

# CONSULTATION DOCUMENT

**Recommendation of the Eastern Caribbean Telecommunications Authority  
("ECTEL")  
To the National Telecommunications Regulatory Commission to consult on  
Policy Recommendations on the regulation of Voice over Internet  
Protocol (VoIP) IP Telephony Regulation Consultation Paper**

**Consultation Document  
/N0.**

**May 29, 2009**

1. The National Telecommunications Regulatory Commission is in receipt of a submission from ECTEL containing ECTEL's recommendation for a Policy on the regulation of Voice over Internet Protocol (VoIP) IP Telephony for its Member States.
2. A copy of the draft Policy document on VoIP is attached to this Consultative Document.
3. The initial comments period will run from June 2<sup>nd</sup> - 23<sup>rd</sup> 2009.
4. The Comment on Comments period will run from June 26<sup>th</sup> - July 10<sup>th</sup> 2009.
5. Following the Reply Comments period, ECTEL's Directorate will revise and submit the draft Policy document to the ECTEL Council of Ministers for its recommendation for adoption in the ECTEL Member States.
6. All responses to this Consultative Document should be written and sent by post, fax or e-mail to: -  
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## **Disclaimer**

***This consultative document does not constitute legal, commercial or technical advice.  
The consultation is without prejudice to the legal position of ECTEL's duties to***

*provide advice and recommendations to the Ministers with responsibility for telecommunications and the National Telecommunications Regulatory Commissions.*

### **Suggested Guidelines for Responses to Consultations**

In order to promote faster processing of views expressed and to reduce administrative lags in ECTEL's public consultation processes, ECTEL hereby recommends that parties desirous of making contributions to the attached consultation follow the procedures outlined below. ECTEL would therefore be grateful if commenting parties could please observe these guidelines where possible.

- 1) Responses to consultations should be clearly labeled as a response to the particular ECTEL consultation and correctly referenced by title.
- 2) Documents should contain; the Name of Party/Licensee/NTRC commenting, address and telephone, fax number and email contacts of commentary author or corporate officer(s) responsible for document. This information will enable ECTEL to clarify any comments where necessary, or to facilitate follow-up dialog by ECTEL where required.
- 3) For each specific recommendation contained in the consultation document, commenting parties should indicate clearly via a **"Yes"** or **"No"** response, whether they concur or disagree with ECTEL's recommendations, and provide explanations/reasons for each response.
- 4) Where parties have no view or interest in expressing a view on a specific recommendation, parties should indicate **"no comment"** and number appropriately.
- 5) Responses/comments to specific recommendations should be double spaced and numbered in sequence with the recommendation. Where comments are extensive, paragraphs should be numbered. Pages should be numbered.
- 6) Commenting parties should avoid making comments in the form of tracked changes to consultation documents.
- 7) Where possible, comment documents should be submitted in PDF format.
- 8) Where possible, parties should make explicit reference to academic articles, legislative provisions in other jurisdictions, or other sources relied on, and should provide copies of these together with comments. Accurate citations of resources relied on will suffice if copies cannot be provided.
- 9) Where parties are commenting on specific provisions of legal language, alternative language should be proposed where possible. Such language should be appropriately highlighted and double spaced. Parties should avoid proposing alternative language in tracked changes to the consultation document.

ECTEL is grateful to those parties adopting the recommended guidelines for submitting comments.

## **EASTERN CARIBBEAN TELECOMMUNICATIONS AUTHORITY (ECTEL)**

# **POLICY RECOMMENDATIONS ON VOICE OVER INTERNET PROTOCOL (VoIP) REGULATORY ISSUES**

## **DISCUSSION PAPER**

**May 2009**

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## **List of Abbreviations**

ALI	Automatic Location Information
CANTO	Caribbean Association of National Telecommunication Organizations
CLEC	Competitive Local Exchange Carrier
CRTC	Canadian Radio-television and Telecommunications Commission
COBAK	Central Office Bill and Keep
EU	European Union
FCC	Federal Communications Commission
ICT	Information and Communication Technology
ILEC	Incumbent Local Exchange Carriers
IP	Internet Protocol
ISDN	Integrated Services Digital Network
ISP	Internet Service Provider
ISVR	International Simple Voice Resale
OfCom	Office of Communications
OECS	Organization of Eastern Caribbean States
PATS	Publicly Available Telephony Service
PUC	Public Utilities Commission
PSTN	Public Switched Telephone Network
SPIT	Spam over Internet Technology
VoIP	Voice over Internet Protocol

# **VOICE OVER INTERNET PROTOCOL (VoIP) IN THE ECTEL STATES**

## **INTRODUCTION TO POLICY RECOMMENDATIONS**

Internet Protocol (IP) applications have permitted the convergence of services on the internet to include not only data, pictures, music and video but also voice communication, including voice services. VoIP is a major step in the convergence process and refers to the conveyance of voice, fax and related services partially or wholly over packet switched IP based networks and always on broadband connections (**The Policy Implications of Voice Over Internet Protocol, OECD Working Party on Telecommunication Information Services pg 7**).

A survey of fourteen (14) Caribbean markets in 2007 revealed the presence of an independent international VoIP provider such as Skype and Vonage and noted that local licensed operators or service providers such as ISP's and international call centers sometimes offered the services illegally (**VoIP Challenges for Caribbean operators, Regenie Fraser, CANTO**). Recently, incumbent providers within the region have commenced offering VoIP services to customers. Thus, Cable & Wireless, a historic incumbent now offers a Netspeak service that utilizes VoIP technology to make and receive calls. (<http://www.time4lime.com/content/6/section/4/category/82/338>).

However, in spite of the growing proliferation of VoIP services there is no regulatory framework that governs the provision of the service within ECTEL member states. In fact within the Caribbean, Barbados is the only country with a written policy on VoIP. The absence of any regulation has implications for consumers, who are not guaranteed a particular standard of service and who may be deprived of services that they have become accustomed to with the traditional telephone service, such as access to emergency services. Of increasing concern to ECTEL is the need to ensure that individual licensees are not exposed to unfair competition by unlicensed providers, illegally providing VoIP services. Further, recent controversies between the holders of ISVR licences and the historic incumbent, over the termination of calls from international providers that are not licensed within the region, also highlight the need for a regulatory framework.

The lack of a regulatory framework is in stark contrast to the plethora of regulations that govern the provision of traditional telephone services. Given the growing prominence of VoIP it is necessary that ECTEL formulate a policy on VoIP.

## **PURPOSE OF CONSULTATION**

The purpose of this document is to provide a basis for consultation on the adoption of a framework to regulate VoIP services. The document outlines pertinent regulatory issues, examines the approaches taken by other jurisdictions and suggests possible approaches that may be adopted by ECTEL. The regulatory issues raised by the emergence of VoIP service are outlined in **The Policy Implications of Voice Over Internet Protocol, Organization for Economic Cooperation and Development, Working Party on Telecommunication and Information Services Policies** and this paper draws from that document. Additionally, a number of the suggestions contained have been gleaned from existing policies in Canada, the United States, European Union, United Kingdom, Barbados, Cayman Islands and Singapore.

