



Many Nations... One Voice
Muchas Naciones... Un Sentimiento
Vele Landen... Een Stem
Plusieurs Nations... Une Seul Voix
Differente Nashon... Un Bos
Secondly Quarterly Magazine 2018
Volume 02/2018

CANCION



**"Guiding Digital Adoption
to Lead the Global Market"**





COLLECT MOMENTS

...& let us keep you in touch

Photo: Erwin Neles



Contents

Mission

Influence the innovation and development of ICT solutions for the benefit of members by developing, navigating and leveraging relationships with all stakeholders. Advocate for policies, legislation and rules which advance the creation of an environment which facilitates the deployment of services and technologies around the region.

Vision

To become the leading authority in shaping information, communication and technology in the Caribbean and the Americas.

Objectives of Cancion

To inform CANTO's membership of information and communication technologies and policy developments taking place in the member organizations of the association.

To reach policy makers of the Caribbean, sharpening their awareness of regulatory developments and technological progress as it affects the region.

To provide CANTO with a literary voice to reach others in the region and internationally, with news, information and analysis of information and communication technology developments in/or affecting the Caribbean.

If you or your organization are engaged in or informed about activities or developments which impact upon Caribbean information and communication technologies please write and let us know.

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Editorial (English)

It is with great pleasure that we welcome you to this our 34th Annual Conference and Trade Exhibition. We are happy to be here in Panama and thank the Hard Rock Hotel for making us feel so at home.

This being the Caribbean's premier telecommunications event we are confident that, there is nowhere else professionals, academics in the industry and representatives of regional governments would rather be at this point in time. Representing over 35 countries, here at this event, are also top executives, telecommunication operators, regulators, ministers and suppliers.

"Guiding Digital Adoption to Lead the Global Market", is the theme we have chosen for this year. The theme was developed as a result of the pressing issues being faced by the industry; and particular attention would be paid to the overall direction in which the Association is geared for the ensuing year of 2018.

CANTO will champion the discourse on this topic as we delve into the digital transformation that is beginning to both encompass and redefine almost every operator's revenue models; perception of customers and how they manifest and appear on networks; the services they consume and evolution of the ways networks are transformed into virtualized, self-aware entities.

Digitalization of the world is on a pace, therefore the Caribbean region has to be well equipped with the required tools and capabilities to be compliant and competitive, in a global village which has become increasingly reliant on technology for even basic aspects of our everyday lives. From E-Commerce to E-Banking to E-Governance and E-Health.

CANTO always has at the forefront of its vision, its mandate as the leading trade association of the ICT sector for shaping information and communication in the Caribbean. Thus being mindful that, it is imperative that the young ones in our midst are moulded for a world where humanity works hand in hand with technology. This initiative is addressed in a number of ways by CANTO. The Secretary General gave an address at the 'Girls in ICT Day' in April, 2018, the theme of which was "When I Grow Up". She encouraged the young attendees to dream big and to consider the possibility of careers in ICT.

CANTO facilitated the 12th Annual WTISD Video contest, the winners of which were announced on May 17th, 2018 are:- First-placed Jamal Witty of Belize; Second-placed Jonathan David Jacobus of Guyana; Third-placed Vince Villatoro and Dion Ciego of Belize; and Fourth-placed Brenda Cab of Belize. Congratulations to the winners and Thanks to all the participants for your effort.

Results for the Innovation Awards honouring the highest achievements from the Mobile sector and celebrating member organizations that are blazing a trail within the sector will be announced during our sojourn here. The finalists are here in attendance as guests of CANTO.

The SONAR platform, of which we in the CANTO Community are very proud, is a Disaster and Emergency Management System which is geared towards providing a centrally managed and converged communication point for the interchange of data and information between National Disaster Management Agencies and the general public. SONAR focuses on the before, during and after components of Emergency events.

HAITI-SONAR PILOT has been launched with high expectation that Haiti and the region as a whole would be better equipped as a result for the 2018 Hurricane Season

CANTO has taken up its stance as the facilitator of the movement to encourage discourse amongst its membership; to foster an environment in which creativity is stimulated, which can only come about through a paradigm shift, in order for all involved in ICT to take advantage of its dynamism. Reimagining ICT in all its different spheres can only reap benefits, which would engender national growth and development.

CANTO's trade exhibition covers the spectrum of communication technologies, offering in-depth information on the latest development in voice, data, image and multimedia captured in 40 exhibits.

The conference on the other hand will lead discourse on key issues from a panel of experts in areas such as -:

- Ministers' Roundtable Discussions on Policy Regulations
- Operators & Regulators Forum
- Stepping into Leadership Womens' Forum
- Creativity Marketing of Telecommunication Products and Services
- GSM Forum - Leveraging Mobile to Achieve SDG Targets

An Excellent Mix! Great business, social, and networking opportunities await you. It is with pleasure we once again welcome you and thank you for joining us at CANTO 2018 here in Panama. Happy Networking!

Es con gran placer que les damos la bienvenida a esta nuestra 34ª Conferencia Anual y Exposición Comercial. Estamos felices de estar aquí en Panamá y agradecer al Hotel Hard Rock por hacernos sentir como en casa.

Siendo este el principal evento de telecomunicaciones del Caribe, confiamos en que no hay ningún otro lugar en el que los académicos de los representantes de la industria de los gobiernos regionales prefieran estar en este momento. Representando a más de 35 países, aquí en este evento, también se encuentran altos ejecutivos, operadores de telecomunicaciones, reguladores, ministros y proveedores.

“Guiando la adopción digital para liderar el mercado global”, es el tema que hemos elegido para este año. El tema fue desarrollado como resultado de los problemas apremiantes que enfrenta la industria; y se prestará especial atención a la dirección general en que se orienta la Asociación para el año siguiente de 2018.

CANTO defenderá el discurso sobre este tema mientras profundizamos en la transformación digital que está comenzando a abarcar y redefinir casi todos los modelos de ingresos de los operadores; percepción de los clientes y cómo se manifiestan y aparecen en las redes; los servicios que consumen y la evolución de las formas en que las redes se transforman en entidades virtualizadas y autoconscientes.

La digitalización del mundo está en marcha, por lo que la región del Caribe debe estar bien equipada con las herramientas y capacidades necesarias para cumplir y competir, en una población global que se ha vuelto cada vez más dependiente de la tecnología incluso para aspectos básicos de nuestra vida cotidiana. De el comercio electrónico a la banca electrónica a la gobernanza electrónica y la salud electrónica.

CANTO siempre ha estado a la vanguardia de su visión, su mandato como la principal asociación

comercial del sector de las TIC para dar forma a la información y la comunicación en el Caribe. Por lo tanto, siendo conscientes de eso, es imperativo que los jóvenes en nuestro medio estén moldeados para un mundo donde la humanidad trabaje mano a mano con la tecnología. Esta iniciativa es abordada de varias maneras por CANTO. La Secretaria General pronunció un discurso en el “Día de las Niñas en las TIC” en abril de 2018, cuyo tema fue “Cuando crezca”. Alentó a las jóvenes asistentes a soñar en grande y considerar la posibilidad de carreras en TIC.

