

DRAFT

**THE JAMAICA
TELECOMMUNICATIONS
POLICY 2007**

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Technology, Energy and
Commerce**

TABLE OF CONTENT

1.0 INTRODUCTION	523
2.0 TELECOMMUNICATIONS AND DEVELOPMENT	
	823
2.1 Policy Goals	823
(i) Improvements in Efficiency in the public and private sectors	923
(ii) Attraction of Investments	923
(iii) Education.....	923
2.2 Policy Vision	923
3.0 MAIN PRINCIPLES	1023
3.1 Telecommunications as a Developmental Instrument	1023
3.2 Universal Service & Access	1023
3.3 Neutrality of Technology	1123
3.4 Competition within the Telecommunications Sector.....	1223
4.0 INSTITUTIONAL FRAMEWORK	1223
4.1 Policy Element - Single Sector Telecommunications Regulator.....	1223
4.2 Policy Element - Governance Structure	1423
4.3 Policy Element - ICT Council.....	1523
5.0 MANAGEMENT OF SPECTRUM	1623
5.1 Policy Element - Spectrum Management.....	1623
6.0 REGULATORY FRAMEWORK	1723
6.1 Policy Element - Licensing	1823
6.2 Policy Element - Underserved Licensing and Universal Access	1823
6.3 Policy Element - Co-location of Telecommunications Equipment.....	1923
6.4 Policy Element - Economic Regulation.....	2023
6.5 Policy Element - Quality of Service (QOS) - Regulatory Performance	2123
7.0 LEGAL FRAMEWORK.....	2323
7.1 Policy Element - The New Telecommunications Act.....	2323
7.2 Policy Element - Enforcement and Sanctions	2423
8.0 COMPETITION	2423
8.1 Policy Element - Abuse of Dominance.....	2523
8.2 Policy Element - Number Administration.....	2523
8.3 Policy Element - Local Loop Unbundling.....	2623
9.0 UNIVERSAL SERVICE & ACCESS	2723
9.1 Policy Element - Universal Service to facilitate Development	2723

9.2	Policy Element - Universal Service Obligations	2823
9.3	Policy Element - Funding of Universal Service Obligations.....	2923
10.0	CONSUMER PROTECTION AND STANDARDS	3023
10.1	Policy Element - Quality of Service.....	3023
10.2	Policy Element - Privacy of Customer information	3123
10.3	Policy Element - Improper Use of Service or Facility.....	3123
10.4	Policy Element - Non-discrimination and Continuity of Supply.....	3223
11.0	TELECOMMUNICATIONS INFRASTRUCTURE	3223
11.1	Policy Element - Strategic Broadband	3223
12.0	TECHNOLOGY	3423
12.1	Policy Element - Technology Neutrality	3423
12.2	Policy Element - Next Generation Networks (NGN) and Emerging Technologies	3523
13.0	INTERNATIONAL SERVICES	3523
13.1	Policy Element - Rights of Carriers, Service Providers and Consumers.....	3523
14.0	THE ENVIRONMENT	3623
14.1	Policy Element - Treatment of ICT Waste.....	3623
14.2	Policy Element - Levels of Emission	3723

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1.0 INTRODUCTION

The Government has long recognized the importance of the telecommunications sector and the potential it offers for technological and commercial development and increased job creation. Within this context, in 1999 the Government made a decision to liberalize the Telecommunications Industry. This was also in response to external factors, which culminated in Jamaica becoming a signatory to the World Trade Organization's Basic Agreement on trade in telecommunication services.

The Government adopted a phased approach to the liberalization of the telecommunication sector in order to minimize dislocation and to ensure that the necessary legal and regulatory framework was in place. To that end, a new telecommunications policy and Act were promulgated in 1999. The Government adopted a consultative and non-adversarial approach in the liberalization process. This involved negotiating a termination of the monopoly license held by Cable & Wireless, which would have lasted until 2013 renewable to 2038. The non-adversarial approach adopted proved to be very effective, relative to the position taken by other jurisdictions at the time.

The new Act, which was promulgated in 1999, was known as the Telecommunications Act 2000 (the Act) and became effective on March 1, 2000. The Act made specific provisions for the liberalization of the telecommunications sector. The liberalization was implemented in three phases. The period for each phase and the key elements of each phase are presented below.

- (i) Phase I (March 1, 2000 – August 31, 2001)**
 - Opened the market to wireless telecommunication.
 - Opened the market for the provision of customers' own equipment.
 - Allowed companies with single entity free zone status to provide their own telecommunications services.
 - Opened the market to the resale of data, international voice and Internet access.
- (ii) Phase II (September 1, 2001 – February 28, 2003)**
 - Competition in domestic facilities and services.
 - Cable TV providers being allowed to become Internet service providers (ISPs).
- (iii) Phase III commenced March 1, 2003**
 - All telecommunications facilities, including international voice and data services, were opened to competition.

The Act provided for the establishment of an advisory body known as the Jamaica Telecommunications Advisory Council (JTAC). Cable & Wireless enjoyed a right of representation on JTAC and other appointments to the body were made on the recommendations of the other carriers, service providers, corporate business entities and consumers. The mandate of JTAC was to provide advice to the Minister on the reform of the telecommunications' sector and the implementation of the phased liberalization.

The Act provided for the sector to be regulated by the Office of Utilities Regulation (OUR). Persons aggrieved by any decision of the OUR are allowed to appeal to a Telecommunications Appeals Tribunal, if their requests for reconsideration by the OUR were not successful.

The Telecommunications Act 2000 was intended to be a transitional law created to facilitate the liberalization process. It was envisaged that a new Act would need to be promulgated either during the transitional phase or shortly thereafter. This policy is intended to set the framework for the new Act, which will replace the 2000 Act. Changes in the global and local telecommunications sectors as it relates to convergence, emerging technologies and institutional arrangements have necessitated the development of a new Telecommunications Policy for Jamaica.

