
# BT Response to ERG VoIP Consultation

6th November 2007

**BT Response to ERG VoIP Consultation Document**

BT is concerned that the ERG analysis focuses on consumers and does not deal with the special issues of corporate VoIP. BT's corporate VoIP products are highly sophisticated and interface with other technologies such as ISDN, PSTN, and IP overlays. They are bespoke products and engineered to work with host PSTN systems to a far greater extent than VoIP products for consumers and SMEs. For some of these products emergency call access is provided through the host PBX via PSTN and is not provided through the additional IP overlay. Further information is provided at Annex A. In many cases NRAs will already have codes of practice (dealing with emergency call access) for private networks.

BT notes that the ERG defines 4 types of VoIP service:

1. A service where E164 numbers are not provided and from which there is no access to or from the PSTN
2. A service with outgoing access to the PSTN only, and E164 numbers are not provided
3. A service with incoming access from the PSTN only, and E164 numbers are provided.
4. A service with incoming and outgoing PSTN access, and E164 numbers are provided.

BT also notes that the ERG makes no specific differentiation between Voice over Broadband and Voice over the Internet. In the ERG terms, VoB suppliers provide VoIP service with a broadband service over their own network. VoI providers offer VoIP only and the consumer has a broadband service from another supplier.

As indicated in para 2 above, BT believes that corporate voice networks should not be included in Type 2 or 4 services as a more flexible approach is needed for these.

Furthermore, there are many companies and organisations which provide a "click to call" button on their websites, software, and other applications. This is designed to link the user with one or more contact points to provide personal assistance with the application. The call set up could be classed as a Type 2 if the party being called is terminating their calls on the PSTN. Normally the end user does not enter a number but there are variations where the call is made from the third party back to the end user. We believe this type of service should not be included in Types 2, 3 or 4, and emergency access should not be mandated.

There is a further issue over the inclusion of VoIP facilities in multimedia play-stations. The analysis may need to consider the extent to which these look and feel like telephone service even if they allow outgoing calls.

**<u>Emergency Services</u>**

**ERG Conclusion 1**: All telephony service providers should be obliged to provide access to emergency services.

> BT agrees with this proposition, subject to major caveats on corporate VoIP and "click-to-dial" services, the clarification that it does not apply to Type 1 and 3 services, and a requirement that the cost, both financial and in system development, of this provision in a Member State should not act as a disincentive to innovation or significantly depress demand. The ERG should make it clear that this obligation does not mean that a provider of corporate VoIP services is obliged to implement this access on his VoIP platform. Such operators should be free to offer their customers emergency services in any appropriate way (e.g via the customer's PBX).

**ERG Conclusion 2**: The ability to provide access to the emergency services should be removed as a factor in the definition of PATS in the Universal Service Directive.

> This proposal would mean that products which meet three of the current PATS gates but not the 112 gate, would now become PATS. For BTs consumer and small business VoIP products this is not a significant issue. But if corporate VoIP products were deemed "publicly available" then they could become PATS and require substantial development work to ensure compliance with PATS conditions. At the moment they fail two of the gating criteria (emergency call access and public availability) but removal of one of these criteria could jeopardise their existence.
>
> BT supports this conclusion if Corporate VoIP and "Click to Call" products are excluded from any requirement to provide emergency access and Corporate VoIP products are not at risk of becoming PATS.
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> In the past, the obligation for number portability only applied to service providers offering emergency access. BT believes this link should be maintained.

**ERG Conclusion 3**: Information about the caller's location should be provided to the extent allowed by the technology.

> BT has concerns with any assumption that the location of a VoIP user can be accurately determined. Mechanisms in place in the UK today rely on registered installation data which may not be up to date due to the inherent mobility of a VoIP service or limitations in the way VoIP orders are processed. We would be particularly concerned about any specific type of location provision being mandated at this time, since standards are not yet sufficiently mature to enable location information to be delivered accurately or indeed at all in some cases.
>
> BT does not believe that requiring users to update their location data if they are away from their registered address is practical or even desirable, as has been shown by experience in the USA. In some cases it could increase problems for the PSAP – for example if users forget, or do not take the time,

to change their temporary (maybe even overseas) location back to their permanent location.