CANTO facilitó el 12º Concurso Anual de Video WTISD, los ganadores que se anunciaron el 17 de mayo de 2018 son: - Jamal Witty, originario de Belice; Segundo Puesto Jonathan David Jacobus de Guyana; Tercer puesto Vince Villatoro de Belice; y la cuarta colocación de Brenda Cab de Belice. Felicitaciones a los ganadores y gracias a todos los participantes por su esfuerzo.

Los resultados de los Premios a la Innovación que honran los logros más importantes del sector móvil y que celebran a las organizaciones miembro que están abriendo camino en este sector se anunciarán durante nuestra estadía aquí. Los finalistas están aquí presentes como invitados de CANTO.

La plataforma SONAR, de la cual estamos orgullosos en la Comunidad CANTO, es un Sistema de Gestión de Desastres y Emergencias que está orientado a proporcionar un punto de comunicación convergente y gestionado centralmente para el intercambio de datos e información entre las Agencias Nacionales de Gestión de Desastres y el público. SONAR se centra en los componentes antes, durante y después de los eventos de emergencia.

HAITI-SONAR PILOT se lanzó con la expectativa de que Haití y la región en su conjunto estarían mejor equipados como resultado de la temporada de huracanes de 2018.

CANTO ha asumido su posición de facilitador del movimiento para alentar el discurso entre sus miembros; fomentar un entorno en el que se estimula la creatividad, lo que solo puede lograrse mediante un cambio de paradigma, para que todos los involucrados en las TIC puedan aprovechar su dinamismo. La reinención de las TIC en todas sus diferentes esferas solo puede generar beneficios, que engendrarán crecimiento y desarrollo nacional.

La exposición comercial de CANTO cubre el espectro de las tecnologías de comunicación, ofreciendo información detallada sobre los últimos desarrollos en voz, datos, imágenes y multimedia capturados en 85 exhibiciones. La conferencia, por otro lado, conducirá el discurso sobre temas clave de un panel de expertos en áreas tales como:

- Discusiones de Mesa Redonda de Ministros sobre Regulaciones de Políticas
- Foro de Operadores y Reguladores
- Foro Las Mujeres Intensifican su Liderazgo
- Mercadotecnia de Creatividad de Productos y Servicios de Telecomunicaciones
- Foro de Atención al cliente, venta de GSM Sales, y mercadotecnia
- Foro de GSM - Aprovechando los dispositivos móviles para lograr los objetivos de SDG

Una excelente mezcla! Grandes oportunidades comerciales, sociales y de redes te esperan. Es un placer para nosotros una vez más darle la bienvenida y darle las gracias por acompañarnos a CANTO 2018 aquí en Panamá. Happy Networking!



Creating business continuity (BC) and disaster recovery (DR) plans is a great step. Truly being positioned to realize the benefits from these proactive measures lies with continual maintenance, testing and incorporating these concepts into a communications service provider's (CSP) culture to the point where they become mindful of BC and DR in all aspects of their business.

Proud member of CANTO



SaskTel International believes every CSP should reflect on their current BC and DR plans to ensure they are at the forefront of their attention.

Having scalable, "living" BC and DR plans will better position a CSP to appropriately address these scenarios and restore service more quickly.

For more information visit our website: www.sasktelinternational.com or contact us at: info@sasktelinternational.com. Learn how SaskTel International will work with you to establish and improve your BC and DR plans!





Regulating the Digital Economy

David Geary
General Counsel Caribbean
Digicel

Introduction

The Caribbean has been an active participant in the global discussion on how online platforms can be regulated with presentations at several of the CANTO conferences of recent years and in 2016 a working group examining this issue was established by the CTU.

The debate has gathered pace over the past year or so as problems with online platforms have been reported in the media. The widely reported Cambridge Analytica scandal revealed that Facebook was used to influence the outcome of democratic votes in the US and the UK and it has transpired that similar methods were used to influence elections in the Caribbean.

This scandal appears to have been the straw that broke the camel's back and ended the era of self-regulation (or no regulation) for online platforms. It raised fundamental questions about the power and reach of online platforms and has brought into focus questions such as what rules should apply to online platforms and how can these be applied?

Who are the online platforms?

Online platforms (also referred to as OTTs as they provide services 'over-the-top') provide services over the Internet often in competition with more traditional service providers across a range of sectors including tourism, banking and retail. Telecommunications was one of the first industries to face this challenge but an increasing number of industries are being disrupted by online competitors. For example, taxis face competition from ride sharing Apps such as Uber and hotels face competition from accommodation letting Apps such as Airbnb. As Artificial Intelligence improves, more and more industries will be disrupted and it will not be long before automated legal advice, medical consultations or accountancy services will be provided by online platforms.

Online platforms are generally located in overseas locations and how these new service providers will be brought into legal, regulatory and taxation frameworks of individual jurisdictions has become one of the important questions of the Internet era.

Should the law apply?

Many of the online platforms still argue that they should be exempt from regulation. They point to the days of Internet start-ups working from a garage and argue that an obligation to comply with local laws in every jurisdiction would be a burden on them and any attempt to regulate them will stifle their innovation and creativity. In their drive for exemptions some online platforms even weaponised the principle of an open Internet to demand complex 'net neutrality' rules designed to protect their business models, an approach now rejected in the US.

However, in today's world the Internet is dominated by a handful of giant corporations and sophisticated investors that do not require such exemptions and protections. On the contrary, the scale of the success of some of these has itself become a key concern as the Internet is now dominated by a small number of vast corporations or 'Internet Giants'.

How consumers and society can be protected from these companies misusing their market position has become an important question. In recent years online platforms have demonstrated that they cannot be left unsupervised. In addition to the Cambridge Analytica scandal, some online platforms have incurred massive fines from anti-trust authorities and reports of infringements of local regulations are now common. Around the world it is increasingly accepted among policy makers that existing laws and regulations must apply to the online world and that new rules may be required to properly regulate the emerging digital economy.

Is it possible to regulate?

An argument put forward by online platforms is that the online world is different and cannot be subject to the same rules. This stance has been rejected in a number of jurisdictions. Courts in several countries in Europe have ruled that online platforms are subject to the same regulations that apply to telephone companies based locally. The Advocate General of the European Court declared Uber to be a transport service and therefore subject to transport regulations. Airbnb has been fined in Barcelona for failing to comply with local regulations. Beyond Europe, Colombia and other countries have moved to ensure that online service providers charge VAT on their services. Therefore it is now clearly established that the law of the land does apply to online platforms. Another question is whether any changes need to be made to national laws to ensure that in practice online platforms comply. The application of regulations that apply to broadcast content is one example with many asking why online broadcasters fail to comply with rules that apply to local broadcasters. Many jurisdictions, in particular in the EU and ASEAN regions, have introduced, or are considering, an obligation to maintain a registered presence in the jurisdiction. It should also be recalled that online platforms are frequently publically traded companies and therefore have an incentive to comply with all applicable laws and regulations.

What new rules might also be necessary?

Online platforms also raise new concerns that require new rules. It has been widely reported that online campaigns were used to influence elections in the Caribbean. The disruptive effect of 'fake news', in particular in the context of political debate, has led to the introduction of a 'Facebook law' in Germany that requires platforms to take down fake news or hate speech with fines of up to €50 million.

Following the revelations of Russian interference in the 2016 Presidential Election, law makers in the US are also considering regulating online campaigning. In Ireland both Facebook and Google (who together control the majority of online advertising) blocked digital advertising related to a referendum in May 2018, possibly influencing the result. This has led to questions about their power to influence democratic votes and calls for regulation.