## **ACTION REQUIRED BY COMMENTATORS**

***Commentators are asked to indicate via “YES” or “NO” replies, whether they agree with each of ECTEL’s eighteen (18) recommendations listed in the following sections, and to provide reasons for their views on each recommendation.***

## **Chapter 1. SUMMARY OF MAJOR RECOMMENDATIONS**

- 1.1 The document proposes that ECTEL adopt a technologically neutral approach to VoIP regulation and that ECTEL should take a light handed regulatory approach to the issue of VoIP regulation, to the extent that this is possible, weighed against the need to protect consumers as well as the interests of licensees. In keeping with this approach, ECTEL will chose to forebear from applying rules created for PSTN to some VoIP providers or services, (discussed below).
- 1.2 Generally, ECTEL views VoIP providers as falling within two distinct categories. Where traditional PSTN providers are also providing VoIP services, ECTEL's view is that the deployment of VoIP represents merely the use of a new or different technology. In this regard, the provision of VoIP services represents a new means of delivering a service substantially the same or similar to traditional PSTN voice service, essentially because such providers supply a service that is difficult to distinguish from the traditional PSTN voice service. Therefore, providers who own, operate or maintain a traditional PSTN should be required to meet the same standards in the provision of VoIP as are imposed on them as PSTN providers. These operators may be subject to requirements of universal service, and must provide access to emergency numbers and directory enquiry services. In terms of numbering VoIP providers within the PSTN category will be facilitated under a numbering plan similar to that provided to PSTN operators. In short, ECTEL's view is that the VoIP services provided by such operators should be regulated in the same manner as the traditional PSTN voice service. These providers do not require a new licence or the creation of a new licensing regime. ECTEL takes the view that the bulk of obligations required to be imposed on VoIP providers who own, operate or maintain a network may be imposed through the use of existing licences. These providers shall not be required to obtain a new licence or to pay any additional licence fees in connection with the provision of VoIP services, and are required to take no additional action, subject to the requirements discussed and contemplated below.
- 1.3 In contrast, where VoIP providers do not own, operate or maintain a telecommunications network, and are dependant on an individual licensee/network operator for the elements necessary to provide the VoIP service, it is unlikely that such a provider will be able to provide that service to a standard comparable to that

- offered by traditional PSTN operators. Such providers are purely service providers. Their capacity to provide the service is wholly dependant on the reliability and availability of another licensee's network. Since they are not ultimately responsible for the quality and accessibility of the services they offer, it is unreasonable to impose similar obligations to those imposed on the network operator. Universal service and other requirements should therefore not be applied. Additionally, such a category of VoIP providers should have clear obligations to regularly and explicitly inform consumers about the limitations of the VoIP services they provide. Currently, ECTEL states do not have a framework to regulate this type of provider.
- 1.4 In ECTEL's view, this latter category of service providers and VoIP services need to be regulated urgently to: (1) protect the interests of consumers, (2) promote fair competition in the market, (3) compensate traditional PSTN or network operators fairly for the use of their network, and (4) ensure that all persons or entities providing telecommunications services to the public in ECTEL member states are properly licenced under the Act. As indicated above, two overriding considerations for ECTEL are that the approach to the regulation of VoIP must be a (i) technology neutral and (ii) light handed regulatory approach.
- 1.5 For such a class of licensees, a distinct licence is required. A major concern for ECTEL in the development of any new licence, is the need to create rules that are easy to understand for various parties and easy to apply for NTRCs. This principle is even more critical in the regulation of VoIP. This general approach is reflected in the attached draft VoIP/IP Telephony licence for category two (2) of VoIP providers. The licence document is modified from the standard service licence issued by ECTEL and borrows from provisions contained in similar licences from other jurisdictions.
- 1.6 This document discusses the considerations ECTEL has taken into account in arriving at this series of recommendations. The document also discusses some proposals for the potential migration of ISVR licensees to the VoIP/IP Telephony licence where existing ISVR licensees are desirous of providing the wider range of services permissible under the VoIP/IP Telephony licence.

### **List of Specific Recommendations**

1. ECTEL recommends that VoIP be regulated under the existing regulatory regime.
2. ECTEL recommends that VoIP providers be categorized into two broad categories, namely:
  - (1) facilities based providers who under the current system would be individual licensees entitled to own, maintain and operate a telecommunications network, and
  - (2) service based providers who lease network elements from locally licenced network operators/individual licensees, to resell services.
3. ECTEL recommends that VoIP specific obligations be imposed on individual licensees using existing licences.
4. ECTEL recommends that service based/class licence VoIP providers be regulated via means of a new, VoIP/IP Telephony class licence (a draft of which is attached to this document.)
5. ECTEL recommends that it should forebear from regulating peer to peer social networks and internet telephony services (i.e. these services should be unregulated.)
6. ECTEL recommends that VoIP providers should be provided with geographical numbers without discrimination.
7. ECTEL recommends that the allocation of numbers should be facilitated by the regulator as opposed to incumbent network operators.
8. Subject to ECTEL's ability to make appropriate recommendations into the future, ECTEL recommends that no obligations on number portability be imposed at this time on either category of VoIP provider.
9. ECTEL recommends that service based VoIP providers be treated as customers of incumbent PSTN operators required to negotiate commercial agreements to provide services.
10. ECTEL further recommends that agreements between service based VoIP providers be subject to regulatory review and approval by the NTRCs and ECTEL.
11. ECTEL recommends that no rules should be developed to regulate IP to IP calls in the short to medium term.

12. ECTEL recommends that the provision of access to emergency services be discretionary for service type VoIP providers in the short term.
13. ECTEL recommends that both categories of VoIP provider be required to provide clear information to customers about the limitations of VoIP services in the event of, for example, the failure of the broadband connection or power outages.
14. ECTEL recommends that no new or extra Quality of Service standards be imposed over and above existing standards already required of individual licensees and resellers in existing legislation in force in ECTEL states.
15. ECTEL recommends that facilities based/individual licensees should be required to provide directory enquiry services for subscribers of other licensees.
16. Providers should be fixed with a general obligation to work closely with law enforcement agencies where requested.
17. ECTEL does not recommend the adoption of any specific rules on security of VoIP services at this time.
18. ECTEL recommends that existing rules on privacy protection applicable to all existing licensees should be extended to VoIP providers.

## **Chapter 2. CATEGORIZATION AND CLASSIFICATION ISSUES**

### **Classifying and Authorizing VoIP Providers**

- 2.1 The necessary commencement point for the formulation of a VoIP policy is the classification of VoIP providers. If VoIP is regarded as a service wholly different from the traditional PSTN then a new policy framework must be created to deal with its regulation. However, if VoIP is viewed as technology that facilitates functions similar to the PSTN then the issue centers around how VoIP can be accommodated within the existing ECTEL regulatory framework.

### **VoIP as part of the traditional regulatory framework for PSTN**

- 2.2 The always-on broadband connections make it possible to make and receive calls to and from a PSTN. In this way VoIP is comparable to a traditional telephone service (*The Policy Implications of Voice Over Internet Protocol, OECD Working Party on Telecommunication Information Services Policies pg 7*). As such VoIP could be regarded as merely a new technology that facilitates voiced telephony and as such should be regarded as a substitute for PSTN. A strict technologically neutral approach would mean that insofar as VoIP provides a service similar to PSTN then VoIP providers could be subject to the same obligations in terms of licensing, numbering, interconnection arrangements and market definitions as traditional PSTN operators.

### **VoIP under a new regulatory framework**

- 2.3 Although VoIP is capable of providing a service similar to PSTN it differs from the traditional network. VoIP providers can easily provide new programs for smart end user devices and are therefore able to continually offer new services which PSTN operators would find difficult and expensive to provide or replicate. In terms of definition, it can be regarded as pure transmission technology and be categorized according to its distinct traits, which some could argue, separate it from existing fixed and mobile services. The regulatory approach in this instance would be to establish a separate and distinct, or potentially novel legal and regulatory regime for VoIP.