We note that automated routing and location provision will require:-

- Increased co-operation between PSAP and VSP, ISP and Access networks : this will be especially challenging if these entities are situated in different countries as is possible for nomadic VoIP devices
- New network entities to be developed/deployed by these parties : eg Location Information Servers and VoIP Positioning Centre
- New interfaces for all involved: probably using HTTP/HTTPS and XML protocols
- New requirements on all organisations (systems development)

The IETF is also expected to have made some recommendations on International Standards by December 07, with ETSI also due to report standards progress later in 2008. Development and deployment of new functionality using these standards is estimated to be at least 2 years away.

**ERG Conclusion 4**: Routing should be provided to the locally responsible PSAP to the extent allowed by the technology.

As above, the routing can only be as good as the location information and therefore requires cooperation between VoIP Service Providers, ISPs and Access Network providers, with the existing lack of developed standards making this unlikely to be reliably achievable in all situations in the near future. There is a further complication insofar as some European countries only offer local emergency response centres which do not have the ability to reroute calls to the responsible emergency centre.

**ERG Conclusion 5**: Telephony service providers should be obliged to provide the emergency service centre with the information on whether the call originates from a fixed or potentially a nomadic user.

In general this is a reasonable conclusion but it will require such providers to comply with existing methods to pass on this location information to the PSAPs/Emergency Service Centres. With most products it is not technically possible to prevent a customer using them nomadically even if they are supposedly “fixed” so the ERG should make it clear that the operator will not be liable if the information provided to the emergency centre proves to be incorrect.

**ERG Conclusion 6**: Telephony service providers should be obliged to clearly inform subscribers about limitations in the services (e.g. regarding localization and routing of emergency calls).

BT agrees with this proposition but would be extremely concerned about any changes to the current Ofcom rules on VoIP customer information as contained in their statement of March 27th 2007 on the Regulation of VoIP. There are already numerous requirements to give warnings to consumer and

small business customers about limitations to their VoIP service and it is a significant and costly exercise to amend them.

**ERG Conclusion 7**: The information should be provided in a comparable way in different MS, e.g. in the terms and conditions of contract, by means of a sticker on device or clearly visible information in bills.

See comments on Conclusion 6. Ofcom has already imposed detailed regulations in this area and BT would not support any changes impacting mass market products in the UK unless harmonisation resulted in a significant reduction in warning requirements and thus a simpler ordering and billing process.

For corporate VoIP products the detailed implementation of any high level notification/ warning requirement should be the subject of negotiation between service provider and corporate customer.

**ERG Conclusion 8**: Emergency calls should be setup with priority to the extent allowed by the technology.

BT agrees subject to the caveat that technical standards exist to do so and that the technology should be tried and tested, deployed, and available at reasonable cost.

**ERG Conclusion 9**: Emergency calls should be setup with the best quality available to both the originator and the recipient.

BT agrees subject to the caveat that the technology should be tried and tested, deployed, and available at reasonable cost.

## Numbering

**ERG Conclusion 10**: All providers of fixed telephony services should be authorised to permit nomadic use by their subscribers. Geographic numbers should be available for this purpose.

BT agrees with this conclusion.

**ERG Conclusion 11**: Numbering plans should be technologically neutral, based on the service descriptions and the same number ranges should be available within those service descriptions. This means that geographical numbers for traditional telephony services and geographical numbers for VoIP services should share the same number range, that is, come from a common “number pool”.

BT agrees with this conclusion.

**ERG Conclusion 12**: Nomadism is an essential feature of VoIP services which should not be restricted. Nomadism does not preclude member states from maintaining the geographical meaning of geographical numbers if wished; this can be

achieved by allocating such a number only to subscribers with a main location (address) in the corresponding geographical zone as defined in the national numbering plan.

