

Radio Frequency Interference at Moule-a-Chique High-site.

Abstract

The radio frequency spectrum is a national resource whose use should be made available to public and private sector entities in order to foster economic and social activities. The mechanisms to ensure the availability and proper usage of the radio frequency spectrum to all sectors of society are enshrined in the general principles of spectrum management. One factor that opposes the principles of spectrum management is radio frequency interference. The administrator responsible for spectrum management is faced with challenges of identifying sources of interference and resolving them. Some sources of interference are easily identified and the corresponding solutions may be uncomplicated, however there are circumstances which may not be as easily identified and resolved. The instances of radio frequency interference occurring at the Moule-a-Chique high-site falls into the category of the later, where due to poor engineering practices, use of sub-standard equipment combined with the co-location of many powerful transmitters from various radio services, have contributed to a deterioration of the quality of the radio frequency spectrum. This paper examines the factors that are believed to be contributing to a form of interference known as intermodulation (IM) at the Moule-a-Chique high-site; it presents some of the mechanisms available to identify IM; it describes possible solutions and examines the regulatory framework available to the spectrum administrator in resolving this form of interference.

Brief Background of Author:

Alvin Augustin holds the post of Manager of Technical Services within the National Telecommunications Regulatory Commission of Saint Lucia. He is a trained telecommunications engineer and has over a decade of experience in the local telecommunications sector.

ABSTRACT – presented by Ms. Annie Baldeo

7th Annual OOCUR Conference, 4 – 6 November, 2009, Trinidad and Tobago

Emerging Regulatory Issues in the Area of Universality: Proposed Framework for Trinidad and Tobago

In today's world there is widespread growth in the use of telecommunications and broadcasting services. The main reason driving this explosive growth is people's need for information. Telecommunications is possibly the primary means of accessing such information in an efficient and timely manner. Individuals use telecommunications and broadcasting services in their daily routines – keeping in contact with loved ones, keeping up-to-date with the latest developments in the news, calling emergency services etc. These services are usually accessible via fixed line, mobile telephone and the Internet.

While some people take the ability to access these services for granted, not everyone has the opportunity to share the experience due to the existing digital divide. The Telecommunications Authority of Trinidad and Tobago is seeking to institute Universality regulatory mechanisms that would facilitate bridging the gap between those who have access to telecommunications services and those who do not, within the country.

This paper explores the methodology used by the Authority in assessing the digital divide on a national and community basis, the methodology proposed to be employed by the Authority in the establishment of a Universality Fund and the proposed Universality projects to be implemented that will contribute to improving the accessibility, availability and affordability of basic telecommunication services to all citizens of Trinidad and Tobago.

Concise Biography – Annie Baldeo

Annie Baldeo is presently employed as the Policy, Pricing and Research Analyst at the Telecommunications Authority of Trinidad and Tobago. She has served with this organisation for over four (4) years. Preceding this, Annie was employed with the National Information and Communication Technology Secretariat of the Ministry of Public Administration where she was involved in the development of the National ICT Plan.

Annie is a national of the Republic of Trinidad and Tobago and currently resides there. Her qualifications include a Bachelors of Science Degree (with Honours) in Management, Economics and Finance from the University of the West Indies, and an MBA in Strategic Planning from Heriot-Watt University, United Kingdom. During her service at the Telecommunications Authority, she has gained a wealth of knowledge in the areas of policy formulation and implementation specifically in the fields of Universality and the Digital Divide.

Proposal for the Establishment of a Regulatory Authority for the Electricity Sector in the Eastern Caribbean

Abstract:

The Communique of the 44th Meeting of the OECS Authority (10-12 January 2007) endorsed the idea of promoting regional regulation of electricity and renewable energy (RE) sources for electricity generation. The project of setting up a regional regulator would provide a concrete response to this endorsement.

Current electricity challenges for the Eastern Caribbean States are increasing, calling for energy diversification and improved energy security. The small structural size of the systems has historically pushed them in a stronger than ever dependency on fossil fuel. Cost for the latter has never been as high and volatile as today, putting pressure on prices. The combination of regulatory uncertainties, mixed utilities' performances, aging generation and distribution capacity, the need to accommodate new private supply of electricity (auto production by large consumers, geothermal and wind projects) is urgently calling for stronger regulatory oversight.

There is an emerging consensus within utilities and governments on the challenge of scale and skills in individual states, increasing the value of pooling resources at regional level to set up an energy regulator with a legally binding mandate providing common oversight, promoting service delivery efficiency through yardstick regulation and incentives to investment.

To date, some of the States governments have already chosen various specific solutions to improve the current regulatory framework. For example, Dominica has set up its own independent regulatory commission (IRC), with Bank support through the Dominica Growth and Social Protection Technical Assistance Credit (2006).

The experience of the IRC is useful to the rest of the region, but the IRC's future now needs to be considered in the broader context of strengthening regulatory framework at the regional level, as it has been recognized that the cost of maintaining a full-fledged domestic regulator for such a small system, is a major concern.

The World Bank has been involved in these deliberations and has taken some initiative in this regard. Their staff is currently in the process of developing a model for an "Easter Caribbean Energy regulatory Authority" which it proposes for establishment in St. Lucia. The IRC and the Government of Dominica is of the opinion that such a facility should be treated as part of the evolution/development of the already established IRC and should be based in Dominica.

Whatever the configuration and location, it has been recognized and agreed that strong regulatory oversight is imperative in small systems to mobilize the various stakeholders and promote new investment without destabilizing the existing utilities.

