Antigua and Barbuda

Information and Communication Technologies (ICTs)

Draft Policy

Ministry of Information, Broadcasting and Telecommunications
Office of the Prime Minister
Queen Elizabeth Highway
St. John's, Antigua
Tel: 562-3860
Fax: 562-3914
e-mail: mibt@antigua.gov.ag
www.antigua.gov.ag

Antigua and Barbuda

Information and Communication Technologies

Draft Policy

Information and Communication Technology (ICT) and the services associated with them include the broad fields of information processing, transmission and communication by means of computer and telecommunication techniques. These modern tools are being used increasingly for organizational and personal information processing in all sectors of the economy and society. The technology and techniques necessary to deliver those services have increased astronomically over the last 10 years.

National development and the growth of any economy are now inextricably dependent upon the existence of a vibrant ICT industry, the availability of modern telecommunications infrastructure and the satisfaction of the growing demand for affordable telecommunications services.

The Government of Antigua and Barbuda is cognizant of the importance of ICT. The convergence and integration of communication networks and services, and the explosive growth of the Internet and Electronic Commerce, can no longer be ignored. Accordingly the Government has developed after extensive consultations the following ICT policy, which is a blue print for the economic transformation of Antigua and Barbuda to a knowledge-based society. In its implementation, this policy will provide the requisite legal and regulatory framework as well as financial and social incentives, which will ensure that the people of Antigua and Barbuda are active participants in the Global Village and reap the full rewards of globalization.

The Government's intention is to promote a set of policies designed to upgrade the intellectual capital of its people. The "People First" philosophy is to ensure that every citizen and resident has affordable access to ICT services in order to communicate and better themselves educationally and economically.

ICT will be integrated into the very fabric of our daily lives. The reform of the educational system and integrating the use of ICT must be accomplished if Antigua and Barbuda is to rise to First World standards and status.

VISION

Access by every citizen of Antigua and Barbuda at affordable prices to:
.

- ❖ ICT Services and

- ❖ the latest in modern communications technology.

Promote Antigua and Barbuda as a Regional Centre of Information Technology Excellence to support the development of:
- E-commerce
- Internet Marketing
- Internet Gaming
- Software Development
- E-education

Achieve the growth of small and medium enterprises by leveraging ICT Services and Techniques

Have unparalleled growth in the national economy by increasing employment and revenue inflows that are directly attributable to a vibrant ICT industry.

POLICY OBJECTIVES

1) The people of Antigua and Barbuda are to have access to and become active participants in the global village network.

2) Telecommunications is to function as a catalyst for economic growth and development

3) The creation of a dynamic ICT industry is to be developed within Antigua and Barbuda that will provide employment opportunities and ensure that Antigua and Barbuda benefits from the converging areas of telecommunications, broadcasting and information technology

4) Training of personnel to provide the leadership and guidance in an expanding and diversified ICT industry

5) An independent telecommunications regulatory authority is envisioned that will be authorized to regulate the telecommunications sector in a transparent, non-discriminatory and accountable manner and facilitate effective competition.

6) Social objectives in education, health, commerce, governance systems and national security will be enhanced and achieved by the use of ICT services and techniques

GOVERNMENT COMMITMENT

The Government commits that within 2 years its vision of an Antigua and Barbuda transformed by ICT through the expeditious implementation of this ICT policy.

The Government invites comments and suggestions from the people of Antigua and Barbuda about this draft policy, so that this policy becomes the people's policy. The Government wants to ensure that the citizens of Antigua and Barbuda maximize the benefits occurring globally, that are attributable to advances in ICT.

Executive Plan and Summary

The Government's policy is a three-prong strategy in which ICT is used as an Enabler for national development it consists of: Encourage and foster Infrastructure development, promote competition and create and produce Legislation.