### **Approaches to Regulation and Classifying VoIP**

2.4 The Canadian Radio-television and Telecommunications Commission (CRTC) has adopted the technological neutral approach that attempts to fit VoIP within the existing regulatory framework. In considering the regulatory framework for voice communication services using IP the CRTC noted that one of the underlying principles of the regulatory framework was technological neutrality and consistent with this approach VoIP services should be subject to the existing regulatory framework subject to forbearance determinations. The CRTC considered that 'voice communication services using IP that utilize telephone numbers based on the North American Numbering Plan and provide universal access to and /or PSTN have functional characteristics that are the same as circuit switched voice telecommunication services.' (***Public Telecom Notice CRTC 2004-2, Regulatory Framework for voice communication services using Internet Protocol***) Thus to the extent that VoIP provides services that are the same as PSTN then it should be subject to the same regulatory framework. Thus, the Canadian policy only regulates VoIP services only when it is provided and used as local telephone.

2.5 The CRTC has defined four possible regulatory categories:-

- 2.5.1 **Category 1 VoIP services:** include peer to peer services and other social networking sites. This category is unregulated.
- 2.5.2 **Category 2 VoIP services:** VoIP services that operate over a broadband Internet connection obtained by the customer from a supplier of choice and that enable the customer to make and receive calls to or from the PSTN and, typically, as well as to and from other broadband connected users;
- 2.5.3 **Category 3 VoIP services:** IP services that provide the ability to make and receive voice calls to and from the PSTN, as well as to and from other connected users and that are supplied with an underlying connection, other than a retail Internet connection, to the service provider's network; and
- 2.5.4 **Category 4 VoIP services:** IP business services offered over network access facilities (LAN, WAN), either provided by the service provider or by another party, connected to the service provider's IP network and which do not utilize retail internet services for connection to the service provider's network. The Companies submitted that Category 4 VoIP services offer, at a minimum, functionality analogous to that of existing business telephony services provided over circuit-switched

networks and may offer additional functionality not available over circuit-switched networks. This category will also be unregulated.

- 2.6 The Singapore model divides providers into two categories; facilities based providers and service-based providers. IP telephony/VoIP providers that intend to operate any form of telecommunication network or systems outside of their own property boundaries to third parties must obtain a facilities based licence. However, IP telephony/VoIP providers that intend to lease telecommunication network elements from any facilities based operator in order to resell IP telephony services must apply for a service-based licence (Guidelines on Licensing and Regulatory Framework for IP telephony services, Clause 1.3, 1.4) The former (i.e. facilities based providers) are akin to PSTN operators and the obligations imposed are more burdensome than that of service based providers. Hence facilities based providers must provide access to emergency and directory services, comply with Quality of Service Standards for basic local call services etc. (Guidelines on Licensing and Regulatory Framework for IP Telephony Services in Singapore Clause 2.4)
- 2.7 Closer to ECTEL member states, the VoIP policy in Barbados, states an intention to adopt a technologically neutral, light handed regulatory approach with a focus on the regulation of services. (***Barbados Voice Over Internet Protocol Policy Clause 2.2, 2.3, 3.2***). It creates four categories of VoIP providers. Class 1 is primary line VoIP services and is viewed as appropriate for utilization as a customer's primary line. Providers within this category may be fixed with universal service obligations; must adhere to quality of service standards, provide access to emergency call services as well as directory inquiry services. Providers within this class are entitled to interconnect with Barbados PSTN and have a right to Barbados PSTN numbering.
- 2.8 However, unlike the CRTC, Barbados also regulates VoIP providers that are not on the same level as PSTN operators. Class 2 operators are Secondary Line Providers that are unable to deliver the customer end of the transport and do not have any to any dialing. These providers are not subject to universal service obligations, do not have to provide directory enquiry services and must simply inform customers that there is no access to emergency services. Class 3 operators provide internet telephony VoIP services and are considered as providing an information service and the final category; peer to peer operators are

completely unregulated. (***Barbados Voice Over Internet Protocol Policy Clause 4.3***)

- 2.9 Japan, Korea and Germany have opted to establish new regulatory frameworks for the regulation of VoIP and the approach is based on the perception of VoIP as possessing distinct characteristics from traditional PSTN voice and therefore not a substitute for it.

### **Commentary**

- 2.10 In terms of the regulatory approach, the following considerations guided ECTEL's deliberations:
- (i) the need to take a light-handed regulatory approach;
  - (ii) the need to be technology neutral;
  - (iii) the need to create a regime that was straightforward and easy to understand by stakeholders;
  - (iv) the need to develop rules that are in keeping with the existing regulatory regime, if possible, and
  - (v) the urgency of the need for regulation.
- 2.11 Taking the above into account, ECTEL's view is that the most appropriate approach to VoIP is that the service is merely a new technology that facilitates voiced telephony and as such should be regarded as a substitute for PSTN. As the service appears to a consumer to be indistinguishable from an ordinary telephony service, it should be treated as such.. This approach also accords with regional views and developments on the issue. In Anguilla the PUC held that Netspeak, a VoIP service being offered by Cable and Wireless was similar to the public voice service already being delivered by Cable and Wireless (**PUC Telecom Decision 2006-101**).
- 2.12 This approach is preferred over that adopted in Japan and Germany noted above. In ECTEL's view, treating VoIP as a service requiring a distinct regulatory regime, becomes problematic when traditional PSTN operators replace their existing technology with VoIP. If there is a change in obligations, an overhaul of the numbering system may be required, or previously imposed social obligations would have to be reassessed, among other things. (***The Policy Implications of Voice Over Internet Protocol, OECD Working Party on Telecommunication Information Services Policies pg 9.***) Additionally, given the immediate need to treat with

VoIP issues the formulation of a cohesive, separate VoIP regulatory regime is not feasible within the short term.

- 2.13 With regard to the issue of the sub-classification of types of VoIP services, ECTEL's preference is for an administratively straightforward approach. When compared to the Canadian approach the Singapore model is less complex. In light of the fact that ECTEL is a regional regulator straightforward rules allow easier and faster adoption by the Commissions. ECTEL therefore proposes to adopt a straightforward two tier categorization of VoIP providers. As such, ECTEL recommends that peer-to-peer or social network sites be excluded from regulation and regulation be imposed solely on facilities based VoIP providers and service based VoIP providers, who essentially intend to provide a telephony service that is fundamentally similar to a traditional PSTN voice telephony service. Facilities based operators, own and maintain their networks and are therefore better able to deliver a better quality of service than operators who do not possess their own networks. Such providers are currently able to facilitate VoIP services under their existing individual licences and shall be required to meet VoIP specific obligations through those licences. Service based providers, who will essentially lease network elements from facilities based operators to resell, and will therefore depend on the infrastructure of others to provide their service, will be fixed with less onerous obligations. These providers require a new licence which should be a class licence, and a draft such licence is attached to this consultation document. The obligations of each category of licensee will be discussed further in this document.