BT agrees with this conclusion.

**Number Portability**

**ERG Conclusion 13**: Number portability is important from a user and competition point of view.

BT agrees with this conclusion.

**ERG Conclusion 14**: There should be an obligation to port numbers to any service provider which satisfies the conditions of use of the appropriate number ranges.

BT agrees with this conclusion. BT believes that rights to keep a number only extend to the type of number generally issued by the importing provider for providing the given service in that area. This would in particular preclude an obligation to import a geographic number into the "wrong" geographical area.

In the past, the obligation for number portability only applied to service providers offering emergency access. BT believes this link should be maintained.

**Consumer Rights / SP Obligations / ECS/PATS/PTN Definition**

**ERG Conclusion 15:** Subscribers should have rights in respect of contracts consistent with Art 20 USD.

BT tends to agree with this position if the offered VoIP service matches the PATS definition and where a contract is appropriate. As VoIP is still an emerging technology, for VoIP services that do not match the PATS definition, the flexibility of VoIP should not be limited by Art 20 USD.

**ERG Conclusion 16**: Subscribers should have rights to tariff transparency consistent with Art 21 USD.

At present the requirements in Art 21 USD apply to PATS services. The ERG appears to be proposing that they apply to all VoIP services regardless of whether they are PATS. This would be a very significant change in the regulatory framework which BT believes requires proper detailed consultation. However, for this particular Article we do not see significant issues for BT;s consumer and small business products if the product actually has a tariff and is charged for by BT. Corporate VoIP services should not be covered by this requirement.

**ERG Conclusion 17**: Subscribers with numbers should have the right of directory listing consistent with Art 23 USD.

> We believe the correct Article should be 25 and not 23. BT does not see any significant issues with this. However we believe Art 25 and its corresponding UK General Conditions GC19 and GC8 need a more substantial review in terms of their application to the new technology and applications of VoIP.

**ERG Conclusion 18**: Subscribers should have the right to port their numbers to or from any other such services.

> BT believes that rights to keep a number only extend to the type of number generally issued by the importing provider for providing the given service in that area. This would in particular preclude an obligation to import a geographic number into the "wrong" geographical area.

**ERG Conclusion 19**: Subscribers should have the right to call emergency services.

> See our previous comments. BT believes that for Type 2 and 4 products this right can be achieved by VoIP. For corporate products it is achieved in many instances via a PSTN gateway or other solutions that may or may not be part of the VoIP platform but are a satisfactory solution for the corporate customer and corporate VoIP provider. We do not see a need for subscribers to be able to make 112 calls from Click to Call applications.

**Task Force Recommendation 20**: In practice the "network integrity" obligation should be applied to telephony service providers for the parts of the network that they control. Where national law does not permit explicit misapplication, it can be achieved in practice, consistent with Art 24 USD, by means of guidance noting the limitations on the "reasonable steps" that are open to the service providers in practice.

> No BT comment.

**Task Force Recommendation 21**: In countries where the national definition of PATS is not completely in line with that in the USD, NRAs may need to consider introduction of a transitional authorisation category in order to ensure that the allocation of rights and obligations is objectively justifiable.

> No BT comment.

**Task Force Recommendation 22**: The removal of the access to emergency service requirement in the PATS definition to eliminate the circularity.

> BT agrees with this provided the exceptions are made for corporate products and Click to Call.

**Task Force Recommendation 23**: A new definition of ECS and PTN which takes into account the emerging NGN architecture and which clarify the regulatory role of those VoIP providers which operate just at the control/application layer and exploit other operators transport networks for speech transferring, after set up of the VoIP

session. The Task Force view is that the network operator is certainly providing an ECS even though the VoIP service provider also provides an ECS (in particular the VoIP SP provides a telephony service as defined in the present report) since it has the contract with the end user, collects payment for the service, negotiates network access to allow the service to be offered, manages directory database and the servers for call set-up signalling. The VoIP SP is therefore providing the service to the end user even if some aspects of it are sub-contracted to various agents.