The digital economy relies on user data and the more data that online platforms have access to, the more powerful they become. This information is valuable but is also personal to users and requires protection. The EU has introduced a General Data Protection Regulation (GDPR) to safeguard user data. Consumer groups are asking the US based platforms why US users aren't being given the same privacy protections as their European counterparts. A similar question could be asked in the Caribbean.

Platforms' control of user data also gives them enormous power allowing them to dominate markets and to eliminate, or simply buy, any competitor before it becomes a threat. The introduction and enforcement of competition law will be an important element of the new framework required.

A consensus is emerging that a shift from sector specific regulation to economy wide rules is required to regulate the economy in the Digital age. Local businesses are at a disadvantage if they are subject to rules that do not apply to their online competitors. Put simply, if rules are required to protect consumers these should apply to all providers of services regardless of their physical location. This requires reducing regulation that applies on a sector specific basis and applying consumer protection laws, in addition to competition and data protection laws, to all service providers and all sectors of the economy. Taxation is another focus as current tax laws frequently do not capture revenues generated by online platforms. As online platforms expand to provide new services the taxation revenue generated by local providers of these services will decline while online platforms generate revenues of hundreds of billions of dollars without paying taxes locally. Governments still need to pay for public services and to do this they will need to broaden the tax base to ensure that online platforms pay their fair share. The EU has begun to address this and has proposed a 3% tax on the revenues of platforms. In India a court has ruled that Google is liable for tax on advertising revenues while a number of South American countries have adapted their VAT regimes to ensure that they apply to services provided by online platforms.

Conclusion

The debate on regulating online platforms has evolved significantly over the past year. The argument that online platforms should remain exempt from



regulation is no longer sustainable. As policy makers introduce changes, online platforms are complying with their obligations. However, the evidence to date suggests that in the absence of regulation online platforms will not act in the best interests of local consumers. A recent example of this was the failure of online platforms to offer EU style protections for the personal data of children to their global customers. One may ask why they believe children in St Lucia or Dominica deserve less protection than children in neighbouring Martinique or Guadeloupe?

Many jurisdictions are now adapting their legal and regulatory frameworks to the digital economy and it is important that the Caribbean region also modernises its frameworks so that it does not get left behind. It is imperative that the sector specific approach to electronic communications is now re-assessed and replaced with economy wide rules that provide necessary protections and a framework within which the digital economy can thrive in the region. Much work has been undertaken by CANTO and the CTU and the next step for the region is to turn this work into positive change.



Active 2018 Hurricane Season Predicted – Are You Ready?

Conventional wisdom has it that the tropical hurricane season begins in June. So it must have come as a shock to many when on May 25, subtropical storm Alberto made a premature entrance as it formed East of Mexico's Yucatan Peninsula, bringing with it haunting memories of the devastation left behind in the wake of the 2017 hurricane season. Then there's the ominous prediction of the National Oceanic and Atmospheric Administration NOAA that there is a 35% chance of an above normal hurricane season this year. All this makes preparation for the 2018 season an even greater priority.



Cable & Wireless Communications engineers hard at work on the Sisal Tower Riggers restoration in Anguilla

Cable & Wireless which operates both Flow and C&W Business Solutions in the region, has been preparing for the season, encouraging everyone to be on alert and to be ready to take the necessary steps to protect family and property. Flow has already completed a series of rigorous hurricane drills across its markets and has begun customer awareness campaigns. The company has also invested in new cellular towers built specifically to withstand category 5 wind conditions and has been rolling these out as part of its restoration efforts in the badly affected islands of Dominica, British Virgin Islands and Anguilla. Additionally, the company has also reinforced its

sub-sea network that connects the Americas to the World with increased transmission capacity across fiber links in some markets and put in place even more redundancy options.



Cable & Wireless Communications engineers hard at work restoring Rigger 1 in Anguilla following damage left in the wake of Hurricane Maria

"We are enormously proud of our network performance in the hurricane-impacted islands last year. We've had decades of experience handling such situations, and every season, we take preparation to another level," said Garry Sinclair, Cable & Wireless' Caribbean President.

Sinclair added, “We are hard at work shoring up our defenses to make our networks even more resilient and robust for the 2018 season. For example, in Dominica, one of the hardest hit markets, we’ve relocated our Main Exchange to higher ground - a reinforced second floor location. In the BVI, another hard hit market, we reinforced the network towers and expanded the underground network to bolster redundancies should telephone poles become compromised during a hurricane.”



Hurricane ravaged BVI

Cable and Wireless, the Caribbean’s largest full-service communications company is keenly aware of the vital role of its services before, during and after these life-impacting weather events. This was most visibly demonstrated in islands like BVI, Dominica, Anguilla and Turks and Caicos where Flow was able to maintain network connectivity for its customers during the brunt of Hurricanes Irma and Maria in 2017. The ability to stay in contact with loved ones and to give updates on their safety was a tremendous relief to Flow customers in those markets.

According to Sinclair, “Hurricane preparedness has to be a priority for everyone including regional governments and businesses. We at C&W continue to hold true to our commitment to keep our customers connected to family and friends especially when it matters most, during times of disaster. Cable & Wireless is ready for the hurricane season. Are you?”

“C&W Business can help you minimize your business risk this hurricane season by securing your data and infrastructure. Reach out to your C&W Business partner so we can work together to make this a safe and secure season,” Sinclair concluded.

We Were all AFFECTED IN 2017!!

CANTO REMINDS MEMBERS TO BE PREPARED FOR THE SEASON:

- + Update your Hurricane Plan
- + Send us your key contact details for Disaster Risk Management
- + Take some time to review the CANTO disaster status report form to be completed and submitted to CANTO in the event that you are impacted by a disaster



**WE ARE READY....
ARE YOU ?**

CANTO IS BIG ON DISASTER RISK MANAGEMENT!

- + **TRAINING:** -
Business Continuity Planning
- + **REPORTS:** -
Partnered together with ECLAC to compile a report on Disaster Risk Management in the Telecoms Sector
- + **PROGRAMMES:** -
Formulated the DRP Mutual Assistance Programme for affected members
- + **PARTNERSHIP:** -
Partnered with CDEMA in soliciting technical assistance for the telecoms sector of the affected countries
- + **AID:** -
Partnered with Tripwireless on the distribution of educational supplies to affected members
- + **CANTO DISASTER STATUS REPORT:** -
Created a status report document for affected members to complete for quick and efficient response from CANTO



APUA Collaborates With CANTO and Trip Wireless on Giveback Initiative



APUA Giveback Team: D.Richards, S. George, J. Samuel & R. Burton

ST. JOHN'S, Antigua, May 22, 2018 - The Antigua Public Utilities Authority (APUA) in partnership with the CANTO and TripWireless has commenced an island wide giveback initiative in Antigua and Barbuda. A selection of students in public primary schools across Antigua and Barbuda have benefitted from the distribution of hundreds of care packages and stuffed animals.