### ***RECOMMENDATIONS ON THE REGULATION AND CLASSIFICATION OF VOIP***

- 1. ECTEL recommends that VoIP be regulated under the existing regulatory regime.**
- 2. ECTEL recommends that VoIP providers be categorized into two broad categories, namely:**
  - (i) facilities based providers who under the current system would be individual licensees entitled to own, maintain and operate a telecommunications network, and**
  - (ii) service based providers who lease network elements from locally licenced network operators/individual licensees, to resell services.**

- 3. ECTEL recommends that VoIP specific obligations be imposed on individual licensees using existing licences.**
- 4. ECTEL recommends that service based/class licence VoIP providers be regulated via means of a new, VoIP/IP Telephony class licence (a draft of which is attached to this document.)**
- 5. ECTEL recommends that it should forebear from regulating peer to peer social networks and internet telephony services (i.e. these services should be unregulated.)**

### **Numbering Policy**

- 2.14 The numbering policy of VoIP operators is another significant regulatory concern. VoIP subscribers require telephone numbers in order to receive calls from PSTN subscribers. The most significant issue is whether and how geographic local numbers are allocated to VoIP providers.
- 2.15 If one takes the view that VoIP is separate and distinct from the traditional PSTN it may be argued that they should have access to a range of dedicated non-geographic numbers instead of geographic numbers. The allocation of non geographic numbers for VoIP services relieves pressure on the geographic numbering resource and separate non-geographic numbers assist consumers in recognizing the differences in the characteristics offered on the separate number.
- 2.16 The allocation of non-geographic numbers however creates a potentially hostile environment for such operators. Consumers are generally unfamiliar with non-geographic numbers and fear high rates when dialing them. Additionally, facilitating arrangements between PSTN operators and service type VoIP providers could prove problematic unless there are strong market competition rules that force PSTN operators to contract with VoIP operators. Even where such agreements are successfully negotiated, one potential danger is that incumbents could prevent the routing of calls with non-geographic numbers to reduce or prevent competition from service type VoIP providers. The cumulative effect of these factors is to diminish the capacity of VoIP operators to function effectively in the market.

## **Approaches to Numbering**

- 2.17 One possible solution would be to assign geographic numbers to operators that meet some or all of the requirements of traditional PSTN networks. Thus, in Japan geographic numbers are only allocated to VoIP services having voice quality equivalent to existing telephones, direct access with end users, location correspondence and access to emergency calls. VoIP services which meet with a minimum voice quality are allocated a dedicated 050 number. In Singapore, facilities based operators are allocated the same numbers as local call operators whilst service based operators are assigned different numbers. In the UK, in 2004 geographic numbers were allocated to all publicly available new voice services with no discrimination. (***OfCom Statement 2004 Numbering Arrangements for New Voice Services***)

### **Commentary**

- 2.18 In keeping with ECTEL's earlier recommendation that VoIP be treated within the existing regulatory framework, the most appropriate approach on the issue of numbering is that VoIP operators must be provided with geographic numbers similar to those allocated to PSTN operators. Accordingly, the issue becomes how to allocate local numbers to VoIP operators. In order to promote transparency and fairness in the allocation process and to ensure a degree of predictability to the issue of numbering, ECTEL's view is that numbers should continue to be allocated through the existing process.

## ***RECOMMENDATIONS ON NUMBERING***

- 6. ECTEL recommends that VoIP providers should be provided with geographical numbers without discrimination.**
- 7. ECTEL recommends that the allocation of numbers should be facilitated by the regulator as opposed to incumbent network operators.**

### **Number Portability**

- 2.19 Once a VoIP provider is permitted to utilize geographic numbers, the provider is likely to inherit all the rights such as number

portability of traditional telephone operators. At present telecommunications providers within the ECTEL system are not yet mandated to offer number portability. Where appropriate, number portability may be required at some point in the future where ECTEL makes a determination that such a recommendation is desirable

***RECOMMENDATION ON NUMBER PORTABILITY***

- 8. Subject to ECTEL's ability to make appropriate recommendations into the future, ECTEL recommends that no obligations on number portability be imposed at this time on either category of VoIP provider.**

## Chapter 3 COMPETITION ISSUES

### Interconnection

- 3.1 In the short term the provision of VoIP services depends in part on successful interconnection arrangements with PSTN operators. Therefore, the interconnection arrangements between IP and PSTN operators need to be addressed.

#### Approaches to IP to PSTN interconnection

- 3.2 In general, countries have continued to utilize existing interconnection arrangements. Dominant operators can only refuse access to their network in certain defined circumstances and parties are free to negotiate the terms and conditions for interconnection. Refusals to interconnect will only be tolerated on specified grounds such as insufficient capacity, safety and security; technical matters that make the provision of access difficult (**Clause 17Cayman Islands ICT Licence**). Regulatory intervention is only required where there is a dispute between parties that cannot be resolved.
- 3.3 VoIP providers may enter into commercial arrangements with intermediary operators (including other VoIP providers with gateway networks, wireless carriers) to get interconnected with the incumbent PSTN operator. In such a circumstance it may be difficult for the incumbent to discern VoIP traffic from others particularly when VoIP providers have been allocated geographic numbers. This arrangement not only makes it possible for VoIP providers to avoid making interconnection arrangements but also makes it difficult for the PSTN operator to maintain any discriminating charges.
- 3.4 In the United States narrowband dial up internet service providers connected to the PSTN are regarded as customers rather than interconnection networks and pay a flat monthly charge plus per minute or per call charge for originating calls to PSTN operators as local end users. The Federal Communications Commission (FCC) proposed a Central Office Bill and Keep (COBAK) regime as a possibility for an inert carrier compensation regime. The creator of the COBAK regime noted that it would solve or ameliorate many of the significant problems that plague the existing interconnection

regime. It would reduce the terminating access monopoly problem, eliminate inefficiently structured interconnection charges and reduce the need for regulatory intervention (**Bill and Keep at the Central Office as the Efficient Interconnection Regime, Patrick De Graba**). To date the regime has not been implemented.

### **IP to PSTN calls**

- 3.5 VoIP providers without an access network do not pay call origination charges to the broadband access provider to which the call is connected when the call originates from an IP network. Thus, in this instance the issue to be considered is the appropriate compensation for the termination of the call on the PSTN network.
- 3.6 In several countries PSTN operators continue to levy termination charges, the amount of which would be equivalent to those levied for using their networks upon PSTN network operators. The ICT licence granted by the Cayman Islands states that interconnection charges shall be cost oriented and reciprocal.

### **IP to IP Calls**

- 3.7 The internet is not directly regulated and its borderless structure makes regulation difficult. In the long run all voice networks will be IP based. However, it is difficult to anticipate how the market will develop in terms of IP to IP interconnection. In Canada the CRTC considered that IP to IP interconnection be resolved as IP becomes more prevalent (**Clause 366 CRTC 2005-28**).

### **Commentary**

- 3.8 Ideally in the short term facilities based VoIP operators that possess their own networks should be permitted to negotiate interconnection arrangements on the same basis as PSTN operators. In this vein incumbent PSTN operators must interconnect with owners of other networks in order to allow for call termination. Additionally, the present method of utilizing cost oriented pricing should be maintained. The proposed facilities based VoIP operators would be able to negotiate interconnection agreements with public network operators already in the region.
- 3.9 Where VoIP operators do not possess their own networks they are precluded from benefiting from existing interconnection arrangements. Due to the limited definitions currently employed in

the revised Interconnection Regulations, interconnection within the ECTEL system can only be accomplished between public network operators and the definition of interconnection in the legislation implies a physical connection between two networks. Thus, operators that are purely service based cannot be regarded as interconnecting parties and should be treated as customers.

- 3.10 Accordingly, the US approach of treating narrow band dial up internet service providers as customers of network operators rather than as interconnecting networks, provides a potential solution to be adopted for service based VoIP operators in ECTEL member states. Such service based VoIP operators should be free to enter into individualized commercial negotiations with the dominant licensee, to secure all the necessary network elements they require to provide their services. These service based VoIP operators would pay a flat monthly charge plus per minute per call charge for originating calls to PSTN operators. Any agreements negotiated for such purposes would of course be subject to regulatory review and approval by the NTRCs and ECTEL.
- 3.11 Once IP to IP interconnection becomes more prevalent consideration should be given to how it should be managed. ECTEL does not believe it is necessary or desirable to develop any rules in this area for the moment.

