

DRAFT
Second Circulation for Comments



**Barbados (VoIP) Voice Over Internet Protocol
Policy**

Policy in accordance with sections 4 (2)(b) and 4 (2)(f) of the Telecommunications Act 2001-36.

This policy describes the terms and outlines the techniques involved in Voice Over Internet Protocol (VoIP) technology. The conditions for use in Barbados as set by The Telecommunications Unit in The Ministry Of Energy and Public Utilities are also clearly defined. As this is a rapidly changing technology, it will be kept under constant review and is subject to change from time to time.

1. INTRODUCTION

- 1.1 Voice Over Internet Protocol (VoIP) also known as Internet Voice, Is a technology that allows a customer to make a telephone call using a broadband Internet connection, instead of a regular (or analog) phone line. The internet uses packet switching techniques, which basically means that the message is broken up and each packet is sent individually. The packets may be routed along different paths in order to reach its final destination. Unless specified otherwise, the following terms are used synonymously: Internet Telephony, IP Telephony, packet voice, Packetized voice and Voice Over Internet Protocol (VoIP).
- 1.2 Currently narrowband telephony networks are connection oriented, i.e. circuit switched. The dedicated path, which is provided for each telephone call, remains unutilized during the long periods of silence. Nevertheless, the network resources continue to be in service even during these periods of pause. On the other hand, dedicated paths are not provided for on the Internet, and the packets find their way end to end through gaps, thereby increasing by multiples the efficiency of resource utilization. This is known as Packet Switching.

- 1.3 Regulators worldwide are grappling with allocating both geographic and non-geographic numbers to VoIP providers. The potential for nomadism of VoIP services is a key consideration and distinction compared with traditional location-identifiable circuit telephony services

2 **Regulatory Framework**

- 2.1 It is incumbent on regulators and policy makers to ensure that there is always a level playing field for operators, small or large. The regulatory framework aims to safeguard access networks and ensure consumer protection (including access to emergency services). The regulatory framework must also address quality of service issues. Issues such as privacy, law enforcement, access for disabled users and customer equipment specification will be addressed. The regulatory framework must be such that it is seen as “work in progress” which will be reviewed as VoIP evolves. We will adopt a technologically neutral position that Internet telephony is just another type of telephone service. We will distinguish between VoIP (the service) and VoIP (the protocol).

3 **VoIP (the service)**

- 3.1 VoIP (the service) should be a licensable service, offered only by companies registered in Barbados. This will ensure that service providers comply with local consumer protection legislation, in addition government can collect license and tax revenues. Furthermore, foreign exchange is not drained.

VoIP service providers should have interconnection with the domestic network (PSTN,) such that a full voice service is provided to consumers. Moreover interconnection should be provided to emergency services and all other local telephone services.

VoIP service providers will need to be licensed as either a fixed or international operator. They should be on the same level playing field as all the other market operators. They should be subject to the same license fees, and be responsible for the same access deficit or universal service fund contribution requirements.

- 3.2 VoIP (the service) includes but is not limited to, peer-to-peer (p2p) type voice service. This involves calls made between two computers connected via the Internet, using IP-enabled voice communications services that do not connect to the PSTN and do not generally use (North American Numbering Plan) NANP-conforming telephone numbers.

3.3 VoIP (the service) includes but is not limited to, Pc-to-Phone services. This service permits calls to a recipient anywhere on the PSTN by dialing a number using a specially adapted IP telephone.

3.4 VoIP (the service) includes but is not limited to, Phone-to-Phone services. These services use an ATA (Analog Telephone Adaptor), which allows the connection of a standard telephone to the computer, or direct to the Internet connection. The ATA is an analog-to-digital converter, which takes the analog signal from a traditional phone and converts it into digital data for transmission over the Internet.

4 VoIP (the protocol)

4.1 VoIP (the protocol) includes but is not limited to SIP (session initiation protocol). SIP is an application-layer protocol, a signaling protocol for Internet telephony. SIP can establish sessions for features such as audio/videoconferencing, interactive gaming and call forwarding to be deployed over IP Internet networks. In addition, SIP Server supports traditional telephony features such as personal mobility, time-of-day routing and call forwarding based on the geographical location of the person being called.