1. Ensure that all persons have access to ICT at a reasonable rate

2. Have a Open Telecommunications market in Antigua while ensuring to the preservation of Antigua and Barbuda's cultural under-pinning

3. Ensure to a proper Transparent and Independent Regulatory Authority

4. Ensure that Antigua moves forward in being e-ready and that throughout all sectors of the society especially in small and medium size enterprises that it is e-enabled leveraging the full use of technology

5. Update the regulatory framework so as to ensure a fair competitive and sustainable telecommunications market

6. Spectrum management and numbering administration will be carried out to ensure that the common telecommunication resources are exploited for the benefit of all the people of Antigua and Barbuda

7. Interconnection will be mandated and access to public networks enabled in a fair and non-discriminatory manner, with recourse to the Regulator in the event of a dispute.

8. The Government, will address convergence issues and develop a regulatory framework that fosters the safe use of the Internet and protects intellectual property in a digital environment.

9. Representation at all necessary International and Regional Forum.

Telecommunications

Policy

Framework

&

Action Plan

Ensure that all persons have access to ICT at a reasonable rate

Background

One of the primary points of reforming the telecommunications sector is so that regulation is used to ensure that telecommunication services are provided efficiently and that they are available widely at affordable prices.

Universal service was once thought of as having a telephone in every household. The incumbent Antigua Public Utilities Authority (APUA) has had the responsibility for ensuring that universal service is achieved. APUA consistent with international trends has traditionally, at its sole discretion, set the targets for number of lines to be introduced per year and where these telephone lines are to be deployed. The Central Government played less of an active role in this area. However, in this new globally competitive environment, universal service can no longer be left to APUA to determine, the responsibility now rests with the Regulator, in conjunction with the Government.

Towards a Modern Universal Service Policy

Antigua and Barbuda is moving towards having a more competitive market; the aim of more competition is seen as not only improving service levels and increasing choice, but also the stimulation of innovation and the development of new services, which respond to user needs. These aims are seen as complementary. In that sense the guarantee of universal service is a means of extending market benefits to all and not something to inhibit the development of effective competition or to replace market mechanisms for innovation. The Government with the implementation of this policy will ensure that basic telecommunications services are affordable, can be accessed by all the people of Antigua and Barbuda and consumer rights are safeguarded.

Critical Information for the Creation of a Universal Service/Access Framework

The following information will be obtained:
- *Telephone Penetration Rates*
- *Computer Penetration Rates*
- *Penetration of Fixed and Cellular Subscribers per population*
- *Target Period for Network Connection and Supply Times*
- *Target Period for Fault Repair, Repair Times and Compensation Schemes*
- *Situation of low income or disabled users*

Access to Internet Services

Internet access is no longer considered a nice to have, but must form a part of basic telecommunication services and targets in schools, hospitals libraries and Government offices. The policy will encourage the growth of access via broadband and increase usage levels while removing any impediments.

An Open Telecommunications Market in Antigua

The once conventional thinking that Telecommunications is a natural monopoly is now defunct. It is now accepted wisdom that many telecom companies can exist in one market. This is primarily driven by the speed with which technology is moving at and the continuous dropping prices of computing power.

An open market in telecommunications means that there will be competition in the all the telecommunications market, i.e. Cable and Wireless will not be the only provider for international service, and APUA will not be the only provider of local wireline service.

An open telecommunications market all translates to ever decreasing prices for the consumer. However a new concern arises for the Government, an Open Market can mean the potential for all sorts of abuses that the customer can potentially endure. Introduction of different types of legislation to protect against "spamming" and "slamming."

Additionally, while most potential telecom players want to see a country have an open market so that they can get in, once in they tend to want the Government to introduce legislation that would "protect their investment," in effect companies would want monopoly protection.

Telecom companies as a general rule do not want the removal of roadblocks to interoperability and openness; words like number portability are things that they do not want to hear about.

However, while the Government of Antigua and Barbuda will give support and encourage the development of open and interoperable standards and sees this as a primary strategy for removing unnecessary barriers to trade, it will maintain or reserve the right to ensure the protection of its people. Additionally, it will always tend to give preferential treatment to the natives of Antigua and Barbuda and will indeed reserve certain services or a percent of those services for their provisioning.