Dr. Carl Alan Duncan-DBA;MIEEE

Commissioner & Chairman of the

INDEPENDENT REGULATORY COMMISSION (IRC)

For the Electricity Sector in the Commonwealth of Dominica, W.I.

Occur 7th Annual Conference

Topic : Renewable Energy Policy in the Caribbean

Presenter: Cedric Wilson

Abstract

The threat of climate change and the potential effect it may have for small island states and countries situated in coastal zones provides a serious cause for concern. Universally, there is recognition that the reduction of green house gas emission and the increase use of renewable energy technology are critical for sustainable development. Consequently, it is important that the countries in the Caribbean fashion appropriate renewable policies.

It is therefore against this background this paper attempts to:

- analyze the status of the energy sector as well as the legal and regulatory framework upon which it is based in several countries;
- identify the measures that are being taken to accelerate the implementation of renewable energy technology in selected countries;
- examine the strategy required to promote development of renewable energy in the region

Much of the information provided in this paper is drawn from a recent study of renewable energy policy in seven Caribbean countries. The study was done by the Caribbean Renewable Energy Development Programme (CREDP). It is hoped that the paper will encourage dialogue on this important issue as well as provide insight into how the barriers to renewable energy in the region can be reduced.

Profile of Presenter

Cedric Wilson is an Economic Consultant with more than 15 years' experience in the energy sector. Wilson received training as an electrical engineer at the University of Technology (Jamaica). He also holds a graduate degree in Economics & Management and a post-graduate degree in Economics from the University of the West Indies (UWI), Mona.

He spent 11 years at the Jamaica Public Service Company (JPS), initially as a tariff specialist and later as the General Manger, Corporate Planning.

Since 2004, Wilson has worked mainly as a consultant to the Office of Utilities Regulation, Jamaica. Currently, he is conducting a study on renewable energy policies in seven (7) Caribbean countries on CREDP's behalf.

Wilson writes a monthly column for the Sunday Gleaner. He also serves as adjunct faculty at the Mona School of Business where he lectures Economics to MBA students.

Organisation of Caribbean Utility Regulators
7th Annual Conference
November 4th – 6th, 2009

Pricing for the Poor- An Evaluation of Water Subsidies in Trinidad and Tobago.

by
Claire A. Moolchan
Regulated Industries Commission

Abstract

Increased access to adequate, potable and high quality water and sewerage services, and affordability for the poor must be a cornerstone of any policy to achieve economic development and eradicate poverty. Despite a relatively high percentage of poor households being connected to the water and sewerage network utility in Trinidad and Tobago, the poor suffer from a discontinuous, insufficient supply of water that is often of poor quality. Furthermore, the overall costs of connecting to the network are high relative to what poor customers can afford.

The Government of Trinidad and Tobago has recognized that without subsidies some households would have difficulty connecting to the network and paying their bills and as such has implemented various subsidy schemes. Although it is recognized that utility subsidies may be essential in making water and sewerage services affordable for the poor, there has been a growing consensus, in recent times, that the poor rarely in fact benefit from broadly based subsidy schemes, which often continue long after they are useful. In Trinidad and Tobago, poor, rural households often receive the lowest levels of supply, if any, and therefore must resort to the use of various coping mechanisms to supplement deficiencies in water supply and pressure.

This paper presents an evaluation of water subsidy schemes in terms of their success in reaching the poor in Trinidad and Tobago. Recommendations are also made as to what regulatory strategies are available to ensure that water utility subsidy schemes are “pro-poor”.

CV

Name: Claire Moolchan
Regulator/Employer: Regulated Industries Commission, Trinidad and Tobago
Position: Tariff Analyst
Qualifications: B.Sc. Economics (Honours)

ORGANISATION OF CARIBBEAN UTILITIES REGULATORS
7TH Annual Conference
“Emerging Regulatory Issues in the Caribbean”

Implementation of An Automatic Metering Infrastructure (AMI)-
A Case Study of the Trinidad and Tobago Electricity Commission (T&TEC):

By
Connel Mottley
Regulated Industries Commission

ABSTRACT

Electrical utilities are always seeking ways to reduce costs by improving the efficiency of their operations. The metering process has become more efficient than traditional manual methods through the use of advanced/smart metering, which can record a customer’s consumption, and automatically transmit these readings daily or more frequently to a collection point via a communication network. Some of the additional benefits are the ability to provide a faster restoration of supply to customers in the event of outages, prompt detection of meter tampering events and innovative billing systems based on ‘time of use’. However, the monetary gains derived are small when compared with the overall cost which usually amounts to millions of United States dollars. Due to this consideration coupled with the fact that some utilities in the United States are postponing implementation of AMI projects, interested utilities and regulators in the Caribbean are best advised to examine current approaches taken by comparative utilities as a guide towards making a better informed decision before embarking on such projects.

This paper seeks to evaluate the Advanced Metering Infrastructure (AMI) Project undertaken by the Trinidad and Tobago Electricity Commission (T&TEC), and wherever possible the experiences in other Caribbean countries, with the aim of offering some insight into the associated costs and benefits of AMI implementation, in order that other Caribbean utilities and regulators would gain from the lessons learned. Alternative approaches that may be considered when implementing AMI in similar electricity distribution networks are provided.