In preparation for the revision of the 2000 Act, the portfolio Ministry commenced work from as early as 2001. In 2001, the Ministry commissioned a comprehensive study of the telecommunications industry. That study, which was completed in 2002, was performed with general oversight provided by JTAC. One of the main changes recommended was to reform the institutional and regulatory framework for the telecommunications sector. The study identified the existence of multiple regulatory agencies (OUR, Spectrum Management Authority, Broadcasting Commission) as a constraint to cost-effective and efficient regulation of the sector. Accordingly, the establishment of a single telecommunications regulatory body was recommended

Subsequently, two additional studies were conducted by the Ministry to examine the regulatory framework. One was conducted in 2004 by Dr. Peter Stern and the other in 2006 by the Nordicity Group. Both studies concurred with the earlier recommendation for a single telecommunications regulator. A Regulatory Impact Assessment Study was commissioned by the Cabinet Office in the Office of the Prime Minister. The study was conducted by the Cambridge Economic Policy Associates (CEPA), in partnership with a team from the University of West Indies (UWI), and a final report was produced in June 2006. The report concurred with the need to have a single agency responsible for telecommunications regulations but recommended that, in the interim, the entire OUR be reorganized and merged with the SMA. Telecommunications operators interviewed during the study, however favoured the establishment of an independent single telecommunications regulator rather than a merger of the two sector regulators. The telecommunications operators' position was consistent with the majority of stakeholders interviewed during the Stern and Nordicity studies. The primary reasons for support of the Single Telecommunications Regulator are (i) the need to give priority to the sector given the amount of investment and potential investments; and (ii) the need for the regulator to respond quickly to issues because of the dynamic nature of the sector.

Other aspects that need to be addressed in the new Telecommunications Act issues dealing with the convergence of all telecommunications services on diverse media such as Public Switch Telephone Networks (PSTN), Asymmetrical Digital Subscriber Line (ADSL), Broadband Networks deploying cable modems for the provision of Internet Access (Broadband over Cable Television Networks), fixed and mobile wireless networks, including emerging high speed wireless technologies (such as 3G, 4G, CDMA, WiFi and Broadband Wireless Access)

representing the licensed and unlicensed spectrum, all of which will compete with legacy and wireline networks. Additionally, the new technologies and the resulting competition issues arising out of the liberalized market served as compelling factors for a new legal, regulatory and institutional framework.

This new framework would be designed to effectively address:

- Next generation networks (NGNs) which offer end-users access through a variety of networks, and because they are based on IP technology, they rely on much cheaper bandwidth and make available a wide range of services more easily.
- Emerging network protocols that provide or will provide seamless transport to new and legacy networks.
- The provision of universal service, high capacity IP networks, voice over Internet Protocol, Internet Protocol Television (IPTV) and the multimedia content that can be delivered over the converged networks.

With advancement in network technologies comes the need to manage and ensure that the vision and objectives of Jamaica, relative to the delivery of affordable and effective services are met. While standards for telecommunications and broadcasting networks exist today and carriers are required to submit such results on a regular basis to the respective agencies, the Quality of Service (QOS) is a significant component of the NGN networks. There will be a considerable effort required by the regulator to review, adopt, publish and enforce global standards for QOS. This is doubly important given the migration of legacy networks to IP based networks.

Given the emergence of next generation networks, there is a need to address the management and potential governance of content. There will be an institutionalized relationship between the content regulator and the telecommunications regulator as it relates to convergence and convergence regulation.

2.0 TELECOMMUNICATIONS AND DEVELOPMENT

2.1 Policy Goals

Recent developments in Information and Communications Technology (ICT), in general, have resulted in the provision of a range of telecommunications-based services. Telecommunication services involve the transmission of voice, video, data and multi-media communications based on wireline and wireless networks. The Government regards telecommunications as a significant part of its economic strategy and wishes to leverage telecommunications in its various forms to enhance the development process. The following outline the three main policy goals:

(i) Improvements in Efficiency in the public and private sectors

Telecommunication has the potential for increasing the overall efficiency in both the public and private sectors. In the case of the public sector, the objective is to improve public access to a wide range of government services and to improve the responsiveness of government agencies to the public. With respect to the private sector, the overriding objective is to obtain the many benefits that flow from competition among individuals and entities trading in goods and services within the telecommunication's industry. With cost-effective telecommunication services, it is envisaged that firms will be constantly automating and improving their business processes which will result in the improved productivity of the national economy.

(ii) Attraction of Investments

The Government is keen on promoting the establishment of a world-class telecommunications infrastructure and services, so as to attract increased investments in the country, with a particular focus on ICT related businesses and services. These include contact centers to support global business processes and customer service operations. The Government also seeks to foster access points, incubators and ICT parks utilizing reliable and robust telecommunications infrastructure.

ICT will also be utilized to promote and attract investments in the entertainment and culture sectors and also to build local content.

(iii) Support for all sectors

The Government is committed to using ICT as a key enabler to develop all sectors including health, education, tourism and agriculture. Focus will be given to the creation of an educated and knowledge-based society capable of leveraging the cumulative benefits of telecommunications and ICT to achieve global competitiveness.

2.2 Policy Vision

The vision of the Government is to establish telecommunications as a national priority that will facilitate economic and social development. As such, the Government would like to have in place a modern island-wide telecommunication's infrastructure delivering a wide range of high-standard competitively priced services, in accordance with best practices in the global telecommunications industry.

3.0 MAIN PRINCIPLES

This Telecommunications Policy is anchored on four fundamental principles which are as follows:

- (i) Telecommunications as a developmental instrument
- (ii) Universal Service & Access

- (iii) Neutrality of Technology
- (iv) Competition within the telecommunications sector

3.1 Telecommunications as a Developmental Instrument

Telecommunications is a key enabler for all sectors including ICT, industry, commerce, education, health, security, entertainment and services. This policy is intended to utilize telecommunications as an instrument for national development and to improve the domestic and international competitiveness of Jamaica.

3.2 Universal Service & Access

At the end of 2005, the regulator’s data showed that mobile penetration rate was approximately 81% and total telephone (mobile and fixed) penetration rate was 94%. While the ITU indicators for 2005 showed an Internet penetration of 39.87% and a computer penetration of 6.2%. Despite the high total telephone penetration rate, many internet services still depend on fixed line based networks for connections to end users however this is rapidly changing because of wireless technologies such as Wi-Fi and Broadband Wireless Access (BWA). BWA in particular has been singled out for their ease of installation and their ability to provide affordable access in unserved and underserved areas.

The government is therefore revising its policy as it relates to universal service and access to extend beyond voice and to include internet, computer, information literacy and the access to telecommunications services.

This policy defines Universal service as the availability of telecommunication and information services at an affordable price to all people throughout Jamaica.