No BT Comment

*NB Comment on timing of consultation:*

*BT notes that the very short consultation period (less than two weeks) may necessitate amendments or additions to this response at a later date.*

Annex A  Corporate Products

The ERG needs to differentiate between the residential and small business market and the large business/enterprise market.

For years corporations have had customized toll bypass voice networks that allowed enterprises to increase functionality and lower costs on voice communications amongst corporate sites and offices globally. Such private networks were overlay networks – i.e. they rode on top of existing PSTN services subscribed to by corporate customers. These private overlay voice networks would also typically allow outbound PSTN calling but would be used by corporations only for outbound international PSTN calls because this was a cost-effective use of such a service. It was not cost effective to make local PSTN calls using a corporate toll bypass voice network plan. Instead a PBX at a corporate site would route local calls over an office's existing PSTN connection. These corporate voice networks that allowed international toll bypass did not and still do not have emergency access capability built into the platforms because it was unnecessary. Emergency access calls were routed by a PBX at the corporate site over an existing PSTN line(s) to an emergency service responder.

Many of the corporate toll bypass voice network services are being converted to IP based toll bypass services. These services continue to be overlay services. Many of BT's overlay IP voice VPN services do not allow corporate customers offices to receive calls from the PSTN. Corporations therefore maintain their existing PSTN services which will be used by a corporate PBX to continue to route emergency calls to responders. Furthermore, BT stresses to its corporate customers the need to maintain a PSTN connection. In addition, with some corporate IP voice products, nomadic use of the service is not permitted, there is a registered location for a particular corporate extension and when an employee moves location there is a formal change process that is triggered.

Corporate service providers are also working with equipment manufacturers to develop standardized solutions that can be deployed globally, uniformly and seamlessly for each IP corporate voice service launched by service providers. For example, BT is inputting into Cisco's development of emergency access technology that would allow Cisco's call manager to identify the address of the LAN port into which an enterprise's employee has plugged in. The Cisco call manager would indicate, for example, that the user is plugged into a LAN port at the northeast corner of 10$^{th}$ Floor, 52 East Temple Street. While this technology is still in development and addresses only VOIP services accessed by wired means and not via wireless technologies, this is an example of how equipment manufacturers and enterprise service providers are working together to develop enterprise grade solutions for their products that can be launched efficiently instead of bolting on piecemeal and varied fixes onto corporate IP voice platforms globally to satisfy infinitely varying local regulations on emergency access.

Large corporate customers' employees are inherently mobile – they travel nationally and internationally. The cost would be prohibitive to comply with infinitely varying regulations from one country to the next. Would employees of a corporation visiting jurisdiction A which required that stickers be placed on all corporate users' equipment

also be required to have stickers on their equipment? What if the employees visited another jurisdiction B which required that all products have an interface allowing the corporate user to constantly update his or her location? Add on a third jurisdiction C's requirement for autolocation technology on handsets – would this mean the visiting employees would also have to have autolocation technology on their handsets. It would kill the viability of launching a global product because of the technical, administrative and cost hurdles. Not to mention that it would prevent a corporate user's experience of the product from having the same look and feel in every country.

In summary, there are a variety of ways in which enterprise service providers, corporate customers and equipment manufacturers are handling emergency access issues for enterprise grade IP voice services as providers and equipment manufacturers work towards permanent solutions. There is no data showing regulatory intervention is required in the enterprise space. Corporate customers have CIOs and CTOs that are experienced and are well able to understand the limitations of the technologies they are buying, understand the work-arounds proposed by service providers, and negotiate and protect the interests of their employee user communities. Finally there is more of a danger in the enterprise IP voice space that a multiplicity of differing regulations would kill global product deployments that deliver a seamless uniform experience for corporate customers. For these reasons, regulators should recognise the different regulatory requirements of the large corporate communications market as opposed to mass market products for smaller scale consumers.

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