According to APUA Business Development Coordinator & CANTO Marketing & Communications Committee Chairman, Joseph Samuel, Trip Wireless via CANTO engaged the local utilities company, APUA, following the devastation caused by Hurricane Irma in September, 2017. A committee was formed within the Authority to include the employee outreach arm, the APUA Giveback Team, to orchestrate the distribution of 500 care packages including school

bags, stationary and stuffed animals to students in need within Antigua and Barbuda. The key team members who facilitated the distribution comprised: Joseph Samuel; Denelle Richards, APUA Audit Senior & CANTO Financial & Advisory Committee Chairman; Floree Whyte, Executive Secretary of the APUA Giveback Team; Sharifa George, APUA Public Relations Coordinator & Giveback Team Member; and Regis Burton, APUA Employee Engagement Officer & Giveback Team member.



APUA Team pose with recipients of bags

Over the course of five days, thirty (30) schools in Antigua were visited and packages were distributed with the assistance of staff members of the Authority. To date, arrangements are currently underway to have packages transported to the sister isle.

The Antigua Public Utilities Authority and the APUA Giveback Team would like to extend a heartfelt thank you to CANTO and TripWireless for the generous donation.

CANTO HIGHLIGHTS GIRL'S IN ICT DAY



Ms. Sherry McMillan
Executive Officer Communications
Consumer & Information Services, TATT



Ms. Teresa Wankin
Secretary General, CANTO



Ms. Tricia Balthazar
Service Development Manager, CANTO



Ms. Ria Karim
App Developer and Creator, D Junction



Ms. Marsha Caballero
Vice President, Corporate Communications,
TSTT



Ms. Camille Denali
IT Administrator, TATT



Ms. Elizabeth Ammon
VP, C&W Business



Ms. Hadassah Gordon
Lead Galaxy Master Trainer, TT - Samsung



Ms. Karisa Phillips
Founder and Chief Creative Officer,
Lagoon Animation Studio Ltd.



Students participate in "When I grow up"
poster design competition



Winners of the competition pose with T. Wankin,
K. Sookram & S. McMillan



Students visit iGovTT booth

CANTO HIGHLIGHTS



Mr. Ken Corbie - Trainer
Professional Selling Skills Workshop
CANTO Secretariat



Mrs. Carla Charles-Yee - Trainer
Professional Selling Skills Workshop
CANTO Secretariat



CANTO team at two (2) day Professional Selling Skills Workshop - CANTO Secretariat

WTISD Winners



1st place - Jamal Witty, Belize



2nd place - Jonathan Jacobus,
Guyana



3rd place - Vince Villatoro &
Dion Ciego, Belize



4th place - Brenda Cab, Belize



CANTO Board Members at 138th Board Meeting held in Aruba



CANTO Chair and Secretary General greet
recently appointed Ag. Vice Chair, D. Cox at
Board Meeting in Aruba



From left: J. Wilkins, M. Sutherland
& D. Cox at 138th Board of
Directors Meeting



CANTO's Board met with Aruba's
Regulator Mr. L. Jansen 2nd
from left



Members of CANTO's Board met with Director of
Setar during the 138th Board Meeting in Aruba
From left: R. Croes, J. Wilkins, D. Cox & T. Wankin



Mrs. T. Wankin met with
Aruba's Prime Minister
Ms. Evelyn Wever-Croes



Will Blockchain Shakeup Telecom?

Jonathan Homa
Sr. Director Portfolio Marketing
ECI

If you want to boost your company's stock price, tell the world you are building a blockchain application. When Kodak announced a blockchain service to facilitate photographers getting paid for their work, their stock jumped 200% overnight and has since leveled off for a still very significant 60% gain. The hype of course is driven by the cryptocurrency boom. The terms Bitcoin and blockchain are practically synonymous.

So, what is so special about blockchain, and can it bring any of this specialness to telecom applications?

Without getting into a technical description of blockchain (there are no shortage of YouTube videos for that), in my opinion there are three attributes that must be satisfied to consider building a successful blockchain application:

1. There is an asset that undergoes transactions, the results of which are recorded digitally (ownership, value, location, quality, membership, etc.).
2. There is a community of users – with varying levels of trust (zero to some) – who have a mutual interest in the veracity and immutability (non-hackability) of these transactions.
3. The pros and cons of using a distributed peer-to-peer solution to validate and keep track of these transactions outweigh using a centralized solution.

This last point is essential, in that there is no middle-man or any centrally located database. In fact, blockchain is a form of what is also called a “distributed ledger” technology. What many people don't realize, however, is that there a range of ways that blockchains or distributed ledgers can be implemented. The selected method should fit the particular needs of the application. The table below outlines the two major categories, termed permissionless and permissioned access.

		PERMISSIONLESS ACCESS	PERMISSIONED ACCESS
DEFINITION	Example	Bitcoin, Ethereum	Hyperledger Fabric
	Distributed ledger of linked blocks	Yes - Both use a distributed blockchain model with no middleman and can keep a copy of the shared ledger at all participating nodes	
	Anyone in charge?	No	Yes, one of group of entities
	Membership and read-write ability	Open to anyone (zero trust)	Controlled (semi-trust)
IMPLICATIONS	Consensus process	High energy use for Proof of Work transaction validation	Semi-trust makes transaction validation much easier
	Security	Very high	High
	Throughput and Scalability	Inherently limited	Good, can be engineered



Bitcoin is the poster child for permissionless access. The asset is digital money, and anyone in the entire world can buy and sell Bitcoin or transfer it to buy and sell other goods. The middlemen eliminated are banks and similar institutions like credit card companies. Because it is open to anyone, Bitcoin assumes a zero level of trust, which requires a transaction validation (or consensus) process that is extremely robust. The consequence of this is that the process is slow, consumes huge amounts of energy, and cannot scale. Some of these problems are the subject of research, but so far there is no magic bullet that solves the inherent implementation constraints placed on permissionless access blockchains. So while the capacity for disruption is huge, this must offset painful implementation costs.

The fundamental difference of permissioned access blockchain applications is that they are not open to anyone. While these applications still use a distributed blockchain ledger, there exists a centralized authority that controls who has permission to read and write to this ledger. This creates a system of semi-trust, which results in a simpler validation/consensus process that can scale efficiently. Companies that operate in a consortium among themselves for tracking

manufactured goods, transaction records, or digital assets, can benefit from this blockchain type. These applications can even extend to individual end-users (e.g. the owner of a manufactured good, like a car) so long as they are permitted access. The benefits are fast processes with highly reliable information, that avoid multiple checks and reconciliations. So while permissioned blockchain applications are easier to implement and produce streamlining benefits, on the flipside, by their nature they don't have the same capacity for disruption as permissionless applications.

As far as I can foresee, the telecom industry will only benefit from permissioned blockchain applications that make existing intercompany processes more efficient. An example is a recent proof-of-concept by PCCW and Colt of a blockchain payments settlements application. While these types of applications are certainly a good thing, they don't have the same breathtaking interest or stock moving ability as Bitcoin. For this to occur in telecom, someone will need to figure out how to make an instance of a telecom service itself as an asset, transferable to anyone. Then we will see some real excitement.

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Empowering SMEs in the Latin American Market

Ian Channing
Global Contributing Editor
Developing Telecoms

Telefonica Business Solutions and Huawei have signed a global alliance for the development of new comms solutions for enterprises.

The solution, specially aimed at SMEs, delivers a simple form of private network between the business' different premises combined with safe navigation, remote access for teleworkers and a web portal where customers can monitor, manage and adjust their services in real time. It can be quickly delivered whilst fully protecting SMEs from cyberattacks and other threats. The initial deployment plan will begin in Argentina and Chile with a progressive roll-out across Latin America and Europe.