Universal service consists of three main elements: availability, accessibility and affordability defined as follows:

Availability:	There should be ubiquitous coverage of telecommunications and internet services
Accessibility:	Users should be treated alike; there should be no discrimination in terms of price, service and quality, irrespective of location or race, gender or religion.
Affordability:	Services should be priced so that most users can afford it.

The main elements of universal access include:

- (a) Physical build-out of the network to cover unserved/ underserved areas in both rural (remote) and urban (inner city) areas.
- (b) Ability to utilize the network (knowledge/expertise to use the network effectively).
- (c) Access to the emergency services e.g. Fire Brigade, Police, Air and Sea Rescue
- (d) Access to the network by persons with disabilities and special social needs.
- (e) Access to fixed line and wireless networks

The government is committed to expand the use of ICT infrastructure and access technologies to the education sector to stimulate interest in, and the learning of, telecommunication technology and services. More specifically, this will include the deployment of broadband ICT infrastructure and access technologies for pre-tertiary students of all ages including electronic learning (E-learning) and internet access. The ultimate goal is to bridge the digital divide between Jamaica and the global marketplace by creating a culture of usage of and reliance on Telecommunications and ICT.

The Government will partner with the private sector to deploy an island-wide broadband network and to achieve universal access. This partnership will include the provision of existing and emerging technologies (example: computers, PDAs) to access the network and services. Another key requirement is to educate citizens to use the technologies and access to services.

3.3 Neutrality of Technology

This policy will not seek to prescribe any particular type of technology nor in any way seek to constrain the dynamics of technological innovation. It is intended to encourage competition in technologies so that consumers can benefit from technological innovation and obtain high quality services at the most reasonable and affordable prices. The policy is, therefore, technology neutral with respect to the separation of voice and data, as well as in the allocation of telecommunications resources.

Neutrality of technology also seeks to ensure regulatory even-handedness for relatively homogenous products which are provided within a single market but which use alternative technologies for service delivery. This is to ensure that no particular technological solution is artificially stimulated or penalized through inconsistent regulations.

3.4 Competition within the Telecommunications Sector

The need for de-monopolization was a major feature of the earlier policy. Some degree of competition now exists in the mobile telephone telecommunications sector. A focus of this new policy is to (i) promote and deepen competition in relation to the various services offered in the sector; and (ii) enable participation by additional suppliers and providers, thereby, providing a wider range of services. This will result in several benefits, including a reduction in the costs paid by consumers to switch to different service providers. It is expected, therefore, that competition-enhanced services such as number portability will emerge based on market demand.

The natural advantages of dominant operators must be appropriately regulated to prevent anti-competitive behaviour.

The OUR has completed a study on anti-competitive behaviour in the sector and its remedies in the form of competitive safeguards. It is recommended that, to the extent applicable, this body of work be incorporated in the revised regulatory framework.

4.0 INSTITUTIONAL FRAMEWORK

In order to promote full competition as well as to facilitate the convergence of telecommunications, information and communications technology and media services associated with the transition to NGN, a new institutional framework will be implemented for the sector.

4.1 Policy Element - Single Sector Telecommunications Regulator

(a) Policy Issue

- (i) Each aspect of the telecommunications sector is currently regulated by a different regulator. Consequently, the sector consists of a number of regulators. These are the Office of Utilities Regulation (OUR), the Spectrum Management Authority (SMA), the Consumers Affairs Commission (CAC), the Broadcasting Commission (BC) and the Fair Trading Commission (FTC). The Ministry of Industry, Technology, Energy and Commerce (MITEC) has portfolio responsibility for policy formulation for the ICT sector. The Minister of Information and Development has responsibility for policy development in the electronic media sector, supported by the Broadcasting Commission and the Information Division in the Office of the Prime Minister. The current telecommunications regulator (OUR) reports to the Minister responsible for Information and Development in the Cabinet Office for matters concerning administration, and the Minister of Industry, Technology, Energy and Commerce for policy matters. MITEC also has oversight for the SMA, FTC and the CAC. With respect to telecommunications, MITEC develops and gives policy direction of a general nature.
- (ii) There is overlapping of jurisdictions in the sector which impedes its efficient regulation and increases the regulatory cost. This is evidenced by the shared responsibilities of the OUR, SMA, FTC and CAC. This overlapping of jurisdictions produces a degree of uncertainty in the minds of stakeholders and unnecessary delays in the issuance of approval, rendering of decisions, etcetera by the regulators. A useful example, is that applicants are at times required to visit several offices in order to access a right or remedy relating to telecommunication services, and the regulators, in turn, are required to co-ordinate their efforts.

(b) Policy Objective

The removal of the fragmentation and overlapping jurisdictions in the sector, caused by the existence of the multiple regulators, and to implement a simplified and efficient institutional framework for the regulation of the trading of goods and services within the sector.

(c) Policy Recommendation

- (i) The creation of a single regulator for the telecommunications sector; this would involve the fusion of the telecommunications regulatory functions of the OUR, the radio spectrum technical functions of the BC and the spectrum management functions of the SMA. Content matters would remain within its portfolio Ministry.

- (ii) It is recommended that the FTC, which has responsibility for a wider constituent, remains separate from this converged entity and maintains responsibility for the adjudication or resolution of competition and consumer competition matters that properly falls within its jurisdiction under the Fair Competition Act. All telecommunications competition related matters must be referred in the first instance to the FTC for determination. Matters referred to the FTC are to be determined in accordance with the provisions of the Fair Competition Act. If the FTC considers the matter to be other than a competition issue, it should refer the matter to the single regulator. Similarly, competition issues referred to the single regulator in the first instance should be re-directed to the FTC, if in the judgment of the single regulator it is in fact a competition matter.
- (iii) Mergers, acquisitions and other corporate combinations will be dealt with in a comprehensive framework and specific guidelines will be developed. The FTC will analyze mergers and acquisitions in the telecommunications industry. Horizontal and Vertical mergers will be of primary concern. Additionally, the powers of the FTC and the remedies (e.g. Prohibition or Dissolution, Partial Divestiture, Regulation/Conditional Approval) it can impose in the merger control regime will be clearly articulated and should be informed by the expertise of the Single Sector Regulator and the Content Regulator.
- (iv) It is also recommended that the role and responsibilities of the BC (content regulator) be expanded to include the regulation of content for all existing and emerging technologies. This should be implemented using a phase approach.
- (v) It is recommended that a cross-regulatory relationship be institutionalised between the content regulator and the telecommunications regulator in the form of an *Inter-regulator's Forum*. This body would be the place for all issues to be addressed between the bodies, including matters such as allocation of fee income. This consultative forum should not be ad hoc but an institutional requirement in law.

