

**ECTA Response to European Regulators Group Consultation**

**Draft Common Position on VoIP  
of the ERG High Level Policy Task Force on VoIP  
ERG (07) 56 Rev1**

**November 2007**

## Summary

ECTA is supportive of many of the proposals in the ERG consultation but wishes to highlight the following significant points which we hope may be reflected in the finalised version.

- The ERG should clearly identify short term practical solutions as well as longer term goals, to provide sufficient certainty to the industry for forward planning and investment.
- Emergency Access: Access to emergency services is an important social objective, but obligations on providers need to be targeted and minimised to avoid unnecessary expense whilst meeting the needs of customers. In particular:
  - It does not seem appropriate or necessary to require emergency access from corporate overlay services, carrier pre/selection or click to call services.
  - It may not be practicable to expect regulators to enforce obligations on providers of VoI to PSTN services based outside Europe.

We would suggest – as a solution – that a provider of telephony services should be able to be classified as a ‘primary voice-line provider’ on the basis of minimum quality standards and emergency service access. This would clearly identify these services to consumers and to those responsible for ensuring health and safety in businesses whilst allowing lower quality second line and overlay services to continue.

- Numbering: Number ranges should be designed to reflect customer expectations. Location is – we believe – less relevant than price and – increasingly quality. To this end, number ranges (such as geographic) should not be restricted on the basis of location, but rather indicate pricing. It should also be investigated whether quality is another characteristic that consumers may expect to be associated with the numbering system.
- Number portability: ECTA agrees that number portability should be available for any numbers which meet requirements for the relevant number range.
- Quality of service: with the increasing range of voice services, quality is rapidly becoming an additional differentiating characteristic. As mentioned above, consideration should be given as to whether it would be helpful to customers for the quality of a service to be signalled at the retail level. In addition investigation is needed at a wholesale (interconnect) level as to how to enable providers to offer services with end-to-end quality guarantees.
- Directory Enquiries: It is important that clear guidelines are set on voice (including VoIP) providers’ obligations to carry calls to directory enquiries and include numbers in directories. A commitment to carrying such calls could perhaps be associated with ‘primary-line’ provision whilst offering a consumer the option to be listed in a directory could perhaps apply more widely to any voice provider using a national number range.
- Definitions: Whilst longer term the PATS definition may need to be revised, it cannot be ignored in the meantime. We suggest however, that in parallel a new ‘primary-line’ identifier could be trialled voluntarily whilst provision could be made to ensure that consumers are properly informed under conditions relating to transparency and fair contracts.

We note that very little time was provided for consultation, and in view of the importance of this issue, we would urge the ERG to fully consider responses and if necessary, delay agreement of the final version until the following ERG Plenary rather than compromise with an outcome that has not received sufficient consideration.

Lastly and importantly, this exercise will only be of use if the ERG can demonstrate that it can be enforced within its member base. We would thus like to see within the final version a clear statement as to how its application will be monitored and within what timescale the ERG expects NRAs to have made any legally permissible changes to apply these guidelines.

## **1. Introduction**

### **1.1 Foreword**

ECTA welcomes the ERG's initiative to revisit the regulatory approach to VoIP with a view to furthering European harmonization, and we thank the ERG for organising a public consultation on the draft Common Position developed by the High Level Policy Task Force on VoIP.

ECTA is firmly of the opinion that common regulatory approach to VoIP is absolutely necessary, and we broadly agree with the proposals concerning numbering arrangements and number portability. However, we have reservations about other aspects, notably the fact that essentially all deployment of VoIP technology is proposed to be treated alike (and de-facto is proposed to become subject to the full set of consumer PATS obligations), without recognizing objective differences in supply and demand conditions, e.g. between the use of managed IP networks (including Next Generation Networks) and the public Internet, and between usage by consumers on the one hand and by professional users on the other hand.

### **1.2 Long term versus short term approach to the technology-services-regulation cycle**

When GSM and UMTS networks were rolled out, the hardware, operations support systems, services, handsets, etc. had been designed in compliance with standards incorporating, from day one, the regulatory requirements. This is a long run approach to regulation.

In the case of VoIP, the sequence of events was different: a technology emerged (the ability to carry voice calls over packet-switched networks), applications of this technology appeared, regulatory questions arose (relating to emergency calling, numbering, portability, quality of service, lawful interception, etc.), new classifications were introduced (PATS, ECS, VoB, Voice over Internet, criteria based on interconnection with the PSTN and use E.164 numbers, etc.), national regulatory authorities adopted different approaches, regulatory authorities changed their approach multiple times over the past few years, and now the regulatory classifications and regulatory obligations are called into question by market participants as well as by regulators. This is a short run approach to regulation, which has led to regulatory fragmentation and, most probably, under-supply.