4.2 VoIP (the protocol) includes but it not limited to the H.323. H.323, is a protocol suite defined by ITU-T. It is used for voice transmission over the Internet. In addition to voice applications, H.323 provides mechanisms for video communication and data collaboration, in combination with the ITU-T T.120 series standards.

4.3 VoIP (the protocol) includes but is not limited to MEGACO (media Gateway Control Protocol). MEGACO is a signaling protocol that enables switching of voice, fax and multimedia calls between the PSTN and next-generation IP networks, allowing dramatic growth and scalability of enhanced services.

5 Licensing

5.1 The License permits the Licensee to provide IP Telephony services using E.212 telephone numbers for such services and assigning such numbers to the Licensee's customer. Such services allow customers to make and receive voice, data and/or video calls using the same telephone number from any home or overseas location where broadband Internet is accessible.

5.2 Licensees are required to give a clear description of the services on

Offer. Such as whether the service is a fixed or portable service and also the significance of maintaining connection during loss of power.

- 5.3 Companies wishing to provide VoIP services to the public in Barbados are first required to be a registered Barbadian company. A (Service Provider License) and (Service Provider Domestic and International) license will be issued to successful applicants.

6 Registration

- 6.1 Cyber Cafes (PC-To-PC) wishing to offer VoIP services to the public are first required to register with the Ministry responsible for telecommunication. This is in addition to the Cyber Café license TU151. The fee will be a nominal annual sum and will state the number of workstations licensed to provide VoIP services to the public. Any workstations in excess of fifteen stations will require that the company apply for a Service Provider license as stated in 3.1
- 6.2 There will be no license fees for commercial VoIP and IP Telephony services offered by community-based organizations, non-governmental organizations and entities such as the church.
- 6.3 Private Network Operators such as private corporations will be granted a free VoIP licence to connect to their corporate headquarters or subsidiary companies. The successful applicants will not be permitted to connect their VoIP networks to the PSTN or bypass the international telephone networks of legitimate carriers.
- 6.4 The use of Net2phone, Vonage and Voice Sticks service may be allowed subject to registration with the Telecommunications Unit.

7 Provision of Services

- 7.1 The Licensee shall ensure that its subscribers are be able to Make and receive voice calls from/to subscribers on any Public Switched Telecommunication Network and Public Mobile Network service. This will necessitate that the Licensee negotiate interconnect agreements with the appropriate Service Providers.

8 Public Emergency Call Services

- 8.1 All licensees must provide access to the emergency services such as the police (211), the fire service (311), and ambulance service (411) and any other national emergency service that the minister may from time to time designate for the purpose of notifying such services of any emergency.
- 8.2 The Licensee shall not charge its customers for any use of

the services to contact the emergency services referred to in 8.1 of this document.

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

9 Quality of Service Standards

- 9.1 The Minister reserves the right to establish minimum quality of service standards for the Services provided by the Licensee with which the Licensee shall comply.

10 Provision of Directory Enquiry Services

- 10.1 The Minister reserves the right to require the Licensee to do either or both of 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;
 - (b) To provide directory enquiry services for subscribers of other licensees.

11 Numbering

- 11.1 The Ministry proposes to implement the ITU-T.E 212 numbering regulation. The Ministry intends to adopt geographic numbering.
- 11.2 Geographic numbering as relates to Barbados can be defined as the unique numbers allocated to Service Providers by the Ministry and that conform to the NANP (North Atlantic Numbering Plan) and are recognizable as telephone numbers for this jurisdiction.

12 Numbering Portability

- 12.1 The ministry is preparing to carry out cost/benefit analysis. Further details to follow.

13 Universal Service

All providers with VoIP licences shall be required to contribute to the Universal Service Fund

14 Indirect/Equal Access

- 14.1 The telecommunications Unit has a consultative document on Indirect/Equal access, on www.telecoms.gov.bb

15 Regulation

- 15.1 VoIP is considered an information service and as such will not be subject to price regulation by the FTC. However providers of VoIP must abide by the Fair Competition Act.

16 Disabled Users

VoIP providers must make adequate provision for the disabled.

17 Acknowledgements

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