CV

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|----------------------------|---|
| Name: | Connel Mottley |
| Regulator/Employer: | Regulated Industries Commission |
| Position: | Standards Engineer |
| Qualification: | BSc. Electrical and Computer Engineering |

THE CHALLENGES OF IMPLEMENTING RENEWABLE/ALTERNATIVE ENERGY SOURCES IN THE CARIBBEAN – A REGULATORY PERSPECTIVE

Abstract

This paper posits that utility regulators have a key responsibility in the region's transition into significant utilization of renewable energy (RE) resources, and identifies possible roles they may play in the process. Currently, over 90 percent of the energy consumed in the Caribbean comes from fossil fuel. Most of this fuel is imported and typically represents a significant percentage of GDP for each country. In contrast, the region has an abundance of RE potential in the form of solar, wind energy, biomass, hydroelectric and geothermal energy. RE holds the possibility of reducing the burden of fuel cost, improving energy security, and reducing environmental pollution.

Although less than 10% of current regional electricity is generated from renewable sources, there is significant interest in expanding the use of such systems. Given this background, and the current trends in RE technologies, utility regulators can play a prominent part in the formulation, analysis and administration of procedures, economic models and licensing regimes aimed at promoting widespread use of RE resources. This paper examines the prospects of RE in Jamaica, Barbados and Guyana, and discusses the implications for the rest of the region.

Derrick Phillips is a Standards Engineer with the Regulated Industries Commission, where he is involved with the development and implementation of standards and license conditions for the electricity and water sectors in Trinidad and Tobago. He served as head of the Solar Laboratory at the Jamaica Bureau of Standards, where he restored the solar testing facilities after damage in 1988 by Hurricane Gilbert. He also served as head of Electrical Inspection at the Trinidad and Tobago Bureau of Standards for six years. Mr. Phillips holds a BSc. in Mechanical Engineering from the University of the West Indies and a MSc. in Administration from the University of Notre Dame, Indiana.

Convergence and Its Implications for Telecoms Regulation

Abstract

Convergence is reshaping how the telecommunications sector should be regulated, both globally and here in the Caribbean. This presentation will consider how policymakers face a fundamental choice between: (1) recognizing the convergence that is taking place and adapting their regulation of the sector accordingly to maximize benefits for consumers, or (2) ignoring the convergence that is taking place and consequently regulating the sector in a way that harms the interests of consumers and lessens competition.

The presentation will examine the traditional market divisions in the telecommunications sector: (1) fixed voice telephony, (2) mobile voice telephony, and (3) television programming delivery. Traditionally, these have been seen as very separate markets with a separate regulatory approach applied to each one. In particular, fixed voice telephony has generally been heavily regulated due to concerns about natural monopoly, cross subsidies from less competitive to more competitive services, and pricing has been designed to subsidize access by means of usage prices set well above cost. Mobile voice telephony, on the other hand, has had much less regulation in most countries from its very beginnings in the 1980s and 1990s. Spectrum has been allocated by regulators, of course, and assigned to specific operators by means of auctions or beauty contests over time. There have been regulatory interventions on service quality and on mobile termination charges, but for the most part, regulators have allowed retail prices to be set free of direct regulatory intervention. Television programming delivery has been subject to regulation of a very different kind than the other two sectors just mentioned. Television broadcasting channel assignments have been regulated, of course. But it is the cable television networks that are most interest to us here in this discussion of convergence. Cable TV networks have been regulated at different times and in different places, but often by different regulators than those that look at telephone companies. Services have been priced on the basis of packages of channels that consumers buy.

If there is no convergence between these markets, and they remain as separate markets, then one could begin to see a possible justification for some of the regulatory interventions that are being discussed now in Trinidad & Tobago, for example, such as local loop unbundling, accounting separation, price cap regulation, etc. If, however, these markets are converging, regulation needs to take on a very different approach if it is to serve the public good. So, the question is an important one and should take top priority as regulators examine their direction and initiatives.

Ed Duke

HOD Regulatory and Policy Affairs

Telecommunications Services of Trinidad & Tobago (TSTT)

ABSTRACT

Presenter: Eugene Cleland

Position: Director Water and Wastewater

Company: Public Utilities Commission

Country: Belize

Topic: An overview of how Belize was able to achieve 24/7 potable water to more than 90% of the country

Presentation Summary: The presentation will discuss the challenges, efforts and opportunities for Belize in its pursuit of the United Nations water millennium goals. The presentation will provide a chronology of these events and will discuss the roles and accomplishments of the different stakeholders. The presentation will also discuss Belize's integrated water resource management, including water availability, production and consumption, implications of climate change, funding, privatization and regulation, and the future outlook of the water industry.

Autobiography

Work Experience: Eugene Cleland has worked 17 years at Belize Electricity Limited (Power Company) primarily in the Finance and Accounts Department and the Customer Services Department, in the capacity as Chief Accountant and Customer Services Manager respectively.

He is presently the Director of Water and Waste Water at the Public Utilities Commission (PUC). Prior to that appointment, he served the PUC as a Commissioner for two years.

He is also an adjunct lecturer at the University of Belize, in the Faculty of Management and Social Science, where he lectures in Accounting, Finance, and Business Strategy and Policy.

Qualification: He obtained his first degree in Business Administration from Ferris State University, a Masters Degree in Business Administration from Texas Southern University, Houston, and is in his final year to complete a Doctorate Degree in Leadership and Higher Education from Nova Southeastern University in Florida.

International mobile roaming

In 1996 the European Union (EU) opened its first dossier on International Mobile Roaming (IMR). There followed complex efforts to use antitrust law and national regulators to bring down high IMR prices – one attempt failing after another. Then in 2007, the EU resorted to draconian trans-national legislation to enforce wholesale and retail price caps.

Governments and regulators in other parts of the world also sought solutions to the persistence of high prices for IMR, with the issue prominent on the global regulatory agenda. It is an extremely complex problem, with authorities trying to control the prices of operators in other countries, with imbalances in traffic, with opaque changes to the wholesale market and with consumers having a very limited understanding of the prices. There is a significant risk of a “waterbed effect”, i.e. any mandated reduction in roaming revenues will be recovered by the operators raising other prices.