Legislators and regulators face a choice between a short run and a long run approach. The short run approach takes technology and standards as a given, whereas the long run approach relies on proactive standardisation.

The Task Force appears to continue to rely on a short run approach to VoIP regulation, in stating: *"Information about the caller's location should be provided to the extent allowed by the technology"* and *"Emergency calls should be setup with the priority, quality and availability to the extent allowed by the technology."* (Section 3.8. paragraphs 4 and 8). ECTA does not disagree with these specific proposals, but a major question that ECTA members are asking the ERG as much as they are asking themselves is: shouldn't we, competitive operators and regulators, move on from short run regulation to long term regulation, especially in the light of the development Next Generation Networks and IP interconnection? Shouldn't we involve ourselves more in standards elaboration and in debating what type of regulation is objectively appropriate, rather than accepting that regulation applies *"to the extent allowed by the technology"*? From the point of view of the users as well as from the point of view of promoting competition on a level-playing field, real technology-neutral regulation implies agreed standards and interconnection and interoperability requirements which incorporate regulatory requirements ab initio.

ECTA accepts that switching to a long run approach for VoIP regulation is difficult in today's circumstances, and our comments hereafter take today's reality into account, but at the same time we urge the ERG to draw lessons from the fact that VoIP regulation has had to be re-thought

multiple times over the past few years, and might have to be re-thought again in a few years, and that there is a cost associated with undoing fragmentation.

We urge the ERG to work on a more forward-looking basis on the various implementations of VoIP technology (VoIP is a technology that can be utilised to provide a “Telephony Service”, as put forward by the Task Force, but it can also be materialised in hardware, embedded in operating systems, embedded in discrete software applications, embedded in web applications, etc.) and thus VoIP can, depending on the conditions of supply and demand, be both less and more than a “Telephony Service”.

### **1.3 Transitional compromises**

The long term perspective being set up, many of the compromises proposed by the Task Force between legacy regulatory requirements and technology limitations become acceptable, insofar as they are recognised as a transitional compromise, which the consultation document fails to properly acknowledge.

Once the notion of transitional compromise is accepted, a proper methodology and process should be employed to elaborate the transitional compromise and its practical implementation.

This methodology could run as follows.

1. All the dimensions of transition should be put on the table and considered in parallel:
  - ◆ Transition of telephony networks from TDM to VoIP.
  - ◆ Transition of handsets from dumb (keyboard, microphone, loudspeaker, lifting and hanging-up) to intelligent (idem plus CPU, screen, operating system, storage, etc.).
  - ◆ Transition of user knowledge and expectation (% of computer and network literacy in population).
2. All these parallel vectors should be considered with the following dimensions:
  - ◆ End-of-transition perspective: new level of service.
  - ◆ Interoperability during co-existence.
  - ◆ Cut-off: what is definitively left behind as part of the abandonment of the legacy technology?
3. Each dimension of each vector should then be studied from the point of view of each user class and of each provider class, with the participation of regulatory authorities and standardisation bodies on a co-operative basis. For example, large corporate users do not have the same service/application requirements as individual consumers, and are not in need of the same level of consumer protection.
4. If antagonistic positions emerge, the costs and benefits of each position to each user class and each provider class should be evaluated and openly compared, in order for transitional compromises to be achieved in a transparent manner.

In the light of the methodology we suggest in this section of our response, the proposals formulated by the Task Force appear to be jumping to conclusions without correctly setting out the goals of regulatory intervention and without having adopted a method for achieving agreed goals of regulatory intervention.

## **2. Access to Emergency Services**

The ERG Task Force recommendations on access to emergency services are listed below, followed by ECTA's specific comments:

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| 1. <i>All telephony service providers should be obliged to provide access to emergency services.</i> |
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As discussed in Sections 1.1 and 1.2 above, ECTA considers that whilst it is clearly desirable for consumers to have access to emergency services, the proposal to impose the provision of access to emergency services (and de-facto the full set of consumer PATS obligations) on essentially all implementations of VoIP technology (with the possibility of carving out non-interconnected VoIP) is not appropriate for all classes of supply and demand, it does not reflect customer demand in all classes, and we would add that it seems unrealistic for NRAs to be able to effectively enforce such a wide-ranging obligation.

The following are widespread supply and usage classes which support this point.

