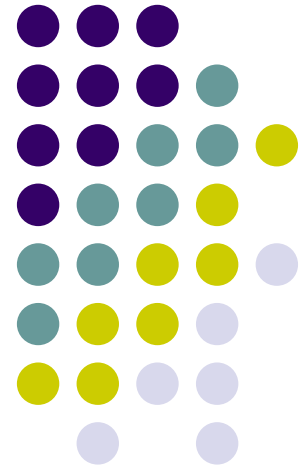


VOIP – Opportunities & Threats

Internet Service Providers Association of Belize

Presentation to the
Public Utilities Commission

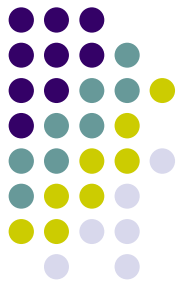
Radisson Hotel, Belize City
April 26, 2006





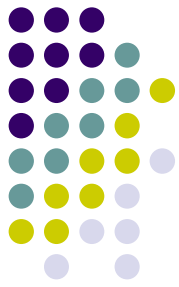
Association Background

- ❑ *Comprised of Licensed Internet Service Providers who provide services to 40% of all broadband users in the country.*
- ❑ *Members includes:*
 - ❑ *Channel Broadcasting Cable*
 - ❑ *IT Solutions Ltd*
 - ❑ *MyCuz.net*
 - ❑ *Net King Solutions*
 - ❑ *Siahnet*
 - ❑ *Stellar Links*
 - ❑ *Tenchtronics Communications*
 - ❑ *UTECH*
 - ❑ *Coral Cable Vision*
 - ❑ *Cyberbel*
 - ❑ *H2TECH*



VoIP – Threats & Opportunities

“Will Belizean be allowed to enjoy the benefit this new telecommunications technology commonly referred to as VoIP, or will laws and regulations be enacted or other steps taken to deprive us of those benefits?”



Internet Service Access

- ❑ *Internet Service provided by*
 - ❑ *Belize Telecommunications Ltd*
 - ❑ *Local Satellite Service Providers*
 - ❑ *Commerical/Residential VSATs*

- ❑ *The incumbent carrier controls the gateways to the world.*
- ❑ *Also controls the national and local infrastructure that delivers its services to its commercial and residential customers.*
- ❑ *Speednet not really an alternative internet service provider.*
- ❑ *The satellite providers are the true alternative broadband service providers in Belize, but this comes with a high price and suffers from weather interferences.*



Competitive Environment

- ❑ *Belize Telecommunications Ltd. has a infrastructure monopoly*
- ❑ *Concerns arise from this position:*
 - ❑ *No redundant alternative, ie ARCOS fiber cut in 2005*
 - ❑ *Provides internet to some ISPs and compete in the same market*
 - ❑ *Pricing structure and quality of network entirely dictated by incumbent.*



What is VoIP?

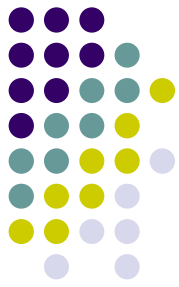
Internet voice or Voice over Internet Protocol -

- Communication protocol technology that routes voice conversations over the internet or any other IP based network.*
- Voice data flows over a general purpose packet-switch network, instead of traditional dedicated, circuit switched telephony transmission lines.*
- VoIP traffic can be deployed on any IP network, including ones with no internet service for example a private LAN.*

Current users of VoIP - BTL & Smart

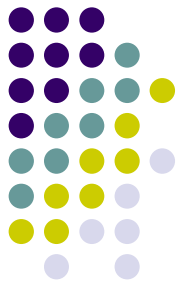
- VoIP is utilized by BTL's to rollout its 10-10-199 services*
- International call services recently rollout by Smart cellular*

VoIP is a technology that is embraced not only by individual users and internet service providers but also by telecom providers holding general licenses.



ISP Association's Position

- 1. Legalize VoIP Services and allow ISP's to deliver service to customers so as to capture the appropriate tax revenue to Government of Belize*
- 2. PUC to give us or another appropriate party the necessary authorizations to roll out competing infrastructure so local providers can compete when deregulation comes in 2010 and there will be unbound cross border competition.*
- 3. VoIP is IP and should be classified as IP telephone*
 - Allow VoIP services to become regulated by the Public Utilities Commission by ensuring reasonable proper rates and quality of services are in the best interest of the people.*



ISP Association's Position cont'd

4. *Allow ISP's to offer VoIP so that VoIP service is not a "monopoly".*
 - *This service provision should be open to communication provider equipped with the technical skills, quality assurance and appropriate licensing by the regulatory body in order to provide an open, competitive market which will benefit the consumers and the country. It does not benefit the public to have any one company monopolize VOIP*

5. *Make a quick decision on this issue*
 - *The people of Belize; particularly the business community, are suffering by being denied the latest communications technologies afforded other countries in the region and throughout the world.*

Summary



If the incumbent provider decides to systematically block VoIP on their network, we would like to be able to look at alternative networks that can regulate VoIP services to provide government revenue and services to the consumer and businesses. Our own informal surveys indicate that an overwhelming majority of Belizeans want to be able to enjoy the benefits of VOIP. Any attempt to outlaw or otherwise prevent VOIP use in Belize would be extremely unpopular. It would also be regarded as a retrogressive step by the entire world community.

REGULATE NOT TERMINATE IS OUR MAIN RECOMMENDATION