"Spamming" the unwanted advertisements that occur while visiting certain websites on the Internet.

"Slamming" the unauthorized switching of customers from one telecom provider to another.

Transparent and Independent Regulatory Authority

The global paradigm shift is occurring in an environment in which competition in telecommunication services exists and within which a modern regulatory and policy framework has proven to be beneficial in developing and developed countries. Undoubtedly, the introduction of competition in Antigua and Barbuda will enhance consumer welfare and economic development.

The Government in recognizing the critically important role that the development of the telecommunications sector will play in the economic, social and political development of the country has created a new portfolio Ministry, in the Office of the Prime Minister. In this Ministry, the telecommunications department will seek to address the anomalies that presently exist in the sector.

The existence of exclusive telecommunications licences for several years, i.e. APUA and Cable and Wireless will therefore necessitate negotiation and a movement from monopoly to competition. To oversee the transition, promote competition and protect consumer welfare the Government will follow international trends and establish an independent telecommunications regulatory authority.

However, the regulatory authority is formulated (i.e. Commission structure, ECTEL etc.) it will be sufficiently empowered to detect, prevent and curtail anti-competitive practices as well as ensure that the dominant telecommunications operator does not abuse its dominant position.

The regulatory authority will also have responsibilities relating to licensing, tariffs, interconnection, technical standards, broadcasting and service quality.

Being E-Ready throughout all sectors of the society

A society that is e-ready is one that has three primary things in place i.e. the tools, infrastructure and education.

The Government is presently reviewing its taxation policy on computers and its peripherals and on Internet access. It realizes that for the digital divide gap to close people will have to have access to the tools at a reasonable rate. Presently computer penetration is at approximately some 20-25% of all households. In the next 2 years the Government desire is to have that this number doubled and the ideal that computers become as prevalent as a television set.

Having computers without having access to Broadband would be very limiting and frustrating to end-users. Broadband can be analogous to having a big pipe that delivers water but instead of water, it would be the simultaneous delivery of voice, data and even video. The delivery of Broadband is best done by fibre optic cable, but can also be a wireless system e.g. via satellite or microwave.

The only undersea fibre optic cable coming into the country is via C&W i.e. Eastern Caribbean Fibre System. The pricing mechanism that is being used by C&W to determine these tariffs is a "value system." If benchmarking is used to compare prices of C&W's broadband services against other providers worldwide it would be evident that the true economic cost for provision of these services are exceeded many times over. C&W in light of the impending liberalization of the telecom sector has begun the process of reviewing and in instances lowering tariffs for its Broadband services.

Presently, the Government of Antigua and Barbuda have received several applications to provide cable services into the country, which we are reviewing in earnest.

Education is the most critical element of ensuring that the society is E-ready and the Government of Antigua and Barbuda have recognized this fact and has made substantial investments to that end. Antigua and Barbuda International Institute of Technology (ABIIT) is one of the institutions training a cadre of professionals to meet both local and international needs of the IT industry.

[For an in-depth discussion on the topic of education and strategies being pursued by the Government please reference the Antigua and Barbuda Draft Strategies for Implementing ICT Policies in The Education System of the OECS]

Regulatory Framework

The present laws of Antigua and Barbuda that govern the Telecommunications Industry are over 50 years old with every exception being referred back to the Cabinet. The Telecommunications Officer is essentially the Regulator but with his primary duties related to the administration of the Spectrum.

The new regulatory framework relating to telecommunications will be modernized in conformity with this policy document to provide a legislative framework, which addresses critical telecommunication issues such as:

- Competition

- Creation of an Independent regulator

- Licensing of telecommunication services and equipment

- Convergence

- Universal Service

- Interconnection

- Spectrum Management

- Numbering

- Quality of Service Standards

- Consumer Protection

Stiff penalties and fines will be introduced for breaches of the new legislation.

Spectrum Management

Background

Wireless communications provide powerful tools for public safety, national security, business development, and entertainment. Essential to wireless communications is the radio frequency spectrum. The radio frequency spectrum is the invisible (to the naked eye) electronic highway that carries radio waves. It is one of the most valuable finite natural resource that must be carefully managed to ensure that it is exploited to the benefit of the people of Antigua and Barbuda.