For most customers national roaming charges in the USA disappeared in the late 1990s, with the national offer from AT&T. This was commercially driven, aimed at regular travelers who wanted to avoid surcharges and was used to promote a new digital network. In Africa, a decade later, this was repeated by Zain, partly to promote its brand. Both forced rivals to make special offers, to negotiate wholesale deals and, especially, in the USA to consolidate.

In the Americas, policy work on IMR has been led by *Iniciativa para la Integración de la Infraestructura Regional Suramericana* (IIRSA), supported by CITELE and Regulatel.

In the Caribbean incoming travelers provide a major boost to economies, with tourism being a significant contributor to GDPs, while IMR revenues support mobile operators. Any attempt to bring down IMR prices towards cost needs to avoid short term harm. The recession hit tourism, reducing IMR revenues, with Bahamas Telecommunications Co (BTC) reporting a drop from \$5 to \$2 million per month.

Cruise ships offer onboard roaming at very expensive rates, but presenting complex jurisdictional problems.

Ordinary citizens in the Caribbean would like to travel between islands without paying punitive rates for IMR. Cable & Wireless and Digicel have responded with home tariff plans within their geographic footprints, copying Zain. However, many rivals are unable to match this, lacking the necessary access to lower wholesale prices or the geographic footprint.

Yet roaming is a minority activity, not everyone travels and many who do are not the poorest. Any regulatory intervention has to avoid adverse effects for poorer users.

In the USA, the relaxation of sanctions imposed by its government means that operators can sign IMR agreements with Cuba. Today, there are still no retail offers.

The challenge is to translate accepted public policy goals of ensuring competition and affordable prices into specific measures for IMR. It is essential to avoid pushing up other prices or causing short term damage to operators. Some simple and harmless measures exist, notably improved price transparency by sending SMS. Extending even this to cruise ships would be an interesting challenge.

Biography

Ewan Sutherland is an independent telecommunications policy analyst. He has worked on projects for the ITU and OECD, plus national authorities in Africa and Asia. He spent 15 years teaching in universities in Scotland, England and Wales, with periods as a visiting academic in Addis Ababa, Johannesburg and Washington DC. As Executive Director of INTUG he was in charge of its roaming dossier for five years. He has published articles on roaming in *Telecommunications Policy*, *Info* and *Computer and Telecommunications Law Review* plus presenting papers at several conferences over the last decade.

Organisation of Caribbean Utility Regulators
7th Annual Conference
November 4th – 6th 2009

Undergrounding Electrical Distribution for New Residential & Industrial Developments - a Regulator's perspective.

By

Gerard G. Emmanuel-Rodriguez
Regulated Industries Commission (RIC)

Abstract

Despite high costs and difficulties in providing economic justification for undergrounding, largely due to varied and conflicting experiences, utilities internationally have embraced undergrounding. In fact, many local government authorities within countries have made undergrounding mandatory, in respect of new residential developments.

In Trinidad and Tobago the electricity transmission and distribution provider, the Trinidad & Tobago Electricity Commission (T&TEC), has embarked on a drive to promote undergrounding in cases of new residential and industrial developments, arguing, among other things, adherence to central government public policy. For the sector regulator (the RIC), matters arising out of such a policy and of critical concern relate principally to the prudence of such an undertaking and how such high capital cost inputs are to be sourced or funded. Additionally, the implications for the utility's existing capital contribution policy; impact on customer tariffs, including issues of affordability and equity; and the treatment of capital for the purposes of return and depreciation, would all engage the regulator's attention. This paper examines the nature and employment of undergrounding internationally; it identifies the costs and benefits thereof, and then evaluates these findings in the Trinidad and Tobago context.

CV

Name: Gerard Emmanuel-Rodriguez

Regulator/Employer: Regulated Industries Commission

Position: Tariff Analyst

Qualifications: MSc. Environmental Engineering; BSc. Economics & Mathematics; Dip. Teaching; Cert. Human Resources Management.

**7th Annual OOCUR Conference
“Emerging Regulatory Issues in the Caribbean”**

**Charting New Developments in Incentive Regulation:
Lessons from the UK, Australia and New Zealand**

Ian Alexander¹

Abstract

Regulation is not a static situation, new challenges arise and priorities may change. Given this, it is appropriate that regulators undertake periodic reviews of the approach that is adopted. Over the past year or so several key reviews have started in the UK and elsewhere. The reviews in the UK, of energy, airport and water regulation have raised several key questions for regulation – focused around the legitimacy of decisions and the role of consumers, the role of competition and how to address uncertainty. These reviews have evaluated whether existing regimes are fit for purpose through the consideration of regimes in other countries/sectors as well as an analysis of the impact of the existing regime. Regulators around the world can learn much from the analysis that is underway and test their own regimes against the best practice options that are being developed. While any regulator needs to ensure that the approach being followed is appropriate for the situation faced, the range of options under consideration provides examples of approaches appropriate for many situations and a framework that can be further expanded.

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PRESENTER: JOSETTE MAXWELL DALSOU

CV: Ms Maxwell Dalsou is currently the Financial Analyst at the Eastern Caribbean Telecommunications Authority. Mrs Dalsou, an Economist by profession (BSC/MSc) has been employed at the Ministry of Finance and Economic Affairs where she served more recently as Acting Director of the Tax Policy Unit and Economist at the Ministry of Finance and Economic Affairs.

