subscribers should be required to register their main location prior to activation of the service?*

NGN may make the concept of a static location obsolescent. Had mobile phones not had a visitors register and the end user was required to register at each new location before use, then it is probable that the mobile phone industry would have stagnated in the UK. Registering may become so cumbersome that the end user neglects to do it or becomes so burdensome it may not achieve the desired effect of providing good emergency information.

*Question 13: Do you agree with the proposed approach to informing consumers where services do not provide emergency location information?*

It is certainly possible to do this, but it would not guarantee that the consumer has read or understood the information.

*Question 14: Do you agree with the proposed approach to informing customers where services do not provide number portability?*

Offering number portability is greatly valued by the consumer. The cost of changing numbers to industry is well documented and should be avoided where possible. Any withholding of number porting would do a disservice to the end users.

*Question 15: Do you agree with the proposed approach to informing consumers about the types of facilities that might not be available, but which they have come to expect from a telephone service?*

The code has grown out of the PSTN as the only mode of communication, this is now moving forward, but Ofcom may still be anchored to old concepts.

The General conditions and Code are well designed and intended for the PSTN and cellular markets. It may be as the market matures that NVS VoIP services may become PATS. Will traditional PSTN offer video conferencing, white boards and texting as part of a Code or General Condition? Both technologies have advantages and disadvantages, to assume they should be bound by the same codes may reduce innovation, as VoIP should not be seen as an IP clone of PSTN, but a potentially different method of individual communication.

VoIP has the capability to overcome many of the issues associated with consumers who may have a disability. White boards, text messaging and video conferencing can only enhance the consumers enjoyment of communication.

*Question 16: Do you agree with Ofcom's view that all aspects of the code of practice should be mandatory?*

The code has grown out of the PSTN as the only mode of communication, this is now moving forward, but Ofcom may still be anchored to old concepts.

The General conditions and Code are well designed and intended for the PSTN and cellular markets

Will traditional PSTN offer video conferencing, white boards and texting as part of a Code or General Condition? Both technologies have advantages and disadvantages, to assume they should be bound by the same codes may reduce innovation, as VoIP should not be seen as an IP clone of PSTN, but a potentially different method of individual communication.

Where individual operators provide more services, then they will take advantage of this and try and claim a bigger market share.

It may be that consumers with a PSTN line and VoIP do not wish all the possible services available, but permutations of both.

*Question 17: Do you consider that the overall programme of activities is appropriate?*

It is always appropriate for the regulator to monitor and advise on consumer behaviour and approach to new communications technologies.

*Question 18: In light of Ofcom's Consumer Policy Review, are there other consumer education measures that Ofcom should consider?*

There is a need to look after the consumers and any potential issues during the transition period.

*Question 19: Do you have comments on this proposed enforcement approach?*

Providing it is well announced and that the conditions under which the operator were reviewed against are clear, then there would be no great issues.

*Question 20: Are there other areas of research activity that Ofcom should consider to ensure it understands market developments?*

Wireless technology and IP technology are progressing so rapidly that Ofcom need to have the broadest view possible. Intellect is well placed to help Ofcom find the direction of new market activities.

*Question 21: In relation to ensuring high availability of 999 access, are there other measures that Ofcom could consider?*

Ofcom should not rely on a service that may be time limited (PSTN). As mobile communications and convergence become the norm, Ofcom need to be able to suggest more than the current system of emergency call out. The car industry are looking at SOS on board, this may be one of many solutions available.

*Question 22: Do you agree with Ofcom's approach to naked DSL?*

Naked DSL will come to the UK market. Ofcom could mandate that existing PSTN line providers inform the consumer that their emergency access may be reduced. This assumes that there is an existing PSTN line connected to the site. The use of Naked DSL will become more attractive as the cost differential becomes more apparent to consumers. A demand will grow and it would have to be accepted that the existing model will change. Naked DSL may come from WiMAX and other radio technologies or transport mechanisms, such as power line connection, and should not be restricted to a LLU model.

*Question 23: Do you agree a cross industry meeting would be a useful approach to move this issue forward? What other steps could be taken to provide support for 056 numbers?*

A cross industry meeting would be useful. Tying VoIP into the PSTN numbering system is pigeon holing for no good reason. 056 does not represent an area and would be best used for free-call type use.

*Question 24: How can a VoIP call be traced for detection and prevention of malicious and nuisance calls? How could a suitable call screening service work in a VoIP network?*

In the same manner in which emails can be traced, each voice packet will have an originating address and MAC address associated with it. It may be difficult to trace the determined (professional) mal-practitioner, but if the need is there to make the issue easier to source, then the markets will make it happen.