## **RECOMMENDATIONS**

9. **ECTEL recommends that service based VoIP providers be treated as customers of incumbent PSTN operators required to negotiate commercial agreements to provide services.**
10. **ECTEL further recommends that agreements between service based VoIP providers be subject to regulatory review and approval by the NTRCs and ECTEL.**
11. **ECTEL recommends that no rules should be developed to regulate IP to IP calls in the short to medium term.**

## **Chapter 4 CONSUMER PROTECTION ISSUES**

### **Access to Emergency Numbers**

- 4.1 Universal service obligations contained in the regulatory framework established certain rights for end users and corresponding obligations on service providers. Therefore, one issue for regulators is whether the social obligations imposed on PSTN operators should be extended to all VoIP providers. Of particular concern is consumer access to emergency services as well as the availability of emergency location information.

#### **Approaches to providing access to emergency numbers**

- 4.2 Most countries attempt to protect consumers by imposing obligations on the provision of VoIP services. The CTC decided that Canadian carriers offering fixed (non nomadic VoIP) local VoIP service must provide access to either an enhanced 911 service or a basic 911 service. Enhanced 911 services automatically send the customer's location information to an emergency centre where an operator dispatches a response service. Basic 911 services connect callers to a central call center, which connects the call to an emergency response centre from which point the caller must supply his location in order for emergency services to be dispatched.
- 4.3 Local VoIP services that are offered on a nomadic basis or with a telephone number that is not native to the customer's area must implement an interim solution, which provides a level of service function comparable to the basic 911 service. The Canadian policy also mandates that VoIP service providers must not only notify customers about any limitations to their emergency services but also ensure that subscribers acknowledge awareness of the limitations. This process of customer notification must be ongoing during the time the service is provided.
- 4.4 In the United Kingdom OfCom considers the maximum availability of emergency services of paramount importance. It notes that the quality of emergency services cannot be guaranteed in all circumstances because the VoIP provider does not always control the provision of the service. Providers that do not fall within the

- definition of Publicly Available Telephone Service (PATS) are not required to offer emergency service access. However, such providers must provide to all customers accessible information regarding whether its service may cease to function if there is a power cut or failure or a failure of the broadband connection.
- 4.5 Where access to emergency services is not offered as part of the service then the service provider must provide the customer with clear and accessible information at the point of sale, in the terms and conditions of use and in any user guide that its service does not provide access to emergency calls. Service providers are also required to take reasonable steps to ensure that customers acknowledge in the form of a signature that they understand that the service does not provide access to emergency services. Additionally, the providers are on the written request of OfCom mandated to supply evidence that they have complied with the requirements to inform customers about the non-access to emergency services.
- 4.6 In terms of emergency location information the obligations vary according to the service provided. Thus where the service provider supplies access to emergency calls and the service is to be used principally at a single fixed location, the service provider must require customers to register the address of the place where the service is going to be utilized prior to activation. Where the service is to be accessed from several locations, the service provider should recommend that its customers register and update location information. (*OfCom Regulation of VoIP services pg 91*)
- 4.7 In the EU once a VoIP provider chooses to offer services that qualify them as a PATS then it must provide an emergency service. In Barbados, the obligation to provide access depends on the Class of the VoIP provider. Class1 providers must provide access to emergency numbers whilst Class 2 and 3 must indicate to customers if emergency numbers are not available. (*Barbados Voice Over Internet Protocol Policy Clause 14*)

### **Commentary**

- 4.8 It is unlikely that VoIP services will be relied upon as a pure substitute for a fixed line in ECTEL member states in the short to medium term. Given the need for a reliable broadband connection, and its related dependence on a basic utility like electricity services, ECTEL does not regard VoIP services as having the potential in the very short term to eclipse the traditional services

- provided through the PSTN. It is unlikely therefore that consumers in ECTEL member states will completely and exclusively rely on VoIP services for all telephony purposes, and this is likely to also be true in the event of an emergency.
- 4.9 However, the availability of access to emergency services is an important public policy objective in the licensing of any new telephony service, and the mere fact that VoIP services are unlikely to be solely relied upon by consumers should not immediately remove the need to provide access. Given the importance of the issue, ECTEL's concern is to place reasonable obligations on VoIP providers, but in particular on service based VoIP providers, to ensure that customers are provided with a maximum degree of information in order to take appropriate measures to ensure they can access emergency services when necessary.
- 4.10 The issue is what degree of regulation is appropriate in light of the nature of the services involved. For facilities based VoIP providers, the ownership and operation of a network enables a degree of control over the reliability of the service they provide. To the extent that the aim of regulation on this issue is to be technology neutral, the objective is to place facility based VoIP providers in the same position as a traditional PSTN operator, and therefore, to treat them in the same manner for regulatory purposes. For pure service based VoIP providers who are essentially reselling services, albeit with value added, it may cause hardship to impose strict obligations on access to emergency services, since the VoIP provider does not always control the provision of the service.
- 4.11 ECTEL's view is that a degree of flexibility is therefore required on this issue. Accordingly, ECTEL will not impose a strict obligation on service based VoIP providers at this time to provide access to emergency numbers and services as part of their basic services. Provision of such access shall be left to the commercial discretion of such providers. For example, providers who wish to provide access to the police or fire services shall be able to do so if they deem it commercially desirable to do so, while providers who do not wish to may chose not to offer such a service. However, providers will be clearly required by their licences to inform consumers that such access is not available, if not offered by them. For those providers who do offer such access, the draft licence mandates them to inform customers about the potential limitations of the service, such as the failure of the service in the event of the failure of the broadband connection or a power cut. The approach of OfCom is rather detailed in this regard and the

provisions suggested by that authority have been incorporated into the draft VoIP licence.

## **RECOMMENDATION**

12. **ECTEL recommends that the provision of access to emergency services be discretionary for service type VoIP providers in the short term.**
13. **ECTEL recommends that both categories of VoIP provider be required to provide clear information to customers about the limitations of VoIP services in the event of, for example, the failure of the broadband connection or power outages.**

### **Quality of Service Standards**

- 4.12 PSTN networks ostensibly offer clearer calls than VoIP because the channel is completely devoted to the single call that occupies it. Sending voice as data packets through the Internet means that a VoIP call is subject to congestion. Latency, packet loss and jitters can result in calls being dropped or momentary uncomfortable gaps in conversation. Thus it may be difficult to apply PSTN standards to VoIP.

### **Approaches to Quality of Service**

- 4.13 The Barbados policy simply allows for standards to be developed at a later stage when and if necessary. (**Barbados Voice Over Internet Protocol Policy Clause 8**). The policy in Singapore mandates that facilities based VoIP Providers comply with standards for basic local call services. Other providers are under no such obligation. (**Clause 5 Singapore Guidelines**)

### **Commentary**

- 4.14 In keeping with the policy of technological neutrality VoIP operators in the same category as PSTN operators should adhere to the standards required of PSTN operators. ECTEL has already developed and recommended elaborate and clear rules governing quality of service, and believe these standards should apply generally to all VoIP providers. However, as VoIP is a developing technology and a VoIP telephony market may take time to develop,

ECTEL will continue to observe developments and to make appropriate recommendations where necessary.

## **RECOMMENDATION**

- 14. ECTEL recommends that no new or extra Quality of Service standards be imposed over and above existing standards already required of individual licensees and resellers in existing legislation in force in ECTEL states.**

### **Directory Services**

- 4.15 Universal Service mandates that there should be a complete directory made available so that users of local networks must obtain the information needed to utilize the network. PSTN operators therefore provide complete directory listings to each subscriber. However, with some VoIP services the telephone numbers may not correspond to the customer's location and it may be difficult to determine which directory constitutes the customer's local diary. The issue to be considered is whether the requirement to supply directory services should apply to VoIP providers.