SMEs are the backbone of all major economies and represent an important strategic segment in the countries where Telefónica operates. However, in many cases, due to commercial and operational restraints, this segment of enterprises does not always have immediate and uninhibited access to the latest technology.

With the emergence of virtualization, automation and the explosion of data bandwidth, SME's can now take advantage of new technologies and enhance their agility.

"Telefónica has a long tradition in supporting SMEs. Now that digitalisation is transforming everything at an unparalleled speed we want to keep playing a key role supporting their digital transformation", commented Hugo de los Santos, Director Global B2B Products & Services at Telefónica.

"Huawei CloudEPN (Enterprise Private Network) solution aims to help carriers provide SDN based agile and on-demand enterprise interconnection services for customers, meeting requirements of rapid innovations and fast changes of enterprise demands. The solution helps carriers grasp opportunities during enterprises' B2B digital transformation, continuously increase B2B market revenue and achieve business success." said Kevin Hu, President of Huawei Network Product Line.

The Network Service Platform and CloudVPN places the customer in control, with an embedded and fully integrated security solution. This means that communications between the client's headquarters and remote users are safe guarded. Customers will have full service deployment control and the ability to implement an end-to-end governance model across all business applications. Furthermore, as a service based on an open source platform, customers have the flexibility to use any type of public access or private, own or third-party network.

www.developingtelecoms.com



Tripwireless Steps in to Assist Caribbean Recover From Devastating Hurricanes

Kimberly Koch
Founder & CEO Tripwireless™ Inc.



Students collect school supplies from Tripwireless

Tripwireless™ Inc. – a U.S. telecom equipment supplier and logistics company based in Denver, Colorado – has had a long-term relationship with OPEN MOBILE in Puerto Rico. When Hurricane Maria devastated Puerto Rico and other Caribbean islands in 2017, Tripwireless™ stepped in to support the network's needs by providing critical spares and telecom equipment. Likewise, pleas for help came in from DIGICEL for emergency equipment in Jamaica and the British Virgin Islands. Tripwireless™ answered the call.

“Providing emergency assistance to help local carriers start the re-building process in the aftermath of the sheer devastation from these hurricanes was a no brainer” says Kimberly Koch, Founder and CEO of Tripwireless™, adding that “it was simply the right thing to do, and we have the ability to quickly and nimbly procure urgently needed equipment.”

In addition to working with the network carriers, the company also founded the **Tripwireless™ Relief Program** which donated over 500 backpacks of school supplies to the hurricane ravaged islands of Antigua and Anguilla.

Tripwireless™ is an active member of CANTO. Kimberly is looking forward to this year's conference in Panama and to attending the Leadership Forum for the Women in the ICT Working Group, in which Kimberly is also an active member. As a 100% woman-owned business, the company is able to work with and meet many suppliers' diversity programs.

Tripwireless™ was recognized by Colorado Biz as one of the **Top 250 Private Companies** in 2016, and in 2017, Kimberly was named the **Enterprising Woman of the Year** winner by Enterprising Women. She has taken an active role in furthering diversity programs and mentoring women in business. The company is an active and certified member of WBENC (Women's Business Enterprise) & SBA-WOSB (Woman Owned Small Business).

With more than 25 years of industry experience, the Tripwireless™ team is uniquely qualified to provide a wide range of highly specialized services to wireless carriers. The company's laser-focus on providing superior service and its proven solutions have saved customers more than \$40 million dollars over the last 10 years, resulting in an extraordinarily high rate of repeat business year after year.

The services offered by Tripwireless™ to markets outside the U.S. include new and hard-to-find refurbished telecommunications hardware; wireless and wireline construction (shelters, connectors, coax); outside power, cross connects, and other hardware to keep networks running. Tripwireless™ is a **Preferred Reseller** for **ServersCheck** and an **Authorized Vendor** for **Cisco**.

Recognizing the complexity in working with multiple vendors, industry-veteran Kimberly Koch founded Tripwireless™ Inc. in 2005 with the idea that customers would greatly benefit from having a one-stop shop with a solutions oriented partner whose mantra is to keep the customer's best interests in mind, always. With this underlying premise in all they do, Tripwireless™ has brought a different kind of relationship to the market – one of loyalty, support and genuine concern for the customer.

To learn more about Tripwireless™' international capabilities, or to set up a meeting during the CANTO Conference, please contact Kimberly directly at:

kym@tripwireless.com | ph +1(303)717-3839



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ALIV Continues its Expansion Throughout the Bahamas



L to R: Chief ALIV Officer Damian Blackburn, Long Island MP Adrian Gibson, ALIV General Manager for the Central Bahamas, Carl Momplaisir

ALIV continued its Family Island rollout expansion adding Long Island to its list in April. ALIV officially launched its superior network with a brand-new store located in Deadman's Cay. Prior to the store's official opening on April 20th, ALIV executives, staff and members of the community were invited to an official cocktail launch held on April 19th at Lloyd's Sporting Lounge.

Chief ALIV Officer(CAO) Damian Blackburn who brought brief remarks said ALIV remains committed to quickly delivering on its mandate to provide superior products and customer service throughout the entire Bahamas.

"I'm the kind of guy who does not let people down and anybody using the ALIV network in Long Island and comparing it with the ALIV network in all the other islands will agree with me that it's the same. We make good on our promises and I promised you the last time I was in Long Island that we will be in your community and support your initiatives and we will also make good on that," he said. "To the ALIV

team here on the ground and those not here I want to say well done, it's an incredible achievement to launch on another island."

Long Island's Administrator Cleola Pinder, who brought remarks on behalf of Long Island Member of Parliament(MP) Adrian Gibson, shared sentiments of joy and appreciation for what ALIV has offered to residents there and what ALIV plans to do in the future.

"We are very happy and pleased to have ALIV here in Long Island because we certainly can use all of the economic benefits and those who are currently now employed will agree with me. Any business that we have here on the island we should embrace so we thank ALIV for being here and for a number of the things they intend to do while here, namely assisting backyard farming, ALIV thank you so very much once again."

The Deadman's Cay storefront was officially opened with an official ribbon cutting ceremony.

Also, in attendance at the launch was ALIV's Central Bahamas General Manager Carl Momplaisir, Chief ALIV Innovator Stephen Curran, Chief ALIV Solutions Architect Duane Davis, Bahamas Chamber of Commerce Vice President Ramona Taylor and Superintendent Victor Wells.

ALIV currently has retail stores and authorized dealers on the islands of New Providence, Grand Bahama, Abaco, Eleuthera, Bimini, Andros, Exuma, and San Salvador with a total of 200 towers throughout these islands. Through national roaming however, ALIV subscribers can use their devices throughout the country. It is hoped that ALIV will have launched in all the major Family Islands and throughout the entire Bahamas by mid-summer 2018.



How Service Providers and Enterprise Customers can Change and Evolve Together

Moshe Shimon
VP Product Management
ECI

Keeping pace with the services your customers and prospects want is a long, winding, and endless road. Here, Moshe Shimon, ECI's VP of Product Management looks at what providers of Business Services can do to change and evolve with their customers' expectations. This is the second in a series of blogs about the metro network and how it's changing in response to emerging market trends and technological innovation.