*Question 25: Do you agree that SPIT could be a potential problem and what techniques can be used to minimise the impact of SPIT on consumers of VoIP services.*

The industry is tackling the SPAM issue and Ofcom has introduced solutions to rogue diallers etc. This shows that the markets, regulators and industry can work together to find resolutions.

*Question 26: Have there been any instances of a VoIP service being compromised or used to deliver malware or a DoS attack?*

The advent of the Internet has blossomed with many Malware and Virus programs. Equally the industry has responded to these and will continue to look for loopholes and exploited programs and systems. Technology can be double edged and consumers are aware of this. Where the market sees a need to enhance and protect it rises to the occasion. This would be no different for VoIP services as for simple IP communications.

*Question 27: Are there any other considerations that need to be taken into account when a provider does not have a UK entity?*

Within the EU there should be no borders to service, IP also does not acknowledge borders. Location is a matter of concern where Rights Management can become an issue.

*Question 28: Is it reasonable to ask VoIP service providers to participate in schemes designed for e-commerce?*

It is generally accepted that communication over wire is not secure. However extra secure encrypted communications can be bought. VoIP would have the same ability to secure the content without the need to participate in an e-commerce scheme.

*Question 29: Do you have any other comments on the proposed approach to investigating the application of the GCs applicable to providers of PATS in the context of VoIP?*

For the last two years Ofcom has been happy to encourage the introduction of services by allowing VoIP providers which did not fully satisfy the criteria to gain some of the benefits of PATS status (the interim forbearance policy). It has now been decided that if a service satisfies the criteria it is PATS and if it does not then it is not. The main difficulty has been that Ofcom has been keen to encourage VoIP providers to offer access to the emergency services as best they can, but because this is a part of the definition of PATS it has been reluctant to cause VoIP providers to not provide access to emergency services in order to avoid having to comply with all the obligations of a PATS provider. It is worth noting that any access to the emergency services will now satisfy this criterion, though Ofcom states in the proposed Guidelines that the obligation in GC3 is normally to provide uninterrupted access.

*Question 30: Do you have any comments on Ofcom's views on the meaning of abovementioned terms and legal concepts?*

**ECN,ECS;** Ofcom should focus on a Technology Neutral approach and also be aware of a recent statement from the ECC Commissioner Vivianne Reding (European Spectrum Management conference 28/3/2006) that the EU should adopt a Service Neutral approach.

*Question 31: Are there any other steps that a VoIP service provider could consider in respect of the IP network layer and service application layers to ensure network integrity?*

The standards for multi-hop through different networks are not with us yet.

*Question 32: Are there any other steps that a VoIP service provider could consider in respect of parts of the underlying network that they do not control?*

Initially the best form of standard would be an SLA/Service Level Agreement.

*Question 33: What additional steps could a VoIP service provider take to support nomadic users with regard to maintaining network integrity?*

One of the great potential benefits of VoIP is the nomadic nature. Consumers will be aware, as in the case of mobile users, that network integrity will be dependent on location.

It may well be out of the control of the network should the user be on transport or using a hotspot.

*Question 34: Do respondents consider whether other options to ensure continuity in the case of a power outage are appropriate?*

The main failure in smoke alarms is the battery. To rely on a non-recharging source is dubious. To expect consumers to purchase a recharging source is equally suspect. The power failure may not be at the consumer end, in the case of Hotspots and WiMAX.

*Question 35: What other steps could be taken to provide reliable location to assist the emergency services in their work?*

*Question 36: What other steps could be taken to provide reliable location to assist the emergency services in their work in the case of nomadic users?*

The possibility that a locator beacon could be put on the market as an emergency device, specifically for the function of alerting the emergency services. There are a number of emerging technologies that could be used.

*Question 37: In addition to participating in the NICC working group on providing location in IP networks and the 112 expert group, what other steps should Ofcom take?*

Regulators are considering what balance to seek between the introduction of greater competition and new services and the preservation of some functionality expected of the traditional voice network, as well the enforceability of regulations in the age of the internet. At the same time, Ofcom is struggling to adapt the pre-existing "new" regulatory framework to the technologically even newer phenomenon of VoIP in a way that achieves this balance. Intellect urges Ofcom to consider manufacturers as well as Ofcom and operators in the tasks on solving the location and E112 problems In the NICC Working Groups

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