### **Approaches to the provision of Directory Services**

- 4.16 In Canada, the CRTC decided there should be no discrimination between VoIP providers and PSTN operators in the area of Directory Services provision. In Singapore, facilities based licensees are required to provide directory enquiry services for subscribers of other licensees (*Specific Terms and Conditions for IP telephony services, Singapore*).

### **Commentary**

- 4.17 Given ECTEL's objectives of taking a light handed regulatory approach, and bearing in mind the need to preserve the principle of technological neutrality, existing directory requirements should be applied to facilities based operators or individual licensees only. Since the provision of VoIP services by a traditional PSTN operator represents only a new technology to provide a service essentially similar to traditional voice service, individual licensees should not distinguish between VoIP customers and other customers on the existing PSTN in this area.

## **RECOMMENDATION**

15. **ECTEL recommends that facilities based/individual licensees should be required to provide directory enquiry services for subscribers of other licensees.**

### **Lawful Interception**

- 4.18 VoIP is even more secure than old style telephony as it utilizes encryption schemes that make it extremely difficult to listen in on an inter phone calls. However, it is in the interest of national security and/or public safety, to allow law enforcement to intercept communications. The issue for VoIP providers is who should bear the cost of providing interception facilities.

## **RECOMMENDATION**

16. **Providers should be fixed with a general obligation to work closely with law enforcement agencies where requested.**

### **Security**

- 4.19 The internet is relatively insecure since it is subject, among other things, to viruses and to cyber-attacks.

### **Commentary**

- 4.20 There is no pressing need for the development of any specific rules on security for VoIP services at this time. In most cases, the issue of security is more appropriately dealt with under ICT security laws (e.g. a “Cyber-crime Act” or “Misuse of Computer Act”). Service providers who offer publicly available communication services over the internet should inform subscribers of the measures that can be taken to protect the security of their communications (*The Policy Implications of Voice Over Internet Protocol, OECD Working Party on Telecommunication Information Services Policies pg 23*).

## **RECOMMENDATION**

17. **ECTEL does not recommend the adoption of any specific rules on security of VoIP services at this time.**

### **Privacy**

- 4.21 VoIP opens new threats to consumer privacy including voicemail spam and the potential abuse of the ALI system required for emergency services including the possibility that such information might be requisitioned under lawful access rules. There is also a risk to privacy from VoIP and wireless ALI systems in that consumers could unwittingly broadcast their location information where it could be picked up and used as a part of covert surveillance or for location-based marketing.

### **Approaches to Privacy Protection**

- 4.22 In Canada, the CTRC notes that concerns relating to the privacy of users of telecommunications services are the same, regardless of the underlying technology of the service. VoIP users are afforded the same level of privacy protection as is extended to users of circuit-switched services.
- 4.23 In the Cayman Islands, the ICT licences for internet telephony contain provisions on the use of confidential information obtained from consumers as well as other service providers.

### **Commentary**

- 4.24 There are already general rules on privacy protection contained in both the Telecommunications Acts of ECTEL states and all licences currently issued by ECTEL states. VoIP providers are subject to the same blanket obligations to protect consumer privacy. General requirements on providers to supply their service in a manner that protects the privacy of persons as well as an obligation to obtain the express acknowledgement from the customer that he understands the service limitations with respect to privacy, should apply in the case of such providers.

### ***RECOMMENDATION***

- 18. ECTEL recommends that existing rules on privacy protection applicable to all existing licensees should be extended to VoIP providers.**

## **Chapter 5 GENERAL LICENSING NOTES**

### **Licensing Fees/Fee structure**

- 5.1 ECTEL will make appropriate recommendations on an appropriate fee structure for Category 2, service type VoIP licences, once the licence has been formalized at the conclusion of the public consultation process.

### **Migration of existing licensees to new VoIP/IP Telephony Licence**

- 5.2 In light of ECTEL's impending adoption of the new licence, ECTEL anticipates the possibility that some existing licensees will be desirous of migrating from one type of licence to the new VoIP/IP Telephony licence. In particular, ISVR or other licensees, may regard the licence as affording rights to provide a greater range of services than currently contemplated under the existing ISVR licence, or other types of class licences currently available. Where existing licensees are desirous of providing the services available under a VoIP/IP Telephony licence, ECTEL proposes to facilitate a migration from one type of licensing regime to the new licence. Where such a migration is necessary, existing licensees may be required to surrender other licenses prior to the grant of the new VoIP/IP Telephony licence.
- 5.3 ECTEL proposes to develop rules and procedures to govern such a migration depending on the nature of the uptake of the new licence, after the licence has been formally adopted.

### **Action required by Commentators**

**Commentators are asked to indicate via "YES" or "NO" replies, whether they agree with each of ECTEL's eighteen (18) recommendations listed above, and to provide reasons for their views on each recommendation.**

## **LIST OF REFERENCES**

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### **OTHER DOCUMENTS**

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<http://www.telecoms.gov.bb/Documents/Policies/PDF/voippolicy.pdf>  
 last accessed on 27th February 2009.

Guide to Interconnection with Dominant Licensee, Singapore.

Guidelines on Licensing and Regulatory Framework for IP Telephony Services in Singapore

OfCom Statement 2004 Numbering Arrangements for New Voice Services  
[http://www.ofcom.org.uk/consult/condocs/vob/nvs\\_statement.pdf](http://www.ofcom.org.uk/consult/condocs/vob/nvs_statement.pdf)  
 last accessed on 27<sup>th</sup> February 2009.

Policy Implications of Voice Over Internet Protocol, Organization for Economic Cooperation and Development, Working Party on Telecommunication and Information Services Policies, OECD Working Party on Telecommunication Information Services Policies  
<http://puck.sourceoecd.org/vl=2779490/cl=26/nw=1/rpsv/cgi-bin/wppdf?file=5kz98hx0mvjh.pdf> last accessed on 27<sup>th</sup> February 2009.

Public Telecom Notice CRTC 2004-2, Regulatory Framework for voice communication services using Internet Protocol

Specific Terms and Conditions for IP telephony services, Singapore

Telecom Decision CRTC 2005-28- Regulatory framework for voice communication services using Internet protocol.

## **ANNEX A**

### **DRAFT VoIP licence Template**

THE MINISTER in accordance with the Telecommunications Act No. [-] of 200[-], and acting upon the recommendation of ECTEL, hereby grants this Licence to [licensee] (hereinafter referred to as the Licensee) to establish and operate a [-] within [Member State] and to do all or any of the acts specified herein.

## **PART I - LICENCE**

### **1. LICENCE**

1.1 This licence shall be known as the VoIP IP Telephony Licence.

### **2. INTERPRETATION**

2.1 A word, phrase or expression used in this licence and conditions shall have the same meaning as ascribed to that word, phrase or expression in the Telecommunications Act....In addition the following expressions shall have the following meanings given to them:

2.2 In this Licence:

“**Act**” means the Telecommunications Act 200[-] and Regulations made thereunder;

“**Affiliate**” means, in relation to this Licensee, any body corporate that is a subsidiary of this Licensee or if this Licensee and another body corporate are subsidiaries of the same body corporate or if each of them is controlled by the same person; and if the Licensee and another body corporate are affiliated with the same body corporate at the same time, they are affiliated with each other;

“**Annual Licence Fee**” means the fee prescribed by the Act payable by the Licensee on each anniversary of the Effective Date;

“**Annex**” means one or more attachments to this Licence all of which constitute a part of and are unique to this Licence;

“**Broadband connection**” means the broadband service, which provides speeds, which are higher than those attainable over a dial up connection;

“**Commission**” means the Commission established under the Telecommunications Act;

“**Control**” means in the case of a body corporate the person who directly or indirectly, except by way of security only, holds the shares of the body corporate carrying voting rights sufficient to elect a majority of the directors of the body corporate;