4.2 Policy Element – Governance Structure

(a) Policy Issue

The governance structure needs to separate investigative and adjudicative functions, in order to mitigate potential challenges on the grounds that the regulatory decisions do not satisfy the rules of natural justice. Additionally, the single regulator needs a governance structure which will ensure independence and the resolution of issues that affect the sector in a reasonable timeframe, given the dynamic and competitive nature of the sector.

(b) Policy Objective

The objectives are as follows:

- (i) the separation of the policy and regulatory functions, while providing immediate access to the regulator in circumstances where issues require the prompt or immediate attention of the single regulator;
- (ii) transparency in the regulatory process;
- (iii) the independence of the single regulator;
- (iv) Natural justice. Given the proposed increase in responsibility that will be given to the Single Telecommunications Sector Regulator, there is a need to ensure that the governance structure satisfies the rule of natural justice;
- (v) a mechanism for continuous consultation with all stakeholders by the regulator

(c) Policy Recommendation

The following governance structure is recommended:

- (i) A Regulatory Board of Commissioners - responsible for adjudication of matters referred to the Board and for regulatory decision making. It is recommended that the Commissioners be appointed based on their professional qualifications and for renewable periods through a recommendation to Cabinet. The Board will consist of a minimum of three and a maximum of five Commissioners.
- (ii) The single regulator will be responsible for making recommendations for decisions to the Board and, in the case of disputes or complaints will be responsible for investigations of complaints and presenting the findings to the Board for a determination.
- (iii) The Telecommunications Appeals Tribunal or any other designated Appeals Tribunal will be responsible for the hearing of appeals of decisions made by the Regulatory Board.
- (iv) The Courts - Stakeholders may appeal to the courts, on a point of law, for any decision taken by the Telecommunications Appeals tribunal.
- (v) A formal process for the development of rules / procedures and continuous public/stakeholder consultations

4.3 Policy Element – ICT Council

(a) Policy Issue

The Jamaica Telecommunications Advisory Council (JTAC) was established by the Telecommunications 2000 Act, to function as a transitional body for the phased liberalization of the sector. As per the provisions of the Act, the five year's mandate of JTAC has expired and there is now competition in certain sectors of the telecommunication's market.

(b) Policy Objective

To establish a council that focuses on more strategic ICT related issues and activities so that the sector and the country can become more competitive.

(c) Policy Recommendation

It is recommended that a National ICT Council be established within the portfolio Ministry. The Council is to consist of personnel having (expert) knowledge of the industry and would serve as an advisory council to the Minister. The Council's activities would focus on the formulation, articulation and review of the national ICT policy and the national ICT strategy. The ICT Policy and Strategy will address all aspects of ICT, including content and carriage.

With the establishment of the National ICT Council, there would be no further need for the Telecom Advisory Council. Matters that would normally be referred to the Telecommunications Advisory Council would now be dealt with within the broader context of national ICT development.

The source of administrative and financial support for the operation of the National ICT Council will be clearly defined in any revised Telecommunications Act.

5.0 MANAGEMENT OF SPECTRUM

5.1 Policy Element – Spectrum Management

(a) Policy Issue

The Radio Frequency Spectrum is critical for any application that requires wireless technologies, including broadcasting, subscriber television, aeronautical and maritime guidance systems and emergency services. This makes it a public resource, an economic asset, that is in ever-increasing demand and which must be effectively managed by the Regulator to ensure that maximum benefits accrue to the Jamaican people.

The rapid increase in the provision of mobile services and the introduction of new wireless technologies (such as WiFi and BWA) has increased the demand for spectrum dramatically over the last few years. As a result, new ways have to be implemented to manage spectrum use more efficiently.

(b) Policy Objective

To develop spectrum management and allocation policies, which take into consideration all existing and emerging wireless technologies (including 3Gs, 4Gs, WiMax, WiFi and CDMA) to:

- (i) promote more efficient allocation of the spectrum;
- (ii) increase the speed of proliferation, and access to the benefits of, new technologies and associated services;
- (iii) derive maximum economic benefit; and
- (iv) attract additional investments

(c) Policy Recommendation

The following are recommended:-

- The efficient allocation and utilization of the spectrum to facilitate the proliferation of new technologies in order to stimulate innovation, investment and competition among services and technologies.
- Provisions in the new Telecommunications Act for enforcement related to the illegal use of spectrum.
- The allocation of spectrum in accordance with the requirements of both the public and private sector, while ensuring a balance between the two sectors to the ultimate benefit of Jamaica.
- Upon consultation and to the extent necessary, the re-allocation of, and access to, the spectrum to meet changing user needs and to facilitate the deployment of new and emerging technologies provided that such re-allocation or access to Spectrum shall be based on appropriately defined criteria and conditions and shall be in accordance with all applicable laws..
- Radio spectrum allocation will allow for reserved frequency allocations for law enforcement, public safety, emergency and other services of national interest. The power to assign and re-assign radio frequency spectrum is to be the responsibility of the Regulator , except in the provision of specified spectrum allocations such as mobile. Further, subject to an exparte order from the Supreme Courts, the Government shall have the power to suspend the right of use of any spectrum allocated, in the interest of National Security or defence.

6.0 REGULATORY FRAMEWORK

In order to facilitate and safeguard procedural efficiencies in the telecommunications sector, now characterized by the convergence of networks, technologies and services, an appropriate regulatory framework is required. This framework will be based on rules that are transparent, responsive to technological change and treat with issues including technical convergence, interconnection, universal access/service, effective competition and increased consumer protection and welfare. The framework will also provide for the sector to be regulated in a non-discriminatory and transparent manner, including accountability for all its operations and service delivery to consumers and carriers.

6.1 Policy Element - Licensing

(a) Policy Issue

- (i) In a competitive telecommunications market, an effective licensing regime is needed to ensure order among competing operators. In awarding licenses, consideration should be given to the number of licenses, the consumption of finite resources such as radio spectrum and numbering, and the business model, technical and financial capabilities of applicants.

(b) Policy Objective

To administer a licensing arrangement for the telecommunication sector, which ensures that appropriate standards are maintained, and competition and consumer welfare advanced. Additionally, the licensing regime will ensure the allocation of scarce resources and establish a framework for competition.