Spectrum management, or radio spectrum management, is the process of providing for efficient use of the radio spectrum and the most important technique for attaining efficiency is controlling interference. Effective management of the spectrum resource is now critical to the success of modern economies.

Spectrum Management Techniques

Traditionally, spectrum management in Antigua and Barbuda like elsewhere in the world has been viewed as a system of frequency allocations, allotments, and assignments. In this system, the entire range of the useful spectrum is divided (in the frequency dimension) into blocks or bands of frequencies called allocations. These frequency allocations determine the type of use allowed within the block or band of frequencies.

There is now unprecedented demand for the use of the spectrum due to the:

- ❖ desire to transmit a larger quantity and a greater variety of information;

- ❖ need for more diverse types of communications systems to meet specialized needs;

- ❖ falling costs and increased functionality of electronic equipment that make radio communications more attractive;

- ❖ rapid overall changes in the technology and the marketplace;

- ❖ desire to create competition with incumbent wireline and wireless providers; wider recognition of the potential value of radio licenses (for example, from the publicity surrounding the award of cellular radio licenses);

- ❖ and pressures to reduce, or at least contain, increases in the costs of administering the process.

The radio spectrum is therefore a very important economic resource that must be effectively managed and efficiently used.

Antigua and Barbuda will modernize its spectrum management by:

1) The creation of a professional regulatory authority mandated to allocate and manage the spectrum;

2) Development and maintenance of a strategic legal and technical framework that ensures:

   a. Timely access to spectrum for new services and technologies;

   b. Spectrum use, which is economically and technically administered in an efficient manner;

3) Consultations with the users of the spectrum and the wider public on the development of the strategic framework that is to be pursued;

4) and compliance with the International Telecommunications Union (ITU) standards;

[For an in-depth discussion on the topic and strategies being pursued please reference the Antigua and Barbuda Spectrum Management Plan – Schedule A]

NUMBERING

The Importance of Numbering

A key component to the emergence of the Information Society and the creation of the Global village is efficient telecommunication service. Such service is dependent on the efficient allocation of numbers, which are a scarce resource. Numbers are used to identify Network Termination points and these points are used to:
   o Connect Customer Premise Equipment (eg. telephone, fax machine, etc.)

   o Provide access to Network Services. Interconnect with other private networks.

Number codes are important as they are used by Network Operators for routing calls, tariffs, geographic and service type locators.

Numbering is a key enabler of development for both commercial and competitive factors for the telecommunications industry. A numbering policy should be based on defined political and social policies. These objectives should be driven by the need to provide a competitive environment and objectives resulting from a rapidly changing economic and technological environment.

The Antigua and Barbuda numbering policy will take into account of the following issues: -

Flexibility to meet future needs. Increasing demand for numbers will arise from the introduction of new telecommunications services as well as the growth of existing services.

Facilitation of effective competition. All telecommunications providers will receive fair and nondiscriminatory treatment in the allocation of numbers. Number portability will be introduced where appropriate.

Cost effectiveness. The development of the numbering plan will take account of the costs that may be imposed on consumers, operators and service providers.

Provision of information to consumers. Where possible, numbers will indicate meaningful information to callers, such as the type of call and the price band.

All new numbering arrangements will be required to support effective competition. The companies that have rights to the numbering resource should receive fair and equal treatment with respect to access and allocation to numbers. Additionally, number portability should be supported by any numbering arrangements.

Interconnection

Definition

"Interconnection can be defined as the physical and/or logical linking of suppliers providing public telecommunications transport networks or services in order to allow the users of one supplier to communicate with users, and to access services of another supplier." There are three types of Interconnection as defined by the International Telecommunications Union (ITU) are:

Type I connection or interconnection of equipment such as PABX or private networks to the public switched network.

Type II interconnection of local and Long Distance carriers to the public switched network

Type III interconnection of wireless networks to the public switched network.