“**Customer**” means any Person who is, or who wished to be, provided with the Licensed Services by the Licensee;

“**Effective Date**” means [DATE OF LICENCE];

“**Government**” means the Government of the [Member State];

“**Licence**” means this Licence together with the Annexes;

“**Licensed Area**” means the territory of [Member State];

“**Licence Term**” means five years from the Effective Date;

“**Licensed Services**” means those Telecommunications Services detailed in Annex A;

“**Licensee**” means the holder of this Licence;

“**Market**” means a market in [Member State] and when used in relation to a telecommunications service, means a market for those telecommunications services or other services that are substitutable for, or otherwise competitive with, the first-mentioned telecommunications services;

“**Order**” means an order issued by the Minister under the Act;

“**Regional Spectrum Management Plan**” means the spectrum plan to be developed by ECTEL in accordance with the Regulations;

“**Regulations**” means regulations issued by the Minister pursuant to Section [ ] of the Act;

“**Renewal Fee**” means a fee payable by the Licensee to the Commission on the renewal of this Licence;

“**Standard Customer Agreement**” means the terms and conditions on which a particular Licensed Service is provided to the Customer;

“**Treaty**” means the Treaty that established the Eastern Caribbean Telecommunications Authority signed in St. George’s, Grenada on 4th May, 2000 and includes that Treaty as amended from time to time;

### 3. **SCOPE OF LICENCE**

3.1 This Licence enables the Licensee to provide IP Telephony services using telephone numbers assigned for such purposes (referred to as an “IP telephony number”) and to assign IP telephone numbers to the Licensee’s customers. Such services allow customers to make and receive voice, data and/or video calls using the same telephone number from any domestic or overseas location where broadband Internet access is available.

### 4. **PRECONDITION**

4.1 The rights and obligations set out herein shall not take effect until the [name of applicant] pays to the Commission the Fees set out in the Act.

### 5. **DURATION AND RENEWAL**

5.1 This Licence is granted from the Effective Date for a period of five years.

5.2 The Minister shall renew the Licence upon request by the Licensee for an additional period determined by the Minister, upon expiration of the Licence Term provided that none of the provisions of Section [-] of the Act would cause the Minister to refuse a request for renewal.

5.3 Licensee wishes to renew the Licence, the Licensee shall apply to the Minister in writing two (2) years prior to the expiry date of the Licence or at a later date if the Minister so determines.

5.4 On granting a renewal of the Licence, the Minister may vary the terms of the Licence if the conditions then prevailing require such variation and it is reasonable to do so.

5.5 The provisions of Section [-] of the Act relating to suspension, revocation, etc. shall apply *mutatis mutandis* to the renewal of a Licence.

5.6 Renewal of the Licence shall not take effect until the Licensee has paid the Renewal Fee and any other fees owed under the Licence.

### 6. **ASSIGNMENT**

6.1 The Licensee shall not assign or otherwise transfer this Licence or any of its rights or obligations under this Licence without the prior written consent of the Minister, subject to Clause 6.2 below.

- 6.2 The prior written consent of the Minister shall not be required by the Licensee where the assignment or transfer results from an internal reorganization of a body corporate that involves no change in the beneficial ownership thereof. The Licensee shall give prior notification to the Minister of the nature and extent of such assignment or transfer.

## **7. MODIFICATION, SUSPENSION AND REVOCATION**

- 7.1 This Licence is subject to modification, revocation, suspension and variation according to Sections [-] of the Act.
- 7.2 In deciding whether to agree to an amendment proposed by the Licensee, the Minister shall give due consideration to any submissions received from the Licensee and other interested parties in relation to the proposed amendment.
- 7.3 If after 6 months from the date of issuance of this licence the licensee does not provide the licensed service, the licensee shall forfeit this licence. Upon forfeiture of this licence under this clause, there shall be no refund of any fees, bonds payments or charges whatsoever that have been paid in respect of this granting of the licence.

## **PART II - LICENCE CONDITIONS**

### **1. LICENCE FEES AND MONIES OWED**

- 1.1 The Licensee shall pay to all fees prescribed under the Act.
- 1.2 If the Licensee owes money to the Government or ECTEL, in relation to fees payable in respect of this Licence, the Licensee shall be in breach of this Licence if the Licensee fails to pay that money within ninety (90) days after receiving a written notice from the Minister indicating that payment is due.

### **2. REGISTRATION OF CUSTOMER INFORMATION**

- 2.1 The Licensee shall maintain a register containing records of its customers and their particulars, which shall be made available for inspection by the Commission.

The records shall contain the following particulars of the customer:

- 1 (a) Name, and address of the customer;
- 1 (b) IP telephony number assigned to the customer; and
- 1 (c) Date of activation of the customer's account;

- 2.2 The Commission reserves the right to require the Licensee to record any other details as necessary in its register of customers.

2.3 Before recording the particulars referred to in Condition 2.2 the Licensee shall:

- (a) require the production of the subscriber's identify card or passport;
- (b) make and keep a photocopy of such evidence of identity
- (c) require the production of the subscriber's proof of address

2.4 The records in the register shall be kept at the Licensee's premises for a period of not less than 12 months from the date of termination of the Services to the customer or any other period that the Commission may require.

### **3. CONFIDENTIALITY OF CUSTOMER INFORMATION**

3.1 The Licensee shall respect and ensure the confidentiality of customer information except under the following circumstances:

- (a) where sharing of subscriber information with other licensees is necessary to detect, prevent or investigate into fraud;
- (b) where disclosure of customer information is deemed necessary by the Commission or such other relevant law enforcement or security agencies in order to carry out their respective functions or duties; and
- (c) where use of customer information is in accordance with applicable codes of practice, guidelines and directions which the Commission may issue from time to time relating to the protection and confidentiality of consumer information.

### **4. EMERGENCIES**

4.1 The Licensee shall disclose in advance to its customers whether the Services it provides may be used to contact the police emergency service, the fire and ambulance services and any other national emergency services which the Minister may from time to time designate, for the purpose of notifying such services of any emergency.

4.2 Where the Licensee provides access to Emergency Calls but the Service may cease to function if there is a power cut or failure or a failure of the-Broadband Connection the Licensee shall:

- (a) provide its customers with clear and readily accessible information, during the Sales Process, in the Terms and Conditions of Use and in any User Guide; that, although access to Emergency Calls is provided, the Service may cease to function if there is a power cut or failure, or a failure of the-Broadband Connection;
- (b) take reasonable steps to ensure that customers acknowledge in the form of a signature (or online equivalent), at the Point of Signature, that they understand that Emergency Calls will fail if there is a power cut or failure or a failure of the Broadband Connection

- (c) provide evidence to the Commission of the acknowledgement in paragraph 4.2 (b) above, within five working days; following a written request from the Commission;
- (d) during the sales process, give Customers the choice whether to receive (at no charge other than reasonable postage and packaging if applicable), labels which state that Emergency Calls may fail.

4.3 Where the Licensee does not offer access to emergency services as part of its service the Licensee shall:

- a) provide customers with clear and readily accessible information at the Point of Signature, in the Terms and Conditions of Use and in any User Guide; that its Service does not provide access to Emergency Calls. The same information must also be provided to prospective customers as part of the Sales Process;
- b) take reasonable steps to ensure that customers acknowledge in the form of a signature (or online equivalent), at the Point of Signature, that they understand that the Service will not provide any access to Emergency Calls.
- c) provide evidence to the Commission of the acknowledgement in paragraph 4.2 (b) above, within five working days; following a written request from the Commission;
- d) as part of the Terms and Conditions of Use, supply its customers with a clear and readily accessible printed statement, or an on-screen statement that the Customer is encouraged to print out, that Emergency Calls cannot be made using the Service;
- e) during the sales process, give the customer the choice whether to receive Labels (at no charge, other than reasonable postage and packaging if applicable) which state that Emergency Calls cannot be made using the Service, and recommend that Customers use these Labels on or near the relevant Service Access Terminal; where a screen or display is used with the Service, a Label could be an on-screen message or display using a clear and readily accessible graphic, words or icon that Emergency Calls cannot be made using the Service; or in these and other circumstances a Label could be (at the Customer's choice) either a piece of paper to be attached to the Service Access Terminal or software facilities for producing such labels.
- f) not charge its customers for any use of the services to contact the emergency services referred to in condition 4.3.