- ◆ Corporate networks for businesses and public administrations: For at least three decades, TDM-based corporate networks, implemented in various ways, have made it possible to organise “free seating”, i.e. employees could work from any location on the corporate network, and be reachable and make calls through their normal geographic telephone number at any such location. No regulator has ever highlighted that there were issues with emergency access when these services were TDM based, but since the development of VoIP, a perceived need for regulatory intervention has emerged, driven by considerations about consumers' locations and about potential scarcity in the numbering plans. Imposing an emergency access requirement on corporate VoIP is unnecessary and is a solution in search of a problem. Typically emergency access with CLI is available through a local connection, separate from the multi-site corporate network (and in a business environment for health and safety reasons the CTO would typically insist on emergency access being available), but it would be overly onerous and technically challenging for the provider of overlay services to be obliged to offer emergency access directly.
- ◆ Carrier pre-selection and selection: whilst often customers may make paid-for calls based on a PSTN-based or successor call pre-selection or selection service, the call provider is not necessarily obliged to directly provide access to emergency services. This can be the responsibility of the access and number provider.
- ◆ Click to call: Businesses, large and small, as well as public administrations, large and small, are increasingly deploying click to call applications on websites that could qualify as Service 2 in the ERG typology (noting that implementations also exist which enable calls to E.164 numbers). Consumer-oriented websites, social networks, etc. are increasingly enabling user-to-user (as opposed to user-to-business/administration) calling as well, including calls to E.164 numbers. Surely no citizen-consumer expects to have emergency access when using tax software that allows a user to click to call tax experts for a consultation; surely no employee expects to have emergency access when using a document collaboration application. Attempting to impose such emergency access, for which there is no demand, seems fraught with difficulty, as there will inevitably be large-scale extra-territorial supply of such software and embedded web applications. If the ERG or NRAs were to nevertheless pursue this approach, there is a real risk of creating expectations among EU citizens that emergency calling is available, whereas in fact it will often not be available or will be inadequate.

There is also an additional enforcement concern relating to Service 2 when provided from outside the EU. For example could a US-based provider be effectively challenged or blocked for offering a service to make calls from the Internet to the PSTN?

There is no very straightforward and consistent ‘mandatory’ solution to these issues. On this basis ECTA suggests that for purposes of customer clarity, voice service providers offering outgoing calls

with a number (or other unique identifier) could be classified as 'primary voice line ready' on the basis of minimum quality characteristics and access to emergency services.

This would not exclude provision of non-primary line ready services to businesses as overlays or to consumers as second lines, whilst explicitly identifying the limitations of such services.

Separate from these considerations, ECTA believes that, for those VoIP providers committed to providing access to the emergency services, it should be clarified that such an obligation does not imply the obligation to guarantee electricity continuity, in order not to create a technical barrier to the effective development of VoIP services and NGN (since NGA will also require local electricity supply).

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.*

ECTA agrees with this proposal. The calendar for adoption and implementation of the expected revision of Directive 2002/22/EC provides sufficient time for providers of services that combine incoming and outgoing calls through E.164 numbers to become compliant with an obligation to provide emergency calling resulting from a revised definition of PATS.

3. *Routing should be provided to the locally responsible PSAP to the extent allowed by the technology.*

ECTA agrees with this proposal in principle.

In addition, we wish to highlight that few Member States have centralised PSAPs today, and we believe that, in order to be able to offer appropriate emergency calling to nomadic users, taking into account geographic and linguistic reasons, centralised emergency response centres are likely to be needed in every Member State before this proposal could become more obligatory.

4. *Information about the caller's location should be provided to the extent allowed by the technology.*

ECTA agrees with this proposal, on a transitional compromise basis (see Section 1.3 above). ECTA encourages its own members, as well as the ERG and NRAs, to become more active in standardisation efforts to achieve forward-looking solutions to identification of caller location.

We do not believe that requiring users to update their location data if they are away from their registered address is practical or even desirable.

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

ECTA agrees with this proposal, on a transitional compromise basis (see Section 1.3 above).

6. *Telephony service providers should be obliged to clearly inform subscribers about any limitations in the services as compared to the traditional telephony service.*

ECTA agrees with this proposal, on a transitional compromise basis (see Section 1.3 above), on the understanding that this concerns only emergency calling, and not other obligations. Defining consumer protection obligations with reference to a particular legacy service/technology and applying it to all VoIP implementations is not an approach we support. The ERG and the industry should strive towards a new common understanding on the capabilities of services that substitute the traditional telephony service.