(c) Policy Recommendation

- (i) Simplification of the licensing process
- (ii) The Government will institute a licensing regime which will effectively regulate the various telecommunication services offered to the public. The licensing regime will continue to promote the principle of technology neutrality.

6.2 Policy Element – Underserved Licensing and Universal Access

(a) Policy Issue

While telephone penetration is high in Jamaica, broadband penetration to provide internet access remains low. In this regard, there is a need for the regulatory framework to provide a licensing mechanism that will expand broadband access in underserved and marginalized areas.

(b) Policy Objective

To increase broadband penetration by supporting the specific needs of these under-served communities including internet access, e-learning, e-health, e-government, e-commerce and other electronic services.

(c) Policy Recommendation

It is recommended that the under-served priority regions of the country be identified and the special licenses be issued for broadband services in these areas. The licensing regime will contain incentives to investors to attract provision of access and services in these underserved areas.

6.3 Policy Element – Co-location of Telecommunications Equipment

(a) Policy Issue

With the introduction of competition in the local telecommunications sector, there has been a proliferation of cell towers across the island. Operators are currently not sharing premises and other essential facilities to take advantage of unbundling. In addition, the National Works Agency is having issues with the multiple operators that engage in excavating the public roadways to lay equipment and cable. Specifically, there is lack of coordination between operators resulting in increased costs, traffic congestion and undue disturbance to the public. Therefore, there is an urgent need to implement a new co-location policy to resolve these issues.

(b) Policy Objective

The objective is to have cell towers optimally located island-wide, in accordance with the guidelines established by the National Environmental and Planning Agency, and to promote co-location as it relates to cellular towers, cable landing stations, central offices, operator premises and right-of-way /easements for the laying of cables.

(c) Policy Recommendations

The recommendations are:

- (i) Provisions will be made in the new Telecommunications Act for co-location as it relates to cellular towers, cable landing stations, right-of-way to lay cables and attachment of cables to poles.
- (ii) Equipment sited prior to this policy will be co-located with the consent of the operators or in accordance with all applicable laws.
- (iii) Incentives will be given to companies with equipment at sub-optimal locations to relocate such equipment to optimal locations or co-locate at such sites.
- (iv) The regulator in collaboration with other government agencies, such as NEPA, local Parish Councils and the NWA, will identify prime cell tower locations, cable landing sites, pole locations and right away for laying cables. This information will be used as a criterion for certifying cell towers.
- (v) The regulator will certify these optimal locations and ensure that the electronic equipment and cables be implemented in accordance with technical standards.
- (vi) Telecommunication companies that are authorized to erect new towers based on the optimal location criterion will be required to facilitate the co-location of equipment of other providers. The regulator will prescribe the co-location rates to be charged by owners of cell towers.

- (vii) Provisions will be made in the new Telecommunications Act for operators to request physical co-location or virtual co-location, or both, in another operator's central offices except in those that have space limitations, or where it is not technically feasible to provide a physical collocation arrangement. Central office means an operator's primary switching location.
- (viii) Provision will be made for appropriate mechanisms to be instituted to govern collocation arrangements relative to subscriber television operations especially as it relates to underground carriage and incentives will be provided to encourage co-location.

6.4 Policy Element - Economic Regulation

(a) Policy Issue

The phenomenon of telecommunications convergence and the incidences on the mergers, acquisitions and consolidations of carriers globally illustrate a tendency towards dominance of the telecommunications sector, in the more developed markets, by a few carriers. The Jamaican Telecommunications industry is no less susceptible to these factors.

Consequently, whilst there is a need to recognize and allow market forces to govern the telecommunications environment, the regulator must guard against anti-competitive practices of any dominant service provider in the island. There is also an absence of provisions for the economic regulations of the communications (media) sector which needs to be urgently addressed, given the increased number of companies/entities in the sector. Regulatory provisions should include price caps, absence of dialing parity, revenue caps, maximum rate of return in areas of monopoly/dominance, competitive safeguards and price filing, as appropriate.

(b) Policy Objective

To allow market forces to govern the telecommunication sector subject to economic regulatory provisions aimed at promoting competition in the sector, however provisions are to be applied by the regulator, as necessary, to prevent market failure or anti-competitive practices by any dominant provider or supplier of services.

(c) Policy Recommendation

It is recommended that:-

- (i) There should be effective regulatory provisions that will enable the regulator to take timely action against anti-competitive practice(s) by any dominant carrier/service provider. The regulatory provisions in the Telecommunications Act should enable the Minister, upon the recommendation of the Regulator, to enact economic regulations to prevent or abort any anti-competitive practice.
- (ii) The Telecommunications Act should provide adequate provisions for the enforcement of economic and other pro-competition regulations by the regulator.

- (iii) A mechanism to forecast, to collect information, and analyze the impact of economic regulations on telecommunications businesses, especially the broadcasting sector be implemented in the short-term. The information gathered should be used to formulate and apply economic regulatory measures both ex ante and post licensing.

6.5 Policy Element – Quality of Service (QOS) - Regulatory Performance

(a) Policy issue

There will be a need to demonstrate the regulator's effective performance in relation to the QOS, Performance Standards and other policy elements to be observed by the carriers and service providers.

(b) Policy Objective

To promote a high standard of performance by the regulator in relation to achieving compliance with the Government's telecommunications policy and attending legislative provisions.

(c) Policy Recommendation

It is recommended that the regulatory framework includes a self-regulatory process in order for the regulator to plan, execute, promote and communicate its scope, responsibilities and delivered results. This process will include the following:

- (i) The establishment and inclusion of Performance and Quality of Service standards for the regulator in its annual budget and work plan.
- (ii) Mechanism for the operators who pay regulatory fees to comment on the regulator's draft annual budget and the Regulator may have regard to take into account these comments before finalizing and submitting its budget for approval.
- (iii) The development and maintenance of a comprehensive up-to-date set of publication methods, including a web site containing information on all of the Regulator's current and past regulatory proceedings, including decisions, regulations, consultations, Quality of Service Standards, Discussion Papers and other data and statistics for the sector. The Regulator will also maintain a toll free line.
- (iv) Where the Regulator conducts proceedings to adopt new rules or amend existing ones, the public will be allowed the opportunity to participate formally by petitioning the Regulator according to established rules and procedures or informally by submitting copies of comments. This will ensure that the new or amended rules serve the public interest.
- (v) The Regulator should have an office of public affairs which issues public notices, news releases provides copies of decisions, rules and comments at standard reproduction cost to the public. This department should be responsible for all outreach activities of the Regulator including luncheon series on issues, recent policy

changes and conducting seminars and workshops designed to keep the public informed.