Love them or loathe them, the OTT players have shaken things up. Amazon Web Services, Google Cloud Platform and Netflix (to name just three) have bypassed the traditional service and billing models, to bring us WaaS (Whatever-as-a-Service) with untold flexibility. The problem is that this approach is fast becoming the norm, and the least people expect.

Meanwhile, in the world of Business Services everything has carried on much the same as it always has. So while the rest of the world embraces a new way of using and paying for services, SPs are busy negotiating over what the network and capacity will look like and insisting customers then sign up to an old-school 12-month contract (on a good day). And heaven forbid if they want to change anything, as that's another lengthy contract negotiation. How much longer can this go on?

Anything you can do, I can do better

Is it beyond the realms of possibility that one of these OTT giants, with its bottomless pockets, will decide it can do 'Business Services connectivity' better than the incumbents? Should that day come, things could get very messy very quickly for SPs that have fallen behind in the services they offer, and the way they deliver them.

So to survive and thrive, SPs need to get better at changing and evolving in line with their customers' needs and expectations. In fact, this should be reason enough for SPs to upgrade their metro networks. As discussed in my previous blog 'Stagnation or Salvation', businesses are going global, moving to the cloud, expecting high-quality access anywhere and anytime. Their own internal traffic no longer stays within the business, and jumps aboard the 'metro express' to connect external cloud-based services and different branch or office locations. All this extra traffic is putting more stress and strain on the network, which is another reason why SPs need to beef up the metro – so they can provide the connectivity services their customers need and expect.

Remember the (not so) good ol' days?

Traditionally, SPs used the metro network either to build a user network or to put extensions on it for specific business services. So, for example, if you wanted an Ethernet Access Service, you'd build Ethernet access pipes onto the end of the metro. But who wants to have to provide a separate product platform for each service, when the technology's there to have a common platform for all services? Especially given the fact that services are evolving much faster than they used to.

Therefore SPs need not only an agile platform that can offer multi-service capability relatively rapidly, but also the toolkit to react to changing customer demands. That requires multi-service flexibility to the Packet layer, and the ability to stitch together an optical, or a combined packet-optical, service. And to make that happen requires seamless IP and optical interworking in the network. Which is where a multi-service box comes in very handy – as long as it's optimised for quality of service (QoS) and compares favourably on cost to a single network.

A dog's breakfast

We can safely say the networking closet in most businesses looks like a dog's breakfast. It'll probably contain a bunch of communications appliances, plus other boxes for things like routing, cyber security and WAN optimisation. But, thanks to virtualisation, those hardware products can become software products, not only reducing the number of different boxes but, at the flick of a button, allowing the spinning up or down of different virtual functions. Hey presto! Instant flexibility. In most cases, all that's required is a very small metro access box as part of the Customer Premises Equipment (CPE) or a dedicated box if more capacity is needed.

Things to think about

So with more access, more traffic and more pressure to optimise costs when they're providing services, SPs need to pay attention to a few key things:

- Cloudification of services – this is driving all sorts of changes. The need to go multi-service. The increase in capacity due to the growing use of video, even in business. The flexibility to migrate between one service and another. The ability to add new end-points or to modify an existing service, without having to go through lengthy contract negotiations.
- A changing business model – until fairly recently, connectivity has been built on a very static business model. What would serve enterprises better is a more dynamic and flexible model, and that's what forward-thinking SPs are looking to offer. So any platform they deploy today has to provide the capability and flexibility their customers will need tomorrow.
- Network Function Virtualisation – lest we forget NFV. You can add a whole raft of capabilities such as extra firewalls, intrusion protection, and encryption services using NFV. While that may be less relevant at the moment for some, platforms need to be flexible enough to add these extra capabilities into the service definition, linking them together using service chaining.

- Security – beyond the firewalls and DPIs, also in terms of Layer 1 encryption, SPs need the flexibility to encrypt their services by service. So, for example, the SP can provide an encrypted service to Company A, but not to Company B. In short, SPs can change things on the fly on a 'per service' turn it on/off whenever you want basis.

A shameless plug...

One of the possible solutions to tackle some of these challenges is to utilize some of the newer, virtual solutions, like uCPE. In essence, a universal Customer Premise Equipment (uCPE) solution such as our very own Mercury™ uCPE gives SPs a lot more flexibility. It provides services based on the customers' needs. So they can add in a firewall if they want, and WAN optimisation, LAN monitoring, security, and other network functions - then use service chaining to link them all together.

Even better, when you need to upgrade or enhance the service, it's done remotely via the central virtual network functions (VNF) manager, so there's no need to connect to bespoke CPEs to upgrade software. Actually, Mercury uCPE makes upgrading and maintaining everything in the network a lot cleaner and simpler. And if you already have one of our Neptune boxes, you can simply plug in a Mercury NFV blade for even more functionality at a click of a button.

And the future?

Nobody knows for certain. I'm sure it won't involve long-term contracts, but I do think it will involve more harnessing of the metro network's ability to diversify your service portfolio, create new revenue streams, and offer an altogether more flexible approach to what you offer and how you charge.

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Business Continuity at the Forefront of Attention

Scott Argue,
VP Client Services,
SaskTel International

Business continuity and disaster recovery are words that have been around for some time. These concepts are important but *are they* actually at the forefront of a communications service provider's (CSP's) attention and adopted into the culture? SaskTel International (SI) believes this is an important question that every CSP needs to reflect on. Creating an outline or plan to address continuity in the face of minor interruptions of service or large scale outages is a great step, but truly being positioned to realize the benefits from these proactive measures lies with continual maintenance, testing and incorporating these concepts into a CSP's culture to the point where it becomes the "way of thinking".

It's important to understand the difference between business continuity (BC) and disaster recovery (DR). Business continuity focuses on business process during and after interruption. Disaster recovery focuses on restoration of enabling resources (technology and infrastructure). Each scenario can be different and unique, where having just one, general plan would most likely not address the issue appropriately. Having a solid business continuity plan (BCP) and disaster recovery plan that is scalable for the varying business units affected will better position a CSP to appropriately address the BC/DR scenarios and restore service more quickly than a "one size fits all" BC/DR plan.

In the event of a disaster scenario the foremost priority is focused on the well-being and safety of people and employees. CSPs provide critical infrastructure for the general public, emergency services and government organizations, all of which can be affected in a disaster scenario. As a service provider it's important to align with and support critical agencies (fire, police, hospitals, government etc.) by prioritizing service restoration to ensure they can resume their critical activities. A concerted effort with all levels of government and emergency services is a critical foundation to ultimately defining

the ideal BCP and DR plan. In Canada's action plan for critical infrastructure, the information and communication technology sector is included. This initiative represents a collaborative federal, provincial and territorial approach to help strengthen critical infrastructure resiliency. The plan focuses on creating sustainable partnerships between the parties involved (different levels of government and sectors), improved information sharing and a larger risk management perspective. This involvement places a lot of responsibility on the CSP to have the appropriate measures in place to ensure continuity and satisfy the action plan.

Beyond the cost implications of an extended outage or inefficient BC/DR plan, many CSPs have regulatory expectations that are placed upon them. There typically might be an expected minimum degree of service that has to be available even during BC/DR scenarios. In Canada, CSPs are a part of larger government groups on a provincial and federal level, like the Canadian Telecommunications Resiliency Working Group (CRTWG). This group provides oversight, best practices and a communication channel between the CSPs and government on multiple levels (provincial and federal). Membership adds a collaborative recovery and response initiative across the working group. The CRTWG helps align members to focus on preparedness and mitigation, pulling from the experiences of its members. This involvement and oversight creates channels to pass information for BC/DR scenarios to help keep all affected stakeholders informed on a provincial and federal level.