TITLE: TO WHAT EXTENT SHOULD WE REGULATE HIGH VOLUME VOICE PACKAGES

There has been an emergence of high volume calling packages by competitors in the voice telecommunications markets. The benefits of such packages to consumers are analogous to the benefits derived from bundling services where the price of the combined package is usually at a discount to that of acquiring given amounts of the products separately. While there may be substantial benefits from offering such packages, drawbacks may arise depending on the structure of the market, the type of the services and the level of discount offered.

The benefits to the provider may be increased efficiencies, economies of scale, which can be passed onto the consumer in the form of lower retail prices or quality improvements. The downside of these new innovative services is the vulnerability to abuses that may be deemed anti-competitive and therefore harmful both to consumers and providers in the market.

Developing an approach to the regulation of such packages can prove to be challenging in jurisdictions where the legislations prove to be rigid and in the absence of experience with anticompetitive codes and practices. This is exacerbated by the dynamics in an industry with continuous technological and market driven innovations.

It is imperative for regulators in the region to develop practical approaches to regulating in this environment. The article will examine practical approaches to investigate high volume packages in particular: the determination of whether there is leveraging of market power from the regulated to the unregulated services; imputation tests to determine whether there is any form of price squeezing; and whether barriers to entry exist.

Name: Mr. Kareem Guiste; B.A., B.B.A

Position: Financial Analyst

Organization: Independent Regulatory Commission

Topic: Funding Capital Expenditure/ New Supply

Curriculum Vitae

Kareem Guiste earned a Bachelor of Business Administration with a concentration in Economics and a Bachelor of Accounting at Cameron University in Oklahoma, USA in 2008 and is currently enrolled in the Masters of Business Administration program, with an emphasis on Economics at Cameron University as an Online Student. Kareem filled the position of Financial Analyst at the Independent Regulatory Commission in 2008 and is the lead, on advice of the Executive Director, on Tariff related regulatory matters and policies. One of his mandates is to review tariff filings for compliance with utility regulatory rate filing requirements and to determine, prepare and defend recommendations for appropriate interim tariff rate that are both equitable to the rate payer and utility. Prior to the IRC he held the position of Accounting Manager at FastCash Ltd. a non-banking financial institution serving the Caribbean. Among other activities Kareem lectures in Economics, Finance, Accounting and Business Administration at various colleges and business institutes located in Dominica. A few of his major accomplishments at the IRC so far are; the drafting of the Tariff Filing Requirement for electric utilities for implementation by Independent Regulatory Commission and the drafting of the Internal Accounting and Information Technology Manual, Policy and Regulation for the Independent Regulatory Commission.

Abstract

Frequently, utility capital projects are complex and multi-year in nature, so project deferrals are often out of the question, even when the overall economic outlook is poor. Capital Expenditure represents that amount which a firm feels that it should put towards the investment in various projects or that amount spent for investment in capital projects. Analysis is carried out prior to deciding if specific projects should be or should not be carried out at a particular time. It is clear that there are several methods that could be used to assess the viability of projects and to note these are critically important towards new energy supply, especially in new environments.

This paper will focus on what can be classified as suitable for funding capital expenditure and the four key reasons for the continued relatively strong investment in transmission and distribution of electricity such as that of regulatory pressure and mandates for service reliability improvements, smart grid initiatives aimed at modernizing the power grid infrastructure and enabling energy efficiencies, obsolescence of existing equipment, long-term investment view being necessary to accommodate future growth in electricity consumption.

Emerging Regulatory Issues in the Area of Broadband Access: A Trinidad and Tobago Perspective

The Caribbean, as a developing region, faces significant regulatory pressures in the area of telecommunications. The advent of new technologies and the aspirations of countries to become an information society impact upon the foundation of existing regulatory frameworks critical to the liberalization of our telecommunications market and the associated benefits that can redound to the benefit of society.

The dawn of the new millennia has brought with it the need to improve access speeds in order to leverage the now content rich and bandwidth intensive Internet, to benefit from triple play services and inevitably, to develop the infrastructure required for the promotion of Information and Communication Technologies (ICTs). This has resulted in the rapid replacement of grandfather “dial-up speed” access networks to new age broadband access networks, either by a wired or wireless medium. This need for operators in the telecommunications industry to provide broadband access has impacted on the regulatory regime instituted to liberalize this industry and telecommunications regulators are faced with the dilemma of crafting a regulatory framework that does not hinder the growth and sustainability of broadband access.

This paper presents the impact of broadband access on the regulatory framework in Trinidad and Tobago and cites the response of the telecommunications regulator, the Telecommunications Authority of Trinidad and Tobago, through its regulatory framework and activities which have been undertaken in order to promote and facilitate the development and sustainability of broadband access. The initiatives undertaken to improve broadband access, from the increase in international bandwidth to the growth in penetration through broadband wireless access technologies, are also discussed.

Kirk Sookram is presently employed as the Spectrum Management Engineer at the Telecommunications Authority of Trinidad and Tobago. He has served in this capacity for over four (4) years. Before this, he was employed as a Telecommunications Engineer by the Ministry responsible for Telecommunications in the Republic of Trinidad and Tobago.

Kirk is a national of the Republic of Trinidad and Tobago and currently resides there. His qualifications include a Bachelors of Science Degree (with Honours) in Electrical & Computer Engineering from the University of the West Indies and a Masters of Science Degree (Distinction) in Operational Telecommunications from Coventry University, United Kingdom. During his tenure at the Telecommunications Authority, he has broadened his knowledge and attained specialized training in spectrum management and wireless technologies, through participation in courses and workshops, for example, the ITU Online Spectrum Management Course, and through attendance in seminars and regional fora.