4.4 The Commission reserves the right to require the Licensee to comply with additional safety and security safeguards to enhance security measures for public and national safety.

4.5 In the event of hurricanes, earthquakes, floods and similar emergencies, the Minister may require the Licensee to provide free of charge to the Government or to such other institutions or Persons such Telecommunications Services as the Minister shall reasonably determine are necessary in the public interest, provided that if the emergency extends beyond thirty (30) days, the Government will compensate the Licensee for any days in excess of thirty (30) days.

## **5. PROVISION OF DIRECTORY ENQUIRY SERVICES**

5.1 The Commission reserves the right to require the Licensee to do the following:

- (a) to provide directory enquiry services based on an integrated customer database upon request to any person to whom the Licensee provides the Services; and
- (b) to provide directory enquiry services for subscribers of other licensees and the licensee shall comply with such requirements imposed.

## **6. PROVISION OF INTEGRATED PRINTED DIRECTORIES**

6.1 The Commission reserves the right to require the Licensee to do the following:

- (a) to provide integrated directories for all subscribers at no charge (except with the approval of the Commission) and at annual intervals or any other intervals to be agreed with the Commission; and
- (b) to exchange all relevant customer data with other licensees free-of-charge for the purpose of providing integrated directories and providing integrated directory enquiry services and the Licensee shall comply with such requirements imposed.

6.2 The Licensee shall, if necessary, and subject to charges, terms and conditions to be agreed with other licensees, provide integrated directories for their subscribers. In the event that agreement cannot be reached, Commission, whose decision shall be final, shall determine the matter.

## **7. NUMBER PORTABILITY**

7.1 The Licensee shall at its own expense comply with any requirement and guidelines established by the Commission on number portability required to be implemented by the Licensee.

## **8. QUALITY OF SERVICE**

- 8.1 The Commission reserves the right to establish minimum quality of service standards for the services provided by the Licensee with which the Licensee shall comply.

## **9. LICENSEE'S OBLIGATIONS TO CUSTOMERS**

- 9.1 The Licensee shall, in accordance with Regulations issued by the Minister, take such steps as are necessary to ensure that in relation to its Licensed Services, each Customer can reasonably and reliably have access to information services to assist Customers with queries relating to the Licensed Services, including fault reporting, billing and directory assistance.
- 9.2 The Licensee shall, no later than three (3) months after the Effective Date, establish an efficient procedure for the resolution of disputes with Customers, in accordance with the Act.
- 9.3 The Licensee shall, no later than three (3) months after the Effective Date, submit to the Commission a form of Standard Customers Agreement containing the terms and conditions for the provision of Licensed Services to Customers.
- 9.4 The Licensee shall notify all Customers of the terms and conditions of the Standard Customer Agreement in the manner specified by the Commission and shall thereafter provide Licensed Services based upon the relevant Standard Customer Agreement.
- 9.5 The Licensee may from time to time modify the Standard Customer Agreement and shall notify the Commission and customers of such modification.
- 9.6 The Standard Customer Agreement and any modifications made under Clause 9.5 shall be compliant with the Act and other applicable laws. In the event that the Standard Customer Agreement or modifications do not comply with the Act and other applicable laws, the Commission shall instruct the Licensee to make the appropriate amendments. Such amendments shall be notified to the Customer in accordance with Clause 3.5 and shall not have retroactive effect.

## **10. NON-DISCRIMINATION AND FAIR TRADING**

- 10.1 The Licensed Services shall be provided, by the Licensee on an arm's length commercial basis with respect to all Affiliates of the Licensee.
- 10.2 In providing the Licensed Services, the Licensee shall not discriminate as between similar types of Customers in relation to Licensed Services provided to those Customers in the Licensed Area and shall offer the Licensed Services on the same terms and conditions to similar types of Customers.

- 10.3 The Licensee shall not engage in any activities, whether by act or omission, which have, or are intended to or likely to have, the effect of unfairly preventing, restricting or distorting competition in relation to the Licensed Services.

## **11. INFORMATION REQUIREMENTS**

- 11.1 The Licensee shall provide the Minister, the Commission and ECTEL, with any relevant agreements (including agreements with any Affiliates of the Licensee) and such accounting, financial, costs, technical and other information (including but not limited to a complete audited financial report) reasonably required to enable the Minister, the Commission or ECTEL to carry out their functions under the Act and, in the case of ECTEL, under the Treaty, in such manner and at the times that the Minister, the Commission and ECTEL may request.

## **12. PRIVACY AND CONFIDENTIALITY**

- 12.1 The Licensee shall ensure the privacy and confidentiality of information and business secrets obtained in the course of its business from any Customer by establishing and implementing procedures for maintaining confidentiality of such information as set out in the Act.

## **13. PRE-NOTIFICATION OF CHANGES IN SHAREHOLDING**

- 13.1 The Licensee shall notify the Minister of any acquisition of shares or change in shareholding of the Licensee, by any Person, if by reason of that acquisition or change, the total number of shares in the Licensee held by that Person, together with any shares held by any nominee or trustee for that Person, immediately after the change or acquisition exceeds 25 per cent of the total number of shares in the Licensee (where such shareholding did not already exceed 25 per cent prior to that change or acquisition).
- 13.2 The Licensee shall notify the Minister in writing sixty (60) days prior to the taking effect of such change or acquisition stated above.
- 13.3 Upon receipt of notification pursuant to clause 13.2 the Minister shall refer the matter to the Commission and ECTEL for their review and recommendation as to whether the licence should be revoked; suspended, varied or modified as a consequence of such a change in shareholding. Where, acting on the advice of ECTEL, the Minister determines that the licence should be revoked, suspended, varied or modified as the case may be, the Minister shall within thirty (30) days of receipt of the notice and in accordance with the provisions of the Act notify the Licensee of his intention to do so, The Minister shall not revoke, suspend vary or modify a licence unless ECTEL recommends accordingly.
- 13.4 Where the Minister fails to notify the Licensee of any changes in accordance with

clause 14.3 herein the Licensee shall continue its operations in accordance with the provisions of this Licence.

#### **14. FORCE MAJEURE**

- 14.1 Force Majeure refers to an event or accident which is beyond the control of the Licensee and includes:
- (a) acts of God, action by or against enemies of the State, riot or civil commotion;
  - (b) strikes, lock-outs and other industrial disturbances;
  - (c) wars, blockades or insurrection;
  - (d) earthquake, hurricane, flood, fire or explosion;
  - (e) outbreak of pestilence or epidemics;
  - (f) government rationing of electricity or other wartime or emergency controls imposed by Government;
  - (g) embargoes or trade restrictions;
- 14.2 The Licensee shall not be in breach of this Licence if and to the extent that it is prevented from fulfilling its obligations by reason of Force Majeure.

#### **15. COMPLIANCE**

- 15.1 The Licensee shall comply with all applicable Acts, Regulations, Directions, Orders and Recommendations, including but not limited to the Act and shall comply with the Directions, Orders and Recommendations issued by the Minister and the Commission.

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Minister of Telecommunications