7.0 LEGAL FRAMEWORK

7.1 Policy Element - The New Telecommunications Act

(a) Policy Issue

The Telecommunications Act 2000 and supporting legislative framework were enacted to achieve certain stated objectives. Whereas some of these objectives have been achieved, the legal framework needs revision in order to address current developments in the sector and enhance the regulation of the sector.

(b) Policy Objective

To give effect to, support and secure the provisions of this telecommunications policy, with an appropriate and robust legal framework. This framework will reference relevant legislative provisions, regulations and orders outlining the rights, duties and responsibilities of all appropriate portfolio Ministries, Regulatory agencies, licensees, service providers, customers and any other stakeholders.

(c) Policy Recommendation

The creation of a new Telecommunications Act and supporting regulations to mandate and give effect to the several objectives in this policy, including:

- (i) the need for innovative and flexible regulatory governance in an environment where a number of telecommunications services are being transmitted/offered over a single telecommunication medium;
- (ii) the promotion of the development of the telecommunication sector;
- (iii) the promotion of competition among licensees and service providers;
- (iv) the promotion of the concept of universal service and access;
- (v) the protection of the rights of, and enforcement of the responsibilities of, carriers, service providers and consumers;
- (vi) provisions for measures to be taken by the State for the protection of the public's interest, in times of emergency, and national defence; and
- (vii) provisions for the optimum allocation and utilization of all telecommunications' resources and the protection of the environment.

- (viii) Existing laws will be reviewed to ensure consistency between the new Telecommunications Act and regulations and other laws.

7.2 Policy Element – Enforcement and Sanctions

(a) Policy Issue

The current legislative framework has, however, proven inadequate and, in some cases, unsuitable to enforce existing sanctions for breaches and in some cases the available sanctions are inappropriate for the proven breach or offence. Hence, in many instances, suspension of the right to provide service (disconnection) or termination of a licence is the only remedy for a breach. In circumstances where such a remedy does not commensurate with the breach, the power of the regulator to impose and enforce a monetary penalty would be a more appropriate and equitable remedy.

(b) Policy Objective

To remedy existing deficiencies and mischief in the legal framework by prescribing appropriate and equitable sanctions and penalties for different breaches and clear and certain procedures for the enforcement of such sanctions and penalties.

(c) Policy Recommendation

The new Telecommunication Act and regulations should make clear provisions for curtailing breaches by the enforcement of appropriate sanctions. Such provisions are to include:

- (i) the introduction of powers to impose and enforce monetary penalties, where appropriate;
- (ii) prosecution in the Resident Magistrate’s Court for specific breaches under the Act; and
- (iii) limiting the termination of licence or suspension of the right to provide service to material breaches in cases where it is just and equitable to do so.

8.0 COMPETITION

It is generally accepted that competition among providers of goods and services in any sector promotes and encourages the growth and development of that sector and the efficiency of the providers of such goods and services. Competition often results in providers adopting new and responsive technologies or services, at affordable prices, to attract and satisfy consumers. In order to foster competition, barriers to new entrants in the market or for a particular service should be kept at a minimum and be limited to satisfaction of the licensing criteria and the ability to deliver the services at the requisite standards.

8.1 Policy Element – Abuse of Dominance

(a) Policy Issue

There continues to be an issue regarding the interconnection, including interconnection agreements and arrangements, between the dominant provider and other provider.

(b) Policy Objective

The objective is to reinforce the legal and regulatory framework that stipulates the terms and conditions for interconnection and provide the necessary means for the enforcement of such terms and conditions.

(c) Policy Recommendation

Legislation will be enacted to better define and set out the interconnection process and the means of enforcement of such a process. This will include provisions for co-location and local loop unbundling, in a manner consistent with applicable laws.

8.2 Policy Element – Number Administration

(a) Policy Issue

Telephone numbers constitute a finite resource which must be administered in the public interest. With the introduction of deregulation, the regulator is now responsible for number administration. Additionally, there is now a competitive market and new and different means of delivering services. To respond to these developments, there is a need for:

- (i) effective management of the numbering system to ensure equity and fair allocation of numbers to all carriers, services providers and new services, as appropriate;
- (ii) number portability subject to a demand for same;
- (iii) inclusion of new numbering options, such as *TElephone NUmber Mapping* (ENUM); and
- (iv) the rationalization of the functions of the two existing numbering entities (traditional telephone numbering and domain name system) in preparation for the implementation of new and emerging numbering options.

(b) Policy Objective

To effectively manage telephone numbers to facilitate the optimal allocation of telephone numbers to all existing and new service providers; and to provide for the application of new numbering systems as deemed suitable.

(c) Policy Recommendations

The regulator will have responsibility for number administration and the allocation of numbers to service providers. The key recommendations include:

- (i) a sufficiently flexible numbering system to meet future demands for telephone numbers;

- (ii) the allocation of numbers on an equitable and commercially reasonable basis;
- (iii) numbers allocated and not used within a specified time to be re-possessioned, if necessary;
- (iv) cost effective management of the numbering plan;
- (v) the implementation of Service Provider Number Portability subject to a determination by the regulator, upon reasonable grounds, that there is sufficient demand for number portability in the market place;
- (vi) the implementation of procedures to ensure compliance with the ENUM protocol and future numbering protocols by the administrator of domain name system and the regulator. This compliance will ensure the resolution and rationalization of the management of the numbering regime (legacy and ENUM) and guarantee that telephone numbers allocated by the number management agency will map properly as domain names to Internet content resources.

8.3 *Policy Element – Local Loop Unbundling*

(a) Policy Issue

Currently, there is no unbundling of the local loop which has resulted in the lack of competition in the market to access network services.

(b) Policy Objective

To encourage competition and promote the growth of the industry by removing the need for new entrants to replicate the local loop plant, thereby, eliminating the costs associated with such replication; and facilitating the deployment of broadband services throughout the island.

(c) Policy Recommendation

Provisions will be made in the new Telecommunications Act for the regulator to prescribe the terms and conditions for the unbundling of the local loop.