Kirk also serves as a Member of the Caribbean Spectrum Management Task Force which was established by the Caribbean Telecommunications Union.

Regulatory Strategy for the Telecommunications Sector in a Small Island Economy – Challenges and Opportunities

Abstract

A big majority of the Caribbean countries and territories are small island economies. A size of the economy has specific implications to the telecommunications environment in such islands – e.g., in terms of economies of scale that telecommunications businesses can achieve, investment incentives, technological solutions and business models suitable for such environments, and regulatory resources available to ensure proper steering of such markets. These and other factors call for a careful consideration of international regulatory practices, which in many cases have been formulated in the context of much larger economies, and adaptation of them to the local circumstances.

It is also important to take into account that the environment of a small market economy provides certain opportunities. These include opportunities of more flexibility and faster adaptation on the side of governments and regulators as well as more regulatory innovation in looking for ways to ensure appropriate regulation with much smaller resources. Furthermore a small economy could provide possibilities for lower scale investments still able to target the whole territory – this may prove attractive in terms of an early adoption of new uncertain technologies, technology trials as well as piloting of new business models; and simply possibilities for small businesses to enter markets that elsewhere are reserved to “big money” only.

Small islands could be very welcoming environment (and possibly a springboard) to some telecommunications (and, in a more broad sense, information and communication technologies) related new business models – such as hosted (shared) platforms and software-as-a-service solutions. This is simply for the fact that a big proportion of businesses in such an economy may not be able to justify investments in specific information technology solutions that bigger businesses would normally entertain. These factors could allow telecommunications to tap into the economies of small countries in a deeper, broader and faster manner.

It is clear from the above that small economies present both challenges and opportunities for their telecommunications regulators. These challenges and opportunities are specific to such environments. With this in mind this paper (presentation) will analyze what could be the elements of the regulatory strategies appropriate in the context of small islands together with the appropriate ways to formulate such strategies. Analysis will be based on the regulatory experience in the Virgin Islands (U.K.).

Short Bio

Tomas Lamanauskas is the CEO of the Telecommunications Regulatory Commission of the Virgin Islands (U.K.). His experience includes positions of a legal adviser at an operator; the Head of Legal, a Deputy General Director and a Member of the Council at the Lithuanian communications regulator as well as the Deputy General Director of the regulator at Bahrain.

Tomas Lamanauskas has the Master of Laws degree from the University of Vilnius (Lithuania) and the Master in Telecommunications Regulation and Policy degree with distinction from the University of the West Indies (Trinidad & Tobago).

He has delivered more than 60 presentations in various conferences, published 17 articles (papers) as well as contributed to 3 books in the field of ICT. He is also a member of the Editorial Board of the “Telecommunications Policy” journal and the Advisory Board of the Nordic and Baltic Journal of Information and Communications Technologies NB!ict.

Name: Lawrence Benjamin

Designation: Utility Engineer

Organization: Independent Regulatory Commission

Country: Commonwealth of Dominica

Presentation: What constitutes an interconnection policy for Distributed Renewable Energy Generation facilities to the distribution network in Dominica.

Abstract:

The Independent Regulatory Commission – IRC in Dominica is a newly formed body setup to regulate the electricity sector. This fledgling organization is in the process of developing policies based on the revised Electricity Supply Act of 2006 to guide competition within the electricity sector in the areas of generation, transmission and distribution.

One of the policy documents that the IRC is reviewing is the recently submitted Interconnection Policy by the existing power provider on the island.

This presentation seeks to define what an interconnection policy is, what should constitute an interconnection policy, the approach used in reviewing the document to ensure that the interconnection policy is properly constructed and takes into consideration the requirements of the IPP or Distributed Generation Owner and the licensed owner of the transmission or distribution system.

BIOS of the Presenter

Lawrence Benjamin is an Electrical Engineer with a BSc. In Electrical and Computer Engineering from the UWI and is presently nearing the completion of his MBA that was started last July. He has worked in the Electric Utility Industry for the past twenty years. He worked in various management positions at the Dominica Electricity Services Limited – DOMLEC for 15 years and then left to take up the position of Project Manager at CARILEC. After his five year stint at CARILEC based in St. Lucia, he is now an employee of the Independent Regulatory Commission in Dominica with specific assignments to include technical analysis, policy review and formulation, setting standards among other duties.

Reset for Regulation and Utilities: Leadership for a Time of Constant Change

Mark A. Jamison, Ph.D.*
University of Florida

Araceli Castaneda*
University of Florida

Version Date
September 4, 2009

Abstract

This paper describes a process for a reset of regulation and utilities in today's environment of constant change. "Reset" means that we develop fresh perspectives and knowledge about the future, all the while holding in trust the wisdom of the past. The paper examines three juxtapositions. The first is to focus on next practices, not best practices. Best practice is about following in someone else's footsteps, whereas next practice is about going into areas where no one has gone before. The second is focusing on why rather than focus on what. Asking "What should we do next?" emphasizes practice whereas asking "Why have certain practices been successful?" searches for underlying needs and context. The third juxtaposition is between leading and leadership. A leader provides direction, which is proper when the right direction is known. In contrast leadership mobilizes people to tackle difficult and often ambiguous problems and circumstances.

Keywords: Leadership; Change; Utilities; Regulation

* The authors are respectively Director and Assistant Director, Public Utility Research Center, University of Florida. The views presented are those of the authors and not those of the center or the university. The authors would like to thank Sanford Berg, Lynne Holt, and Ted Kury for their helpful advice. All errors and omissions are the responsibilities of the authors. This is a work in progress. Please do not cite or quote without permission of the authors. Please provide comments by emailing the authors at mark.jamison@cba.ufl.edu or araceli.castaneda@cba.ufl.edu, or by calling +1.352.392.6148.