Guidelines

(I)   The Government's policy objectives for development of Antigua and Barbuda telecommunications sector;

(II)   The role that telecommunications is expected to play as a support service to all sectors;

(III)   The commitments made by the government with respect to the licences held by the incumbent telecommunications operator; and

(IV)   The World Trade Organization (WTO) regulatory paper on telecommunications

The Objectives

• Guarantee sustainable competition in the telecommunications sector.

• Expansion of the ICT sector by the entry of new providers for products and services.

• Safe guard against anti-competitive practices.

• Ensure that the terms and conditions of interconnection arrangements are based on principles elaborated by the WTO

Adopted WTO Principles of Interconnection

Interconnection to be Guaranteed

Interconnection with the incumbent and therefore generally the major supplier will be ensured at any technically feasible point in the network.
Such interconnection is provided:

I. Under non-discriminatory terms, conditions (including technical standards and specifications) and rates and of a quality no less favorable than that provided or its own like services or for like services of non-affiliated service suppliers or for its subsidiaries or other affiliates;

II. In a timely fashion, on terms, conditions (including technical standards and specifications) and cost oriented rates that are transparent, reasonable, having regard to economic feasibility, and sufficiently unbundled so that the supplier need not pay for network components or facilities that it does not require for the service to be provided; and

III. Upon request, at points in addition to the network termination points offered to the majority of users, subject to charges that reflects the cost of construction of necessary additional facilities.

B. Public availability of the procedures for interconnection negotiations

The procedures applicable for interconnection to a major supplier will be made publicly available.

C. Transparency of interconnection arrangements

It is ensured that a major supplier will make publicly available either its interconnection agreements or a reference interconnection offer.

D. Interconnection dispute settlement

A service supplier requesting interconnection with a major supplier will have recourse, either:

(i) at any time or

(ii) after a reasonable period of time which has been made publicly known to an independent domestic body, which may be a regulatory body, to resolve disputes regarding appropriate terms, conditions and rates for interconnection within a

reasonable period of time, to the extent that these have not been established previously.

Strategy

Presently while interconnection does exist in Antigua and Barbuda it is biased. The Government will develop and make available guidelines that should be used in the commercial negotiation of the terms and conditions of interconnection contracts between the entrant and the incumbents, APUA and Cable and Wireless. If an agreement cannot be reached, either of the parties will be able to refer the matter to an arbiter for resolution.

Regard will be had to the following:

1. **Non-discrimination**. To ensure fair competition, there should be non-discrimination in the charges for and quality of interconnection that the incumbents APUA and Cable and Wireless offer to itself and to others.

2. **Fair terms and conditions**. Technical standards and specifications should be reasonable and appropriate points of interconnection should be made available. Charges should be cost oriented, and interconnection services should be sufficiently unbundled that the purchaser need not pay for components or facilities that it does not require.

3. **Inclusion of relevant elements in the charge.** In addition to the cost of provision of interconnection services, the regulatory authority may also take into account, as appropriate, the net cost to the APUA in providing Universal Service and requirements to provide free access to the emergency services.

4. **Transparency.** Interconnection agreements or a reference interconnection offer by the incumbents, APUA and Cable and Wireless, should be made publicly available, setting out the basis on which interconnection will be provided. All elements of the charges to be paid for interconnection should be explicitly identified, and sufficient information should be made available to justify the charges, within the reasonable bounds of commercial confidentiality.

Convergence Issues

In defining ICT into the broadest of categories one would have telecommunication, computer and networking technologies. Technological innovations that have occurred over the last few years have been combining all of these into digital technology. It is this combination of all of these technologies and the resulting blurring of the distinctions between the forms of delivery used to carry different types of content that is called convergence.

The Government intends to promote the use of the Internet and electronic commerce, but is mindful of the potential dangers inherent in interactive media. The types of abuses that can occur are that of privacy, infringement of copyright and computer hacking.

The Government would be also looking to enact legislation of the following nature: review and strengthen if necessary the present Copyright Laws, Data Privacy and misuse of computer network.