9.0 UNIVERSAL SERVICE & ACCESS

9.1 *Policy Element – Universal Service to facilitate Development*

(a) Policy Issue

Universal Service is required to ensure that all citizens have access to basic telecommunications services at an affordable rate. Voice telephony is extensively available throughout Jamaica but there is a need to expand island-wide access to broadband networks and services.

(b) Policy Objective

- (i) To ensure that telecommunication services are available throughout the island and to provide all Jamaicans with access to such telecommunications services at affordable prices.
- (ii) To ensure the wide scale availability and access to high quality and diverse telecommunications services on a domestic and international broadband infrastructure to facilitate and to support the Government's developmental programmes.
- (iii) To ensure that there is information literacy and the provision of local content.

(c) Policy Recommendations

- (i) The establishment of a national broadband network to connect key public institutions including government agencies, schools, libraries, post offices, emergency and public safety entities.
- (ii) Government should leverage telecommunications in order to achieve lifelong learning and a knowledge-based society by ubiquitous access to information which supports improved education, skill acquisition and innovations.
- (iii) The provision of incentives to operators that offer services in underserved communities.
- (iv) The promotion of information literacy programmes and the development of local content.

9.2 Policy Element – Universal Service Obligations

(a) Policy Issue

Prior to the de-monopolization of the local telecommunications sector, the sole telecommunication provider had responsibility for meeting the universal service obligations (USO). Since de-monopolization, there is shared responsibility for financing the USO, with no single carrier or service provider bearing this responsibility.

Without an adequate universal service obligation, there is a risk that carriers and service providers would favour geographical areas that are densely populated and where the cost of delivering service per customer would be relatively low. The policy seeks to guard against this risk, which would exclude numerous rural communities and lower socio-economic areas, from access to telecommunication services.

While voice telephony, through wire line and wireless transport, penetrates extensive areas of the island, the availability and access to broadband networks for Internet access remains a major challenge. This has adversely impacted on ICT based education, access to information, and the

deployment of electronic services (E-Services) beyond urban and other densely populated geographical regions. There is therefore a need to deploy broadband networks to underserved areas.

(b) Policy Objective

Citizens must be able to obtain efficient and reliable telecommunications services island-wide at reasonable and affordable rates.

(c) Policy Recommendations

- (i) Zoning underserved areas and provide incentives to maximize access to broadband services.
- (ii) Support programmes that specifically target certain groups such as low-income households, the elderly and the disabled.
- (iii) Establish a micro-financing fund which will provide loans, grants, equity in projects run by small local entrepreneurs, local authorities and non-profit organizations to encourage the grassroots movement to expand ICT access.
- (iv) Offer incentives to promote the deployment of services to underserved areas and the provision of Access Points and multi-function telecentres or internet cafes by the carriers, smaller rural service providers or other providers.
- (v) The continuation of funding connectivity services to all public institutions including educational institutions, libraries, and other public facilities in urban and rural communities.
- (vi) The provision of internet access devices and applications for the training of students in the use of the internet and other ICT services will also be funded through the Universal Access Fund Company to support the Government's vision of an information and knowledge based society, with the capacity to develop the telecommunications sector and to compete globally.

9.3 Policy Element – Funding of Universal Service Obligations

(a) Policy Issue

There is the need to retain a financing methodology capable of generating a sustainable source of funds to meet the universal service obligations across the country. This was provided for in the Telecommunications Act 2000 and is consistent with the practice in some countries whose governments cannot afford to fund such expenses from general revenue.

(b) Policy Objective

To continue with the requirements for telecommunications service obligations to fund universal service obligations.

(c) Policy Recommendations

- (i) The Telecommunications Act should make specific provision for the Universal Access Fund to be empowered to collect and administer the universal service obligations.
- (ii) The Telecommunications Act should make specific provisions for the obligations to be used to finance the universal service programmes set out in this policy or determined necessary for the fulfillment of the policy objectives.
- (iii) Emphasis should be placed on using the obligations to finance broadband access. This should include appropriate hardware, software and electronic educational content (web-based applications).
- (iv) Universal Service obligations shall be as agreed between the government and stakeholders or as prescribed by government from time to time.

10.0 CONSUMER PROTECTION AND STANDARDS

10.1 Policy Element - Quality of Service

(a) Policy Issues

Consumers at times experience poor quality of service. This includes “dropped calls”, unavailability of network and services, long problem-resolution time and breach of technical standards.

(b) Policy Objective

To have an efficient and reliable telecommunication service that conforms to international technical and quality of service standards.

(c) Policy Recommendation

The regulator should prescribe quality of service and technical standards, in keeping with best practices in the global telecommunications industry, which shall be met by each telecommunication service provider.

10.2 Policy Element - Privacy of Customer information

(a) Policy Issues

Customer privacy can be compromised by virtue of the customer accessing certain telecommunications services. Possible violations include archiving of personally identifiable customer information for marketing and sales purposes without prior written or electronic consent, and failure to disclose policy regarding usage of information, unauthorized recording of communication and installation of rogue programmes.

(b) Policy Objective

To minimize the incidents of invasion of customers' privacy and the unauthorized usage of customers' information

(c) Recommendation

Where no legal provision or insufficient legal provision exists, legislation should be enacted to protect the privacy of customers and prevent the misuse of or unauthorized usage of information. Provisions will be made in the Law for persons whose privacy have been violated to seek redress.

10.3 Policy Element - Improper Use of Service or Facility

(a) Policy Issue

There is, at present, in-adequate legislative provisions to prevent a carrier and/or service provider from knowingly using or/and allowing its services and/or facilities to be used to defraud, abuse, annoy, threaten, or harass anyone.

(b) Policy Objective

To have timely and effective recourse in the event of any such improper use of services and facilities.

(c) Policy Recommendation

There should be legislative provisions to empower the regulator to intervene in the event that carriers and service providers are not sufficiently responsive to customer complaints. Provisions will be made in the Law for customers to seek redress.

10.4 Policy Element - Non-discrimination and Continuity of Supply

(a) Policy Issue

There is an absence of adequate legislative provisions to ensure that carriers and service providers do not act in a discriminatory fashion against retailers and final consumers in the provision of services.

(b) Policy Objective

To ensure the absence of discrimination against retailers and final consumers of services, in the provision and maintenance of these services

(c) Policy Recommendation

There should be legislative provisions to empower the regulator to intervene in the event of discriminatory conduct on the part of the carriers and service providers.