The question now is: *how does a CSP ensure their BCPs and DR initiatives are efficient?* This lies in having these proactive measures embraced by all levels of the organization, from the top down. Evolving these concepts to become "the way of thinking" for the organization, which will influence existing operations, but also into design and implementation phases as the CSP changes over time. This becomes adopted

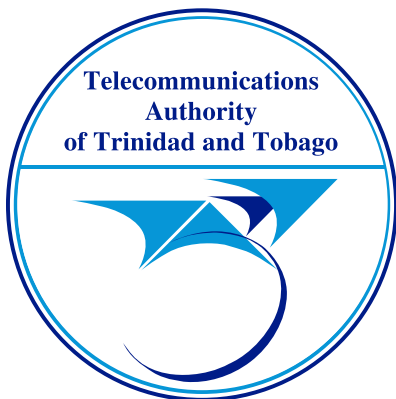


into the culture from continual review, maintenance and testing of the BCP and DR initiatives to highlight areas for change. Constant focus will help engrain these concepts into the CSPs culture, positioning them to have the appropriate measures in place to further mitigate strategic, financial and operational risks.

SI recommends a model that demonstrates Business Continuity Management(BCM) through governing policies at a high level, but also by establishing roles and responsibilities down to the individual business units to create transparency. A CSP could use a six-stage lifecycle approach towards its BCPs, managing these inputs/outputs from a BCM steering committee. The committee would include multiple levels of leadership, business and technology representatives. They ensure appropriate plans are developed, stay accurate and that periodically the business unit BCPs are exercised and DR plans tested to confirm alignment with corporate BCM policy and strategy.

SI's parent company, SaskTel, is a CSP with established, thorough BCP and DR initiatives for its varying business units. SI's strong relationship to our parent company allows us to easily leverage both our own experience and that of SaskTel's, to bring forward a project team fluent in business continuity and disaster recovery processes to help others in establishing their BC/DR evolution.

It's important to realize that BC and DR scenarios will vary in severity and constantly develop over time, thus there are real benefits to creating adaptable BC/DR plans to stay accurate and remain useful. SaskTel International encourages CSPs to engrain BC and DR perspectives into their culture, to the point where it becomes the "way of thinking", enabling service providers to be well positioned when these scenarios occur.



Cryptocurrencies – a Financial Sector Phenomena

Telecommunications Authority of Trinidad & Tobago

In October 2008, Satoshi Nakamoto wrote a white paper titled “Bitcoin: A Peer-to-Peer Electronic Cash System” in which there was mention of a revolutionary technology that created the world’s first genuine peer-to-peer and decentralized monetary system.

While the design and creation of bitcoins are attributed to Satoshi Nakamoto, there remains uncertainty as to whether the name represents a person or group of persons.

Nevertheless, whether a person or group, it will be interesting to find out whether, at the time of writing, Nakamoto anticipated bitcoins would be today one of the world’s leading cryptocurrencies and further, that cryptocurrencies would be traded on the New York Stock Exchange.

Cryptocurrencies such as bitcoins, emerged within the last decade, disrupting the historically staid global financial market.

According to an article on BitcoinExchangeGuide.com, an entity dedicated to reviewing all of the major bitcoin exchanges, cryptocurrency is often described as a type of digital currency.

It must be noted that monies which do not exist physically are known as digital currencies. While cryptocurrencies are described as a type of digital currency, they are not the traditional digital currency with which most of us are familiar and which is also referred to as electronic money.

Digital currency or electronic money is held by individuals in financial institutions such as banks and credit unions which its owner can convert to physical cash, or utilise a credit or debit card, to spend on goods and services. These currencies belong to specific countries and are backed by legal frameworks for their establishment and usage.

Cryptocurrencies on the other hand, while also referred to as digital currencies, are very different from traditional digital currencies and are thus far,

unregulated. Its value is not determined by a known regulatory or financial institution, but for the most part by the group of people utilizing the currency.

At the Telecommunications Authority of Trinidad and Tobago’s (TATT) 28th ICT Open Forum on Thursday 22nd March 2018, a range of issues related to cryptocurrencies were discussed. That forum was titled “**Cryptocurrencies: Implications for Trinidad and Tobago**”

The objective of the Forum was to initiate discussion on issues related to cryptocurrencies including cybersecurity, global trading, central financial authority and legal considerations, as well as provide accurate information on the technology that enables their use. In his opening address at the forum Mr. Eric Butler, member of the TATT Board, noted that as with most financial innovations, some level of security and financial concerns surrounding cryptocurrencies have arisen due to potential risks.

He informed the audience that Symantec, one of the world’s leading cybersecurity companies, in its March 13th, 2018 report stated the following:

“Symantec has seen an increase in threats and malware that mine cryptocurrencies such as Bitcoin and Monero...”

The creators and distributors of these threats use commonly-available mining software to take advantage of someone else’s computing resources (CPU, GPU, RAM, network bandwidth, and power) to generate cryptocurrency. This mining-related activity can cause unnecessary wear on your hardware, increase network activity, increase costs, and impact user productivity.

Mr. Butler’s welcoming remarks were followed by three dynamic and informative presentations.

Mr. Aaron Besson, Founder of Morpheus Software Solutions Limited explained that there are three types of cryptocurrencies:

- Currencies - primarily used for payments and/or store of value

- Securities - External tradeable asset class and usually involves rewards for ownership (eg. dividends)
- Utility Tokens –primarily used to access/ unlock platform features

He informed that cryptocurrency companies were looking at Trinidad and Tobago to set up shop as it is the second cheapest country in the world to mine bitcoins, because of this country's low electricity costs. He revealed that it costs US\$1,190 to mine one bitcoin in Trinidad and Tobago. Venezuela is the cheapest at US\$ 531, compared with Egypt and Saudi Arabia where the cost is the US \$3,172.

Head of Legal at the Ministry of the Attorney General and Legal Affairs, Ms. Vashti Maharaj, gave the audience insight into legal issues surrounding cryptocurrencies.

She reminded attendees that the three supervisory authorities in Trinidad and Tobago's Financial Obligations Regulations 2010 are the Central Bank; Trinidad and Tobago Securities and Exchange Commission (TTSEC) and the Financial Intelligence Unit (FIU).

These three organizations, she emphasised, bear the responsibility for ensuring this country's compliance with anti-money laundering and combatting the financing of terrorism (AML/CFT) legislative and regulatory requirements.

In her presentation, Ms. Maharaj revealed that the potential use of digital currency for money laundering is the primary concern of regulators.

She said regulators in this region ought to take careful note of the Caribbean Financial Action Task Force (FATF) recommendations. These recommendations set out a comprehensive and consistent framework of measures which countries should implement in order to combat money laundering and terrorist financing, as well as financing the proliferation of weapons of mass destruction.