7. *The information should be provided in 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.*

ECTA agrees in principle with this proposal, on a transitional compromise basis (see Section 1.3 above). However, given that many ECTA members are pan-European or global operators, and several of them do not address the consumer market, but meet demand from multinational organisations, we strongly insist that expressing in a Common Position that “information must be provided in a comparable way” is in our view insufficiently ambitious, and may in practice amount to 27 slightly different, or even substantially different, sets of obligations being imposed, thereby in practice not contributing to genuine European harmonisation. What is needed is what we would term ‘pre-harmonisation’ before national authorities go on to interpreting this in a myriad of different ways.

8. *Emergency calls should be setup with the priority, quality and availability to the extent allowed by the technology.*

ECTA agrees with this proposal, on a transitional compromise basis (see Section 1.3 above).

Please also refer to our comments on quality of service in Section 5 below.

### **3. Numbering**

The ERG Task Force recommendations relating to numbering are listed below, followed by ECTA’s specific comments:

1. *All providers of fixed Telephony services should be authorised to permit nomadic use by their subscribers. Geographic numbers should be available for this purpose.*

ECTA agrees with this proposal, which is valid in a short run as well as in a long run perspective and is also in use today with corporate overlay services.

It is important in this context to examine what is important from a consumer perspective when dialling numbers and to match the service with the consumer expectation. Price rather than location (which in any event can be affected by existing technology such as call forwarding) seems to have been the most important factor to date. Other factors such as expectation of quality could also become increasingly relevant with the development of alternative ‘voice’ technologies however and should be investigated to see whether it is reasonable for this also to be differentiated on the basis of the numbering range used.

2. *Numbering plans should be technologically neutral, based on the service descriptions and the same number ranges should be available within those service description. 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”.*

ECTA agrees with this proposal, which is valid in a short run as well as in a long run perspective.

3. *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.*

ECTA notes that the Task Force proposes that out of area/out of country use of geographic numbers could be restricted “if wished”, which already indicates at this consultation stage that there will not be harmonisation of the extent to which geographic numbers can be utilised.

It is clear that demand, especially from business customers, exists for out of area use of geographic numbers, on a nomadic as well as on a permanent basis. If restrictions were deemed necessary in some Member States, these could be acceptable insofar as they are fully justified. ECTA accepts that scarcity of numbering resources in certain ranges/areas and user expectations about the location at which they intend to reach their correspondent (e.g. office vs home vs personal calls) could be factors in the short run, but we doubt that these would remain relevant considerations in the long run.

#### **4. Number Portability**

The ERG Task Force recommendations relating to number portability are listed below, followed by ECTA's specific comments:

1. <i>Number portability is important from a user and competition point of view.</i>
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ECTA wholeheartedly agrees that number portability is important, in a short run as well as in a long run perspective.

2. <i>There should be an obligation to port numbers to any service provider which satisfies the conditions of use of the appropriate number ranges.</i>
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ECTA agrees that there should be an obligation to port numbers to any service provider which satisfies the conditions of use of the appropriate number ranges (satisfying such conditions is not, however, a given).

Where certain (typically non-geographic) number ranges are associated by regulation or co/self-regulation with specific services/content, portability should be restricted to entities that are authorised to provide the type of service/content in question.

If out of area/out of country use of geographic numbers are restricted in certain Member States, as is suggested by the Task Force, then logically corresponding rules would have to preclude the import of a geographic number into the wrong geographic area. Even where "out of area" numbers are provided for use, the import obligation should be restricted, so that legacy PSTN providers do not become obliged to import numbers with codes not proper to the switch in question. Equally if a differentiation in number ranges is made on the basis of call quality (a point we have suggested should be investigated), that would also feed through into number portability provisions.

In addition to the above, ECTA would also suggest consideration is given to the possibility of utilising protocols such as ENUM linked with the provision of centralised databases in order to determine where to route the call, addressed to the user defined by a number.

#### **5. Quality of Service**

The ERG Task Force document only addresses Quality of Service (QoS) and standardisation in the context of calls to emergency services. However, with the proliferation of different types of voice services – quality – and not just price – may become a key differentiating factor for consumers and businesses. This raises issues about consumer awareness at the retail level – including whether services of a given quality should be differentiated through 'primary-line' branding and/or association with particular number ranges.

In addition, at wholesale level, some ECTA members are concerned that the introduction of VoIP technology on managed IP networks, including Next Generation Networks (not to mention the public Internet) raises issues relating to how providers may ensure end-to-end service quality (end-



to-end quality is the only quality level that the user experiences), because limited attention has been accorded to wholesale NGN interconnection and interoperability until now.