CVs

Mark A. Jamison

Education

Ph.D. University of Florida, 2001

M.S. Kansas State University, 1980

B.S. Kansas State University, 1978

Dr. Mark Jamison is the director of the Public Utility Research Center (PURC) at the University of Florida and also serves as its director of Telecommunications Studies. He provides international training and research on business and government policy, focusing primarily on utilities and network industries. He directs the PURC/World Bank International Training Program on Utility Regulation and Strategy.

Dr. Jamison's current research topics include leadership and institutional development in regulation, competition and subsidies in telecommunications, and regulation for next generation networks. He has conducted education programs in numerous countries in Asia, Africa, Europe, the Caribbean, and North, South, and Central America. Dr. Jamison is also a research associate with the UF Center for Public Policy Research and with Cambridge Leadership Associates, where he provides consulting and training on adaptive leadership. He is an affiliated scholar with the Communications Media Center at New York Law School.

Previously, Dr. Jamison was manager of regulatory policy at Sprint, head of research for the Iowa Utilities Board, and communications economist for the Kansas Corporation Commission. He has served as chairperson of the National Association of Regulatory Utility Commissioners (NARUC) Staff Subcommittee on Communications, chairperson of the State Staff for the Federal/State Joint Conference on Open Network Architecture, and member of the State Staff for the Federal/State Joint Board on Separations. Dr. Jamison serves on the editorial board of *Utilities Policy*. He is also a referee/reviewer for the *International Journal of Industrial Organization*, *The Information Society*, *Telecommunications Policy*, and *Utilities Policy*.

Araceli Castañeda

Education

University of Rouen, 1997

M.A. University of La Laguna, 1998

Post graduate University of Salamanca, 1998

Ms. Araceli Castañeda is the Assistant Director of the Public Utility Research Center (PURC) at the University of Florida. She is responsible for representing PURC at international events, conducting training on leadership topics, and managing PURC's operations and financial matters. Since she joined PURC in February 2003, Ms. Castañeda has held different positions. She has been the director of the *PURC/World Bank International Training Program on Utility Regulation and Strategy*, and has coordinated a number of programs and research projects in the U.S. and abroad, including programs in the Caribbean, Latin America, and Asia.

Ms. Castañeda's past professional experience includes being a team leader for the international insurance company, tour guide for various organizations, English language teacher, and interpreter and translator for the central government in Spain. She was born in the Canary Islands. She studied translation at the University of Rouen, France, obtained her Master's in English Philology from the University of La Laguna, Spain and completed her post-graduate studies in English teaching methodology at the University of Salamanca, Spain.

OOCUR 2009 Annual Conference

ABSTRACT

Title of Presentation: “Trends in Performance indicators based on CARILEC’s Annual Benchmark Studies - 2002 to 2007”

Presenter: Nigel Hosein – Executive Director (CARILEC)

CARILEC has been conducting its annual benchmark study since 2002. The last study completed to date is for the year 2007. Some of the trends in the major performance indicators will be presented based on period 2002 to 2007. The performance indicators will include general indicators, generation indicators, T&D indicators and commercialization indicators. Note however, that most of the data that will be presented will be the anonymous version because the utilities that participate in the benchmark study have done so on the basis of confidentiality. We trust though that the information presented will be useful to the delegates at the conference.

Bio – Nigel Hosein

Mr. Nigel Hosein is currently (from May 2006) the Executive Director of CARILEC (The Caribbean Electric Utilities Association) with its Secretariat office based in St. Lucia and currently serving 33 utility members and approximately 60 Associate Members.

Mr. Hosein holds a Bachelor’s Degree in Mechanical Engineering and a Masters in Business Administration. He is a Registered Engineer with the Board of Engineering in Trinidad and Tobago and he has a wealth of knowledge and experience having worked both in professional and management capacities in the electric utility and construction industries within the Caribbean Region for the past twenty years. Areas of expertise include i) business management, ii) project management, and iii) consulting/contracting for energy management, mechanical and electrical systems.

Mr. Hosein is a true “Caribbean Man” with a diverse cultural experience having lived and/or worked on various projects throughout the region (in countries such as Grand Cayman, St. Lucia, St. Kitts, Dominica, St. Vincent, Barbados, Grenada, Guyana and his native Trinidad & Tobago).

Telecommunications Provision - Concepts and Trends in a Converged Environment

Abstract

The issue of convergence as it relates to the telecommunications industry is evolving at a fairly steady pace. Telecommunications regulatory authorities are now faced the challenge of this changing environment and must develop policies to suit in order to meet the demands for the growing number of applicants who are eager to offer telecommunications services on a converged platform.

This paper would be mainly technical and will give participants the understanding of the trends of convergence and the effects on telecommunications regulation environment. It would deal with broadband and wireless broad band technology in the converged environment. It will also discuss the challenges and the way forward for telecommunications regulators. Two main types of convergence will be discussed:

- Functional convergence is the coming together of broadcasting; telecom and computing, with a single channel of distribution through which the individual consumer will receive a wide variety of existing functions and services accessed via single screen” (Mitchell.J, 1997).
- Technological convergence is the presence of a vast array of different types of technology to provide very similar tasks.