Mr. Hadyn Gittens, Chief Executive Officer, Trinidad and Tobago Securities and Exchange Commission (TTSEC) also presented at the forum and informed the audience of international developments regarding cryptocurrencies. He spoke about the International Organisation of Securities Commissions (IOSCO)'s Securities Markets Risk Outlook 2016 and its January 2018 warning on Initial Coin Offerings (ICOs)

The 2016 Risk Outlook stated that cryptocurrency exchange platforms such as crowdfunding and the use of peer-to-peer (P2P) lending platforms are vulnerable to cyber-attack, as these activities are conducted via the Internet. Further, start-up companies in this field

may have low budgets and limited resources available to put towards maintaining their own cyber resilience, leaving their clients' information vulnerable to a cybercriminal.

The January IOSCO 2018 warning stated that ICOs are highly speculative and raise investor protection concerns. It noted that start-ups have begun issuing new digital currencies via ICOs that are sold to investors in return for cryptocurrencies such as bitcoins.

There are clear risks associated with these offerings as ICOs are highly speculative investments in which investors are putting their entire invested capital at risk, the warning added.

Alongside these international developments, Mr. Gittens reminded the audience that his organization, the TTSEC, issued a Cautionary Statement on ICOs in February 2018. The statement made it clear that the TTSEC had not approved any ICO and that ongoing offerings were unregulated and speculative investments, with considerable risk to the investor. Some of the risks were identified as:

- 1. Heightened potential for fraud** – While some ICOs are floated by entrepreneurs with genuine and innovative ideas for new products and services, there is a risk that some issuers could seek to perpetrate fraud against investors.
- 2. Cross-border distribution risks** – As the issuer may also be operating the ICO from outside the investor's jurisdiction, following the money in the event of a collapse of the ICO as well as recovering invested funds, may prove extremely difficult in practice.
- 3. Information asymmetry** – Due to their complexity and the uncertainty around the rights or interests that an investor may be acquiring, many retail investors may not be able to understand the risks, costs and expected returns and/or the drivers of risks and returns, arising from their investment.
- 4. Liquidity risks** – Like cryptocurrencies in general, tokens traded on virtual currency exchanges (or over-the-counter) may give rise to opaque and volatile pricing, often coupled with insufficient liquidity to support reliable trading and market-making activities. In some jurisdictions, the cryptocurrency exchanges may also be unregulated.

He ended by stating that the goal of a responsible regulator in the securities industry is to balance the need for innovation with the need for investor protection through regulation and education.



Strategies to Gain Competitive Market Share

Melissa Harris
CEO of Telecom Training Corporation

In the increasingly challenging competitive landscape, ICT companies must continually look for ways to increase their market share. Frequently, the focus is on implementing big changes - new networks, systems, mergers/acquisitions, etc. - that are risky, costly, lengthy, and require lots of resources.

However, it's important not to overlook the old adage "little things make the big differences." At Telecom Training Corporation, we've worked with telecommunications and cable television operators for over 20 years to support their goals in beating the competition.

10 Areas of Competitive Differentiation

1. **Networks** – 4G LTE, 5G, Wi-Fi/Hotspots, Fixed Wireless, HFC
2. **Services** – Wireless, Internet, TV, Telephone, Features
3. **Pricing** – Bundles, Promos, Lifeline, Roaming, Long Distance, Overages, Installation Fees, TopUps, Prepaid/Postpaid, Deposits, Connection/Reconnection Fees, Equipment Deposits, Replacement Value for Equipment Not Returned When Moving, Transfer Fees, Taxes and Fees, Subsidies to Cancel Contracts, Trade-Ins
4. **Devices** – Smartphones, accessories, routers
5. **Support** – Troubleshooting, Repair, Locations
6. **Billing** – Payment Options, Credit Checks
7. **Community Commitment** (We're local so we care") – Employees, Careers/Hiring, Facebook, Twitter, Customer Experience Centers or **Global Focus** (We're so big that you can trust us!)
8. **Marketing** – Social Media, Promotions

9. **Customer Experience** – Strategies to delight the customer with every interaction to build loyalty and obtain referrals, measured by Net Promoter Scores.

10. **Front Line Employees (Sales & Customer Service) Really Knowing the Entire Service Portfolio** (including the unique "little things" – Accessories, Lifeline, Hard of Hearing Handsets, CLASS features) to have the knowledge to build trust, dig deeper to uncover new opportunities, and confidently act as a consultant to recommend value-based, customized and bundled solutions since the competitors typically won't be able to do so.

Common Pitfalls in Competitive Selling

- Assuming that sales, customer service, and call center teams understand the sales and support issues about their solutions without having received effective product training
- Trusting that these teams will find the time to research the competition to understand their offerings and prepare strategies to professionally sell against them
- Anticipating that these teams know effective competitive selling skills, particularly those who have only recently become responsible for sales such as customer service representatives
- Thinking that managers and supervisors know how to successfully coach teams to use effective competitive selling skills and increase product/service knowledge

It's challenging for front line employees to successfully win in competitive situations if they are "just winging it." Allocating time to **develop a competitive communications strategy** makes all the difference. For example, a strategy session could include brainstorming on the following:

- Your key strengths and weaknesses and those of your major competitors
- Customer needs that can be exclusively addressed by your products and services and your competitor's products and services
- Your unique features and benefits that demonstrate added value over the competition
- New and emerging technical products and services offered by your own company as well as those offered by your competitors
- Strategies to overcome competitive strengths and weaknesses

Do's and Don'ts in Competitive Selling

1. Don't let the customer shape the comparison between you and the competition. They will typically focus solely on low price.
2. Don't give your competition free advertising by using their name. Refer to them vaguely such as "Unlike other companies, we exclusively offer..."
3. Thou shalt not disparage the competition or the customer will have an attack of the "underdog" mentality – subconsciously aligning with the company you are badmouthing.
4. Keep the focus on your company by strategically crafting phrases that highlight your unique and exclusive benefits using words such as:
 - o "We are the only company that ..."
 - o "We exclusively provide..."
 - o Other words to use - *We provide the most, the best, the fastest, the leading, the largest, the most unique, the most accurate, the longest, ...*
5. Don't ask the customer what they like about the competitor – find out their problems that you can uniquely satisfy.
6. Don't ask the customer why they aren't using your service – If you do, they'll tell you one of your major weaknesses and you'll be in a defensive posture at the beginning of the relationship.

By the way, we've just worked with a company who has developed an amazing software solution that allows call center representatives to easily compare the competitive differences between companies. It allows them to immediately identify which operators provide certain TV channels, compare pricing and features in bundles, highlight the "got cha's" in the fine print of pricing and promotions, and much more. It's quite amazing and unique in the marketplace and I wish we'd had something like this available in the past. But it's especially helpful now since things are much more multi-faceted with all of the new services and quad play bundles. This company has already deployed their customized solution with several global operators (hopefully for your company, your competitor isn't already using it!)

Winning over the competition requires lots of "ingredients", but remember to focus on the "little things" such as equipping your front line teams with the tools they need to successfully win!



CALENDAR OF EVENTS

Ministerial Roundtable Panel A & B
Hard Rock Hotel, Panama

23rd-24th
July
2018

**Caribbean Investment Forum/
Match Making Session**
Hard Rock Hotel, Panama

24th
July
2018

CANTO Regulatory GSMA Workshop
Hard Rock Hotel, Panama

24th
July
2018

Stepping into Leadership Womens' Forum
Hard Rock Hotel, Panama

25th
July
2018

GSMA Forum
Leveraging Mobile to Achieve SDG Targets
Hard Rock Hotel, Panama

25-26th
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