11.0 TELECOMMUNICATIONS INFRASTRUCTURE

11.1 Policy Element – Strategic Broadband

(a) Policy Issue

Many countries, states, counties and cities are building modern telecommunications infrastructures and offering advanced services to provide a competitive edge in the bid to attract investments to develop their societies. There needs to be a high capacity backbone network to efficiently convey, across Jamaica, multi-media traffic which originates from all the access technologies such as fixed and mobile wireless, PSTN voice and ADSL and cable modem. Access to the public rights of way can then be regulated. This, in turn, should provide a national platform for the deployment of advanced telecommunication services at internationally competitive prices.

There is a need to for a telecommunication infrastructure capable of providing assistance in matters dealing with public emergency, safety, national security and defence. Additionally, there also exists a need for the Government's telecommunications and information and communications technology (ICT) systems to be developed based on common standards and protocols so that they can be fully integrated. Greater strategic planning and coordination of implementation can rectify the existing problem of multiple incompatible networks in the public sector.

(b) Policy Objective

- (i) To establish a high capacity backbone to convey multi-media traffic across Jamaica which will facilitate the public good, commercial and national security considerations.
- (i) To regulate public rights of way to the high capacity backbone.

- (iii) To implement a comprehensive and integrated telecommunications system that will link all government entities in order to enable efficient and cost-effective communications across the public sector

(c) Policy Recommendations

- (i) Legislative provisions will be enacted to facilitate the establishment of a public high capacity backbone network to efficiently convey, across Jamaica, multi-media traffic which originates from all the access technologies such as fixed and mobile wireless, PSTN voice and ADSL and cable modem. Access to the public rights-of-way will also be regulated.
- (ii) The Government will harmonize the ICT system across the public sector so that it is fully integrated, compatible, efficient and cost-effective. The Government will also establish common telecommunications and ICT standards and protocols for use in the public sector, and require all ministries and agencies to conform to such standards as they develop their respective systems.
- (iii) With respect to network infrastructure, this should comprise of infrastructure owned by the different arms of Government being inter-connected to privately owned networks where it is economical to do so.
- (iv) Private companies/carriers should be encouraged to enter into agreement with Government for the rolling out of fiber optic cables or other existing and emerging infrastructure technologies along roadways.
- (v) The network topology should consider and take advantage of the existing fiber deployments and other telecommunications network infrastructure, the national road network and utility rights of way. Network topology should incorporate metro network designs for the urban centres using near shore submarine, terrestrial subterranean and aerial means, and feeder links for remote areas.

12.0 TECHNOLOGY

12.1 Policy Element - Technology Neutrality

(a) Policy Issue

There is a growing range of technological options for delivering ICT services. Some traditional options are more accepted and protected; resulting in the tendency to resist and restrict new and emerging alternatives such as NGN. With NGN the technology infrastructure does not impact on the type of service that is delivered, therefore the technology used to deploy infrastructure ultimately depends on the particular circumstances and needs of the target population.

(b) Policy Objectives

The objective is to create a policy environment whereby all existing and emerging technologies can compete so that there is continuous technological innovation and development thereby benefiting the consumers.

(c) Policy Recommendations

This policy is technologically neutral and is intended to encourage innovation and new investments for the introduction of new technologies and services for the benefit of the sector and consumers.

12.2 Policy Element – Next Generation Networks (NGN) and Emerging Technologies

(a) Policy Issue

Next-Generation Networks (NGN) and other emerging technologies offer end-users access to a variety of networks and are based on IP technology. Therefore, they rely on much cheaper bandwidth and make available a wide range of services. These services include the provision of Voice over IP and IPTV and services on fixed line, mobile and cable networks. There is an increasing amount of voice traffic that is being transmitted through IP networks, and this has affected telecommunications prices and universal service revenues. The telecommunications policy and regulations must be reviewed in light of these developments.

(b) Policy Objective

To effectively regulate the sector given NGNs and other emerging technologies, to ensure maximum benefits to the consumers, operators and Jamaica. The regulatory intent is to ensure a high quality of service standard and non-discriminatory treatment of services carried over different networks.

(c) Policy Recommendation

Provisions will be made in the new Telecommunications Act to ensure that the country, the telecommunications industry and consumers benefit from NGN and other emerging technologies. Specific provisions will be promulgated for regulations related to the transmission of voice, VoIP regulation, quality of service, price regulation, international settlement, interconnection, content regulation, licensing and termination charges across networks.

13.0 INTERNATIONAL SERVICES

13.1 Policy Element – Rights of Carriers, Service Providers and Consumers

(a) Policy Issue

There is need for the regulator to approve the terms and conditions pursuant to which either a carrier or service provider may discontinue the provision of specified services to either party or to consumers, to avoid arbitrary and discriminatory treatment.

(b) Policy Objective

To ensure that the regulator is empowered to enforce compliance with the rights and obligations of carriers, service providers and consumers in relation to the provision and discontinuation of specified services.

(c) Policy Recommendation

The new Telecommunications Act will empower the regulator to approve the terms and conditions pursuant to which a carrier or service provider may discontinue specified services to either party or to consumers; and to enforce compliance with such terms and conditions.

14.0 THE ENVIRONMENT

14.1 Policy Element – Treatment of ICT Waste

(a) Policy Issues

There is lack of guidelines for the disposal of telecommunications and ICT equipment which may cause potential environmental and health risk to the population. Retailers/suppliers are currently not responsible for ensuring that their customers are aware and safely dispose of their materials and equipment.

(b) Policy Objective

To ensure safe disposal of hazardous materials.

(c) Policy Recommendation

- (i) The Government will mandate that the National Environmental and Planning Agency develops a comprehensive policy for the disposal of wastes that adequately covers the telecommunications and ICT sector.

- (ii) Retailers/suppliers are to advise consumers of the manufacturers' safety recommendations and provide instruction and facilities for the safe disposal of ICT waste.

14.2 Policy Element – Levels of Emission

(a) Policy Issues

ICT equipment and materials have the potential to emit harmful radiation.

(b) Policy Objective

To determine the levels for safe emission and to ensure that emissions do not exceed a limit beyond which exposure becomes harmful to the population.

(c) Policy Recommendation

The regulator should prescribe safe levels of emission in accordance with recognized international standards or best practices and have the authority to enforce compliance with the prescribed emission standards and allow for redress for persons affected by breaches.

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