Building QoS into VoIP, especially in terms of end-to-end interoperability, is a major task ahead for operators as well as for regulators. The ERG should clearly point this out, and regulators should jointly ensure that the migration from TDM to VoIP, including NGN, will prevent the following risks from materialising:

- ◆ Lowest common denominator end-to-end QoS, whereby the QoS experienced by the user is, at best, an average of un-guaranteed QoS of the interconnected networks (i.e. it would not be possible to provide consistent QoS), or at worst, the QoS experienced by the user reflects the weakest link in a chain of network elements, because no guaranteed or only a low QoS is provided to interconnecting parties.
- ◆ Deliberate degradation of the end-to-end user experience, where dominant operators would seek to distort competition by offering preferential QoS to themselves (internal interconnection) as opposed to (to and between) third parties (external interconnection).

Failure to take into account QoS and interoperability now, including in standardisation and regulatory processes, could lead to reduction of competitive intensity and/or declining customer satisfaction, which could open the door to calls for political intervention, which may in turn trigger costly obligations on operators to re-engineer their networks and systems.

Such issues should be considered in the context of ERG's important work on IP interconnection.

Finally, as regards QoS consideration should be made not only for the carriage of voice/data communications but should also be extended to signalling services (this issue may be resolved by providing a sort of NAP opened to all service providers where the latter exchange their signalling).

## **6. Access to Directory Enquiry Services**

Directory Enquiry Services are qualified by the EC Directives as a component of Universal Service because directories are "essential" for using telephony services. Therefore, all providers of PATS assigning telephone numbers are required to give their subscribers the possibility to be included in a directory and must provide access to directory services. However, this is often not the case for non-PATS VoIP service providers.

Frost & Sullivan<sup>1</sup> notes that "The development of the European VoIP market and the current nature of regulation raises new threats for the Directory Assistance (DA) market, specifically with regard to:

- ◆ Reduced quality of information;
- ◆ Reduced availability of subscriber information; and
- ◆ Reduced subscriber access to DA services."

Frost & Sullivan notes that only a regulatory approach increases the likelihood that subscribers can enter their details in a directory and have access to directory services.

The Task Force recommends that "*Subscribers with numbers should have the right of directory listing consistent with Art 25 USD*" irrespective of whether the service providers fulfil the definition of PATS.

This is because Task Force's view is that, irrespective of the underlying network, the VoIP service provider is providing the service to the end user, even if some aspects of it are sub-contracted to

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<sup>1</sup> Frost & Sullivan (2006) Regulatory Obligations for the Provision of Directory Listings Information on VoIP Operators - Impact on European Directory Inquiry Markets.

various agents. We agree with the Task Force that the restriction to PATS made sense in a PSTN-only world, but is now outdated.

ECTA therefore agrees with the recommendation that also the subscribers of non-PATS VoIP electronic communications services with incoming call capabilities should have a right to be included in directories.

In addition, given the importance of directory services and taking account of practicalities and enforcement it should be ensured that:

(a) all VoIP electronic communications services marketed as 'primary-line ready' should also ensure access to directory services;

(b) VoIP electronic communications service providers should be obliged to explicitly ask their subscriber while concluding the contract about if and how the subscriber wants to appear in directories and provide access to this data to relevant directory enquiries providers.

## **7. Cross Border Issues**

ECTA shares the concerns raised by the Task Force regarding cross border issues and agrees with the interim conclusions proposed in the consultation document. Cross border provision is, however, an objective reality, and we believe that the review of the EC directives cannot ignore this reality.

## **8. Definitions**

ECTA accepts that there is a certain degree of circularity in the PATS definition, and that other definitions could usefully be re-examined, notably in order to remove this circularity and to clarify the role of VoIP technology implementations functioning at the control/application layer and using networks controlled by other operators, especially in an NGN environment. However, we do not believe that the ERG's mandate permits it to encourage NRAs to deviate from the stipulations of EC Directives (and NRAs' mandate does not permit them to deviate from national law).

The calendar for adoption and implementation of the expected revision of Directive 2002/22/EC provides sufficient time for providers of services that combine incoming and outgoing calls through E.164 numbers to become compliant with an obligation to provide emergency calling resulting from a revised definition of or removal of PATS.

In the meantime, it could be helpful, in parallel with seeking amendments to the Directives, to explore a voluntary system in which voice providers could identify themselves as 'primary-line' providers, whilst information and contractual requirements are used to ensure that consumers in particular are informed about any limitations to the service they receive.