Presenter: Rowald Derrick

Position: Engineer/Spectrum officer ECTEL

Education: Bachelor of Science (Electrical Engineering)
1995-2000 Cuba

Experience: Oct 2001 - Jan 2005

National Telecommunications Regulatory Authority (NTRC) St. Vincent

Radio Communications Engineer

Feb. 2005-Present

Eastern Caribbean Telecommunications Authority (ECTEL) St. Lucia

Engineer/Spectrum Officer

Professional Development (Most resent)

2009 ECTEL/NTRC regulatory training program- Saint Lucia

- Presentation- Radio Spectrum Management and Billing

2009 Caribbean Telecommunication Union- Trinidad

7th Spectrum Management Policy Development Meeting

- Elected as a committee member of the Caribbean telecommunication Union Spectrum management task force

- Elected as a member of the World radio Conference study group for the Caribbean region

2008 International Telecommunications Union- (Online)

- WiMax Networks – 802.16 IEEE Standards (Certificate)

TITLE: CLICK TO AGREE: AN EXAMINATION OF CONTRACT FORMATION IN THE ELECTRONIC ENVIRONMENT.

ABSTRACT

A legal framework that promotes certainty in the contracting process is inimical to the development of electronic commerce (e-commerce). By providing guidelines on how communications between parties are to be construed the law determines whether consensus has been reached, when an agreement occurs and the obligations of the parties. The revolution in communication technology occasioned by the transmission of digitized information over a distributed network has challenged traditional contract principles and introduced new issues. Contracting in the electronic environment has therefore necessitated legal reform. This article identifies some of the problems that can arise when contracting online and examines how some of these issues are being treated with internationally.

Traditionally, there is no formal requirement for contract formation, however where the law requires that the contract to be written and signed by the parties to be charged difficulties arise. Thus, the article examines the concept of equivalence and outlines different approaches to dealing with digital signatures. The article then moves to a consideration of the substantive issues of contract formation. In particular it looks at whether webvertising constitutes an offer and whether automated responses by a machine or simply browsing a website could amount to an acceptance. The applicability of the rule in Adams and Lindsell to contracting by email is also examined and reference will be made to the UNCITRAL Model Law. Also considered is the approach to the requirement that parties consent to the terms of the contract where web click contracts are utilized. The article concludes by noting that the traditional rules that have governed contract formation were insufficient to deal with contracting in the electronic environment and the introduction of new rules have now recognized and validated electronic contracts.

PRESENTER: RO ANN WRIGHT

CV: At present Ms. Wright is the Legal Officer at the Eastern Caribbean Telecommunications Authority. She was admitted to the Trinidad and Tobago Bar in 2003 and worked as the Legal Officer II in the Tobago House of Assembly from 2003 -2007.

7th Annual OOCUR Conference
“Emerging Regulatory Issues in the Caribbean”
4-6 November 2009

New Developments in Institutional Framework Design for Utility Regulation and Competition in the Caribbean

Abstract

In the Bahamas a suite of legislation introduced a new institutional framework for utility regulation and competition on August 1, 2009. The new Bahamas institutional framework has wider implications for the Caribbean particularly in respect of:

- independence of the regulator and
- converged regulator and competition authority

This presentation discusses the said suite of legislation and its implications.

Presenter:

Rita Persaud-Kong, LLB Attorney-at-Law

Rita is an Attorney with 30 years experience as Legal Adviser, Corporate Secretary and Director of companies in the Energy/Petrochemical sector, the Banking/Trust sector and the Insurance sector in Trinidad & Tobago. A former Legal Counsel and Secretary to the Regulated Industries Commission (RIC), Rita presently serves OOCUR as its Secretary General.

**7th Annual OOCUR Conference, 4-6 November, 2009, Trinidad & Tobago
Theme: “Emerging Regulatory Issues in the Caribbean”**

ABSTRACT

TOPIC:

Electricity – “System Losses: Causes – Prevention - Savings”

PRESENTING:

**Steven Meissel, Vice President, International Business Development
Aclara Technologies, an ESCO Company**

The paper will focus on causes of system loss; successful prevention technology being used today and being considered for tomorrow, and savings to utility customers that are gained by implementing system loss prevention technology. The paper is based on the case study of an island based utility of how non-technical loss has been reduced after application of the technology. The paper will also bring to your attention efforts to reduce system loss by using new improved Polemount meter box technology in Columbia, Brazil and Mexico to reduce losses.

ABSTRACT SUMMARY

"Doing Business Project of the World Bank – Piloting a new indicator on “Getting Electricity”

Infrastructure services such as roads, water, electricity and telecommunications matter to private businesses. Where access and quality are poor, they can slow a company's growth. Managers responding to the World Bank's Enterprise Survey in 89 economies consider electricity the second biggest constraint to their business (after access to finance). Those in South Asia and Sub-Saharan Africa consider it the biggest constraint.

The Doing Business research project at the World Bank has 6 years of experience in providing objective measures of business regulations and their enforcement across 183 countries. Doing Business has developed a pilot indicator on the process a private business must go through to obtain an electricity connection. The indicator measures the procedures, time and cost associated with obtaining a new electricity connection for a small-to-medium sized company.

Data has been collected for distribution utilities in the main business cities of 140 countries. Consistent and objective data on connection services can both inform utilities, regulators and governments seeking to strengthen sector performance, and serve as input for research on links to economic outcomes.

SHORT BIOGRAPHY

Susanne Szymanski, a Policy Analyst, joined the Doing Business team of the World Bank in March 2008 to work on the new “Getting Electricity” indicator. Ms. Szymanski holds a master's degree in Business Administration and Economics from the University of Munich. Before joining the Doing Business team, she worked on issues of private